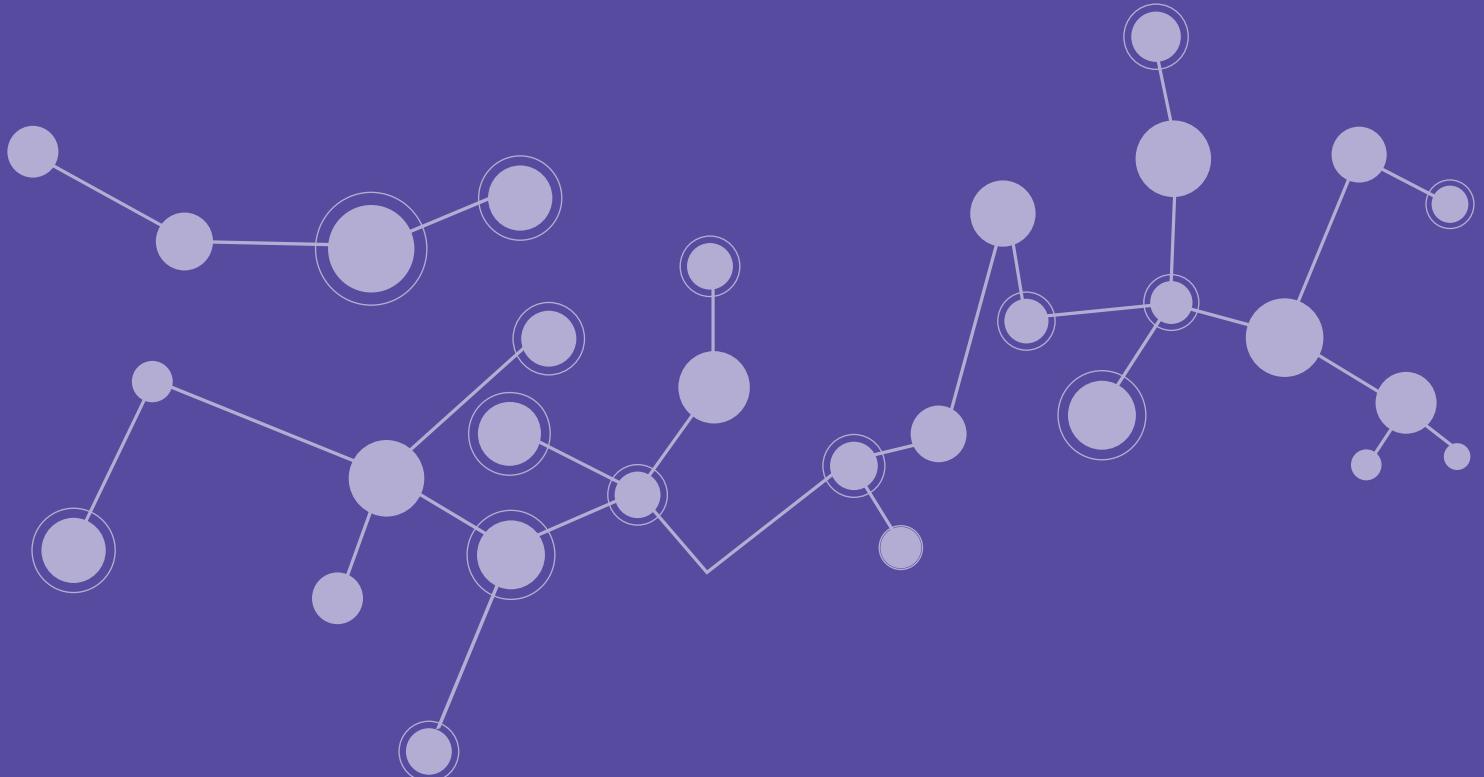


DOCUMENT D'AUTO-ÉVALUATION

DEPARTMENT 5
Complex Systems,
Artificial Intelligence and Robotics



01101100
01101111
01101010
01101001
01100001
01101100
01101111
01101010
01101001
01100001
1110000101
1110000111
1110000101
1110000111
1110000101
1110000111

Loria



Inria



En partenariat avec :



Table des matières

DAE Département 5 : Systèmes complexes, Intelligence Artificielle et Robotique	5
Retour sur l'évaluation 2011-2016	7
Critère 1 : qualité et production scientifiques	7
Critère 2 : rayonnement et attractivité académiques	7
Critère 3 : interactions avec l'environnement économique, social, culturel et sanitaire	8
Critère 4 : organisation et vie du département	8
Critère 5 : implication dans la formation par la recherche	9
Critère 6 : perspectives et stratégie scientifique à cinq ans	9
Domaine 3 : Production scientifique	10
Référence 1. La production scientifique de l'équipe satisfait à des critères de qualité.	10
Synopsis	10
Composition	10
Research topics	11
Main Results	13
Scientific production and quality	18
Life of the department	23
Relations académiques pérennes	23
Référence 2. : La production scientifique est proportionnée au potentiel de recherche de l'équipe et répartie entre ses personnels	24
Homogénéité de la production scientifique entre les permanents.	24
Accompagnement des jeunes chercheurs.	24
Accompagnement des chercheurs qui reprennent l'activité recherche.	24
Production scientifique des doctorants..	24
Domaine 4 : Inscription des activités de recherche dans la société	24
Référence 1 : L'équipe se distingue par la qualité de ses interactions non-académiques	24
Référence 2 : L'équipe développe des produits à destination du monde socio-économique	24
Référence 3 : L'équipe partage ses connaissances avec le grand public et intervient dans des débats de société	24
Recurrent activities	25
Non-recurrent activities	25
Références bibliographiques du département 5	27

DAE Département 5 : Systèmes complexes, Intelligence Artificielle et Robotique

DEPARTMENT HEAD

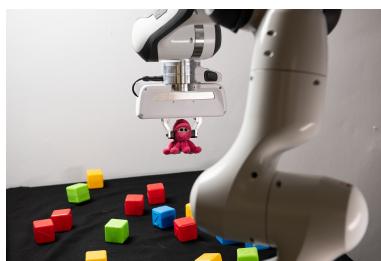


Patrick Hénaff

Department 5 groups five teams that share scientific interests in Complex Systems, Artificial Intelligence and Robotics. The overall aim of Department 5 is to understand and model complex systems and their interactions. From our point of view, a complex system is composed of a large number of coupled or interacting sub-systems for which studying its evolution is out of reach of purely mathematical approaches. We strongly focus on homogeneous and heterogeneous interactions in multi-scale complex systems (from microscopic to macroscopic scale via mesoscopic scale) in the following areas of:

- Computational biology in CAPSID team,
- Cognitive sciences in the BIRD team,
- Computational neurosciences in the NEURORHYTHMS and BISCUIT teams,
- Robotics in the LARSEN, NEURORHYTHMS and BISCUIT teams,
- Bio-inspired computational systems in the BISCUIT team.

The particularity of the department is that a large part of its research activity is based on experimental data or experimental equipment.



DAE Département 5 : Systèmes, complexes, Intelligence Artificielle et Robotique

1. Retour sur l'évaluation 2011-2016¹

Critère 1 : qualité et production scientifiques

Appréciation et recommandations : La production scientifique en termes de publications, de logiciels et de démonstrateurs est importante et de très grande qualité. L'équipe KIWI manque de publications dans des revues internationales de renom, mais est néanmoins fortement présente dans les conférences. Les travaux menés au sein de toutes les équipes, autour des plateformes et les démonstrateurs sont de qualité et gages d'avenir. Il faut veiller à ce que tous les enseignants-chercheurs soient bien intégrés dans les projets phares des équipes et que chaque enseignant-chercheur participe au moins à un projet majeur au cours d'une période contractuelle.

La restructuration du département 5 validée lors de la dernière évaluation a permis de prendre en compte les recommandations du comité en améliorant la qualité des publications de toutes les équipes, y compris l'équipe KIWI dans les journaux internationaux (équipe restructurée en BIRD en 2021). Ainsi, le nombre de publications dans des revues et journaux internationaux a plus que doublé entre les 2 périodes d'évaluation (passant de 80 à 173), le nombre de conférences internationales diminuant légèrement (passant de 273 à 227). Cet accroissement important du nombre et de la qualité des publications est aussi du à la mutualisation des plateformes expérimentales et des équipements (notamment ceux labellisés "Creativ'Lab@Loria"), en associant plus d'enseignant-chercheurs aux différents projets menés durant la période 2016-2021. On peut citer les principaux journaux suivants : Biology, FASEB Journal, Neurocomputing, PNAS, Journal of Intelligent Information Systems, Social Network Analysis and Mining, International Journal of Robotics Research (IJRR), IEEE Transactions on Robotics (TRO), Journal of Artificial Intelligence Research (JAIR), Journal of Machine Learning Research (JMLR), Frontiers in System Neuroscience, Science Robotics.

Critère 2 : rayonnement et attractivité académiques

Appréciation et recommandations : Le rayonnement et l'attractivité du département sont d'un excellent niveau. Du fait de la multitude des collaborations qui apparaissent portées par des individus, un effort de coordination est nécessaire afin de les optimiser et sans doute d'en faire bénéficier le plus grand nombre. Il ne faudrait pas que la restructuration pénalise certaines personnes qui n'ont trouvé que très récemment leur place dans ce processus. Même si les collaborations sont nombreuses et diverses, elles ne concernent pas toutes les équipes. Il serait souhaitable de mieux les coordonner au sein du département et de renforcer les activités de contractualisation de l'équipe CAPSID et de la future équipe BISCUIT.

Suite à la nouvelle organisation du département, les équipes ont concentré leurs efforts sur leur propre dynamique au détriment parfois d'une coordination entre les équipes sur des thèmes particuliers au sein du département. Cependant, les équipes CAPSID (celle-ci a été impactée fortement par le décès de son responsable D. Richie en 2019) et BISCUIT ont pu amorcer et renforcer leurs activités de contractualisation. Il en est de même pour l'équipe NEUROSYS.

1. La majorité des membres de l'équipe BISCUIT a décidé de boycotter le processus d'évaluation de l'H-CERES. Par conséquent certaines informations quantitatives de cette équipe n'ont pas été prises en compte. Les informations quantitatives du département ne reflètent donc pas parfois la réalité.

(devenue NEURORHYTHMS en 2019). Les activités contractuelles des équipes LARSEN (plus particulièrement dans les domaines robotique autonome, humanoïde et système d'assistance) et KIWI (plus particulièrement dans le domaine du E-learning) ont quant à elles eu une dynamique très importante au cours de la période 2016-2021 tant sur le plan national que international. On peut citer les principaux projets en partenariat suivants : ANR PRCI SOMA (2018-2021, ANR FIGHT-HF (RHU – 2016-2021), PIA2 eFran LINUMEN (2017-2021), PIA2 e-Fran METAL (2016-2020), H2020 RIA ANDY (2017-2020), ANR Grasp-IT (2019-2024), ANR ProxiLearn (2019-2023), ANR Flying Corworker (2019-2023).

Critère 3 : interactions avec l'environnement économique, social, culturel et sanitaire

Appréciation et recommandations : Les interactions avec le monde socio-économique sont attestées par plusieurs projets, mais pourraient encore être développées. Compte tenu de la maturité qu'il a atteinte, le département devrait pouvoir augmenter le nombre de thèses CIFRE, développer les relations avec des PME-PMI locales, et la valorisation avec des start-up locales. Afin de maintenir un bon équilibre avec la recherche amont, il faut cependant éviter que les thèses au sein d'une équipe soient uniquement financées sur contrat.

Durant la période, le département a plus que doublé son nombre de thèses CIFRE (8 au total), et cela en relation avec des entreprises locales (Pharmagest, ST Gobain PAM, AGORAA, Xtramile, Yupeek) ou nationales (PSA, Safran, Facebook) sans toutefois obtenir des financements récurrents avec des PME-PMI locales. Chaque équipe a su diversifier ses financements de thèse afin de garder un équilibre entre la recherche amont (MESRI, Inria, ENS, EU, ANR) et la recherche plus appliquée (CIFRE, région, etc). Cependant, malgré cette diversité de financement, chaque équipe s'est attachée à viser le plus haut niveau pour la qualité de ses publications (journaux et conférences internationales).

Critère 4 : organisation et vie du département

Appréciation et recommandations : La structuration du département, sous sa forme actuelle, est encore jeune. Même si de nombreuses discussions ont permis d'atteindre une meilleure lisibilité des activités, il ne semble pas y avoir encore une volonté de mettre les équipes en synergie. Le département est davantage une structure administrative et il ne joue pas encore de rôle dans le pilotage scientifique. Son existence réelle dépendra de sa capacité à élaborer une politique scientifique partagée.

Il est souhaitable de développer la coordination scientifique au sein du département, d'assurer une plus grande cohérence scientifique et de mieux profiter des synergies inter- et intra- équipes. Il faut donc que les discussions qui ont conduit à la restructuration du département se poursuivent, et soient formalisées, afin de gérer en particulier la faiblesse des effectifs de certaines équipes, et l'arrivée récente de nombreux nouveaux membres. Une refonte du site web pourrait mettre en valeur les synergies potentielles ou effectives entre les équipes, en interne et vis-à-vis des partenaires potentiels du département.

La restructuration du département associée à l'arrivée de nouveaux membres (notamment 3 CR Inria en 2014-2015 dans l'équipe LARSEN) a impulsé une forte dynamique autour de la robotique. Dans le même temps les travaux de l'équipe KIWI dans les domaines du "E-Learning" et des "learning analytics" ont apporté une forte croissance de l'activité scientifique dans ces domaines. La prospective et la politique scientifique sont décidées et menées par les équipes, le département pouvant servir de levier auprès de la direction du laboratoire et des tutelles. Même si les équipes partagent le même objectif d'étudier les interactions au sein des systèmes complexes de nature différentes (biologiques, matériel, logiciel), la coordination scientifique du département

1. Pour des raisons de clarté, c'est le nom NEURORHYTHMS qui sera utilisé dans la suite du document

autour de questions scientifiques variée sur un spectre large n'est pas évidente. Cependant, le CPER 2015-2020 a permis à certaines équipes du D5 (LARSEN, NEURORHYTHMS, KIWI) de réfléchir ensemble à des équipements communs autour de la plate-forme SCiarat (Stimulation Cognitive, Intelligence Ambiante, Robotique d'Assistance et Télémédecine) et CyberEntreprises qui ont ensuite été utilisés dans différents projets et ont été intégrés dans l'environnement Creativ'Lab au sein du LORIA. Des échanges scientifiques entre les équipes LARSEN, NEURORHYTHMS, BISCUIT, ont aussi eu lieu durant les 2 workshops organisés en 2018 à Nancy et 2019 au Japon entre le D5 et le département "Human Intelligence Systems" de l'université Kyutech (Japon). Enfin, des co-encadrements de Master inter-équipes (notamment BISCUIT-LARSEN) ont lieu chaque année avec succès mais sans aboutir jusqu'à ce jour à des thèses inter-équipes.

Critère 5 : implication dans la formation par la recherche

Appréciation et recommandations : Le département affiche un très bon dynamisme dans la formation par la recherche, que ce soit au niveau du nombre de thèses soutenues ou de l'implication dans les formations de master. La répartition des doctorants et la participation à la formation sont inégales entre les équipes et reflètent en partie la composition des équipes (chercheurs et enseignants-chercheurs) : par exemple, l'équipe KIWI, composée uniquement d'enseignants-chercheurs, s'investit fortement en enseignement, mais n'a bénéficié d'aucune allocation doctorale sur la période contractuelle.

Il est souhaitable que chacun puisse participer régulièrement à l'encadrement (ou au co-encadrement) de thèses. La répartition des allocations ministérielles entre les équipes devrait être plus équilibrée.

Le nombre d'HDR dans le département a doublé, passant de 5 à 10 durant la période (5 HDR soutenues : 2 dans LARSEN, 1 dans KIWI, 2 dans NEURORHYTHMS), pour un effectif total d'EC et chercheurs permanents quasi-stable (passant de 32 en 2016 à 29 en 2020 et 30 2021) du à un très faible recrutement (1 MdC et 1 CR recrutés entre 2016 et 2021, 1 décès en 2020, 3 départs en 2020 suite à la restructuration de l'équipe KIWI devenue BIRD). Cette augmentation du nombre d'HDR sur la période 2016-2021 a permis de mieux répartir l'encadrement et le co-encadrement dans toutes les équipes en répartissant au mieux le nombre d'allocations doctorales dans le D5 (même si l'attribution aux équipes des contrat doctoraux ministériels est décidée par le conseil scientifique du laboratoire et non par le département). Ainsi, sur la période d'évaluation, les allocations ministérielles ont été réparties entre les équipes de la façon suivante : BISCUIT (1,5) CAPSID (1), KIWI (1,5), LARSEN (0), NEURORHYTHMS (2,5). Enfin, l'implication des enseignants chercheurs du département dans les formations au niveau Master (par des enseignements ou par la prise de responsabilité) est restée très importante. Ainsi au moins un membre par équipe est responsable de formation de niveau M1 ou M2 : Master en sciences cognitives (KIWI), Master en informatique – parcours Apprentissage, Vision, Robotique (BISCUIT), Telecom Nancy (Capsid), Mines Nancy (NEURORHYTHMS). On peut aussi noter l'implication forte d'EC dans les formations de niveau L2 ou L3 par la prise de responsabilité : DUT/BUT Informatique (LARSEN, BISCUIT), L3 information-communication (KIWI).

Critère 6 : perspectives et stratégie scientifique à cinq ans

Appréciation et recommandations : Le département D5 dispose pour le prochain contrat d'un groupe de chercheurs et enseignants-chercheurs renouvelé et de haut niveau scientifique, d'une structuration cohérente en termes d'axes et de projets scientifiques, de l'appui d'Inria au travers de trois EPC, d'un environnement expérimental exceptionnel (plateforme et collaboration avec le milieu de la santé consolidées). Les conditions sont réunies pour poursuivre une recherche de qualité, dès lors que le département jouera son rôle de coordination et veillera à une appropriation partagée du projet.

Il est souhaitable que le département définisse un projet d'envergure, qui rassemble plusieurs équipes et

consolide ainsi les relations scientifiques en son sein. Le département devra veiller à un bon équilibre entre les équipes, notamment entre les EPC Inria et les équipes non Inria. La survie des petites équipes passe par un renforcement de leur potentiel en chercheurs, qui s'avère par ailleurs légitime dans des thématiques porteuses. Dans des thèmes comme l'apprentissage automatique et la fouille de données, qui sont partagés avec d'autres départements, il faut susciter des rapprochements des équipes du D5, avec les équipes de D4 ou de D1. Compte tenu de la grande activité que les équipes déploient au niveau expérimental et de la charge de travail liée au développement et à la maintenance de logiciels, il faudrait soutenir et renforcer le département en lui attribuant un support ingénieur.

L'effectif du département étant resté quasi stable, la structure des équipes est restée quasiment la même. On retrouve en 2021 des équipes avec des effectifs d'EC et chercheurs différents : LARSEN (10), KIWI-BIRD (9-6), BISCUIT (5), Capsid (5), NEURORHYTHMS (4). Seules 2 équipes ont été renforcées sur la période d'évaluation : LARSEN (1 CR recrutée en 2019, 1 DR transféré de NEURORHYTHMS en 2020), NEURORHYTHMS (1 MdC recruté en 2021). Le déséquilibre persiste donc entre les équipes, notamment entre les EPC Inria (2 en 2021) et les équipes non Inria (3 en 2021, NEURORHYTHMS n'étant plus EPC depuis 2021). Cependant, la taille modeste de certaines équipes n'a pas influencé leur dynamisme en encadrement et en publication. Par ailleurs, des rapprochements et collaborations sont effectifs entre le D5 et les D4 et D1 sous forme de co-encadrement de thèses soutenues ou en cours : Capsid (D1, D4), KIWI-BIRD(D4), LARSEN (D4). Bien que les recherches du D5 nécessitent souvent des expérimentations longues et délicates (particulièrement pour les équipes LARSEN, NEURORHYTHMS, KIWI-BIRD) aucun ingénieur permanent n'a été recruté pour le département. Cependant, les équipes ont pu recruter des ingénieurs en CDD ou bénéficier des ingénieurs Inria (LARSEN). Enfin, le recrutement en 2016 d'un ingénieur CNRS pour la plate-forme "Creativ'Lab" du LORIA a permis à toutes les équipes du département de bénéficier d'une aide précieuse (mais insuffisante au regard des besoins) pour la préparation des expérimentations et la gestion des équipements (robots, systèmes de capture de mouvements, eye-trackers, etc.).

2. Domaine 3 : Production scientifique

2.1. Référence 1. La production scientifique de l'équipe satisfait à des critères de qualité.

2.1.1 Synopsis

L'Université de Lorraine a demandé aux laboratoires de rédiger pour juin 2021 les bilans des laboratoires en vue de l'évaluation HCERES 2016-2020. Ce document est présenté dans le Portfolio D5-1, et nous y référençons régulièrement dans le présent document. Pour faciliter la lecture des évaluateurs, nous avons extrait des éléments de notre rapport 2016-2020 pour les reproduire ici ; nous les avons cependant laissés en anglais, ce qui explique le mélange de langues dans le présent document. Il est à noter que des éléments issus du bilan 2021 sont inclus dans ce présent document.

2.1.2 Composition

Fin 2021, le département 5 est composé de 30 enseignants-chercheurs et chercheurs permanents (4 PR, 15 MCF, 3 DR, 7 CR, 1 émérite), de 42 doctorants et 10 ingénieurs ; voir Portefolio D5-1 pour les détails sur l'évolution des effectifs (2016-2020).

Le département est structuré en 5 équipes :

- **BISCUIT**² (created officially in may 2017 from CORTEX) : Distributed and decentralized computing, neural networks, self-organization, reinforcement learning, unsupervised learning, neuromorphic engineering.
- **BIRD** (restructured from **KIWI** in 2021) : Artificial intelligence, recommender systems, data mining, learning analytics, behavioral analytics, interpretable models, AI in education, outlier detection, sequential data mining, user modeling, triggering factors.
- **CAPSID** (EPC Inria) : Structural bioinformatics, molecular docking, 3D-modelling, proteins, nucleic acids, virtual screening, biological databases, data mining, knowledge extraction, graph mining, knowledge graphs.
- **LARSEN** (EPC Inria) : Artificial Intelligence, Robotics, Machine learning, Decision making, Human Robot Interaction Human activity analysis and recognition, smart environment .
- **NEURORHYTHMS** : Computational neuroscience, biological neural networks, brain signal analysis, memory, general anesthesia, brain-machine interfaces, neuro-rehabilitation, neurorobotics, motor-coordination learning, human-robot interactions.

The team KIWI changed in 2021 to the team BIRD which focuses more on data mining while continuing to work on the topics described above. Three members of KIWI left the team : one moved to SMART team (D4), one joined the CREM Lab (UL) of the LORIA, one didn't currently join to one team.

The team NEUROSYS (EPC Inria, until december 2018) changed to NEURORHYTHMS in January 2019 (not EPC) and D. Martinez (DR CNRS) moved from NEURORHYTHMS to LARSEN in June 2020.

2.1.3 Research topics

[Extrait du Portfolio D3-1, Section 2.] The overall aim of Department 5 is to understand and model complex systems and their interactions. From our point of view, a complex system is composed of a large number of coupled or interacting sub-systems for which studying its evolution is out of reach of purely mathematical approaches. We strongly focus on homogeneous and heterogeneous interactions in multi-scale complex systems (from microscopic to macroscopic scale via mesoscopic scale) in the following areas :

- Computational biology (e.g. protein interactions) in CAPSID team.
- Cognitive sciences in the KIWI team
- Computational neurosciences in the NEURORHYTHMS and BISCUIT teams.
- Robotics in the LARSEN and NEURORHYTHMS teams.
- Bio-inspired computational systems (e.g. Neuromorphic computing) in the BISCUIT team.

The particularity of the department is that a large part of its research activity is based on experimental data or experimental equipment.

Our activities address different kinds of complex systems, characterized by multi-scale homogeneous and/or heterogeneous interactions. More concretely, our common aim is to model interactions between natural systems (biological organisms, human, animal...) or between natural systems and artificial systems (hardware like robots or software like web). We address these issues by following common approaches : artificial intelligence, bio-inspired artificial intelligence, data mining, machine learning. Our methodology also share many similarities : we conduct experiments using real systems (robots, measurement setups, hardware and software interactive

2. la majorité des membres de l'équipe BISCUIT a décidé de boycotter le processus d'évaluation de l'H-CERES. Par conséquent certaines informations quantitatives de cette équipe n'ont pas été prises en compte. Les informations quantitatives du département ne reflètent donc pas parfois la réalité.

systems) and we develop models based on real data coming from biology, from experiments with human or animals or with other artificial systems.

Meeting these scientific challenges involves the design of new algorithms and computational models in the following areas.

Computational biology To facilitate and improve the 3D modeling of large multi-component biomolecular machines, we develop algorithms and software to help study biological systems and phenomena from a structural point of view. The activities focus on two main themes. The first theme concerns computational modeling of protein-protein interactions (protein docking and molecular dynamics simulations). The second theme concerns classifying and mining protein structures and protein interactions (knowledge discovery in biological databases). While the main activity of the team is algorithm and software development, it also tackles “real-world” biological problems through collaborations with experimentalists (CHRU of Nancy).

→ Teams involved : CAPSID

Cognitive sciences Working on user modelling, recommender systems for web applications and e-learning with a strong interest in data modelling can be broken down into two main goals : mining information and inferring/predicting information. More specifically, we focus (1) on collecting interaction traces in order to infer a reliable and relevant user model from the observations and (2) on using statistical modelling in order to predict future events, and to build recommender systems that can maximize a user satisfaction function. The approach is applied to various application fields related to e-education (e-health, recommendations in web applications, learning analysis, digital humanities, ...).

Working on human/robot social interactions requires understanding and modelling as best as possible the cognitive behaviors of humans. This requires collaborating with psychologists (from laboratories in behavioral psychology of University of Lorraine or others) to experiment with specific interpersonal interactions to build cognitive models and to study specific human behaviors interacting with robots. The use of robots is also interesting for psychologists to experimentally study several hypotheses in human interactions.

→ Teams involved : KIWI (BIRD), LARSEN, NEURORHYTHMS, BISCUIT

Computational neuroscience We work on a better understanding of the central nervous system and the motor nervous systems by modeling various neural areas at microscopic, mesoscopic, and macroscopic scales. We specifically focus on several objectives. We want to study the mechanisms of sleep and anesthesia to better anticipate and control the waking phases of patients during surgical operations. Brain-computer interfaces (BCI) based on EEG signals processing are developed for rehabilitation of brain after stroke or for recovery after stroke and detection of peroperative awareness during general anesthesia. The sensorimotor loop of human and animals is studied to design bio-inspired adaptive controllers for motor coordination of humanoid robots (Central Pattern Generators), or to simulate human walk or to develop for mobile robots new exploration strategies inspired from flying insects, e.g sensory-olfaction. Bio-inspired computing architectures are developed to give learning and control abilities to persistent autonomous systems interacting with dynamical, complex, and unforeseeable environments. These kinds of architecture are implemented in hardware architectures (e.g. Neuromorphic computing).

→ Teams involved : NEURORHYTHMS, BISCUIT

Robotics We focus on new algorithms to give robots the capacities required for life-long autonomy and natural interactions. These two objectives are reached with fast on-line computation,

learning, decision-making and bio-inspiration. For life-long autonomy, the objective is that a robot continuously performs its tasks while being able to adapt to sudden or gradual changes in both its environment and its morphology. For natural interaction, the objective is to allow a robot to interact physically and/or socially both with other robots and human beings, taking into account the fact that people and robots learn from each other when they interact. The solutions that we propose mainly come from the fields of robotics, stochastic optimization, Bayesian modeling, cognitive sciences, and neuroscience. Neurorobotics is an emerging science that studies sensori-motor loops using neural models embodied in robots like humanoids or flying autonomous robots. Our approach in neurorobotics is to design adaptive neuro-controllers that allow humanoids robots to learn sensori-motor-coordination or to develop navigation strategies inspired by flying insects for navigation.

→ Teams involved : BISCUIT, LARSEN and NEURORHYTHMS

2.1.4 Main Results

Major results can be found in Portfolio D5-1 Section 3 and in each team's report. Instead of giving a long list or a hardly understandable abstract, we choose here to highlight some representative results on main topics of the department.

Web intelligence : data mining and recommender systems

- **Mining an apprehensible set of patterns :**

One important focus of the department is the mining of data to understand and explain the associated phenomenon when data are occurrences of a phenomenon or traces of activities. The main difficulties come from data are sequential, noisy, sparse, evolving, and from the mining whose goal must be actionable because dedicated to a human (sometimes expert), or to a subsequent process [130]. A generic pattern mining algorithm, **C3Ro**, has been designed to mine a wide range of sequential patterns, going from closed or maximal contiguous sequential patterns to closed or maximal regular sequential patterns. **C3Ro** is dedicated to practitioners and is able to manage their multiple constraints. It is the first sequential pattern mining generic and parametrizable algorithm [130]. A temporal pattern mining algorithm based on such a temporal granularity was also proposed [321] in the educational context. We have shown that not only the number of temporal patterns remains limited, but also that the human behaviour predictability depends on this granularity.

- **Recommender Systems :**

The goal is to identify a set, or sequence, of items that fits the user's preferences or behavior. This task is often viewed as a prediction task, but also as a prescription task, where a prescription impacts the active user. By considering the recommendation task as a prediction problem (predicting future preferences or actions of users), we have proposed an algorithm able to detect users who have preferences that are not in line with those of others, and that also models their preferences taking into account the distribution of the preferences, inspired by the literature about outlier detection [236]. We have also proposed an algorithm with a low complexity that performs long-term predictions based on a strategy defined to form the rules, that does not rely on traditional episode mining[114]. By considering the recommendation task as a prescription problem, we mainly focus on the links between data elements. We conducted a user study for music playlist recommendation to measure the effects of providing such a recommendation functionality. We have shown that about two-thirds of the users made active use of the recom-

mendations and that the mere presence of the recommendations impacts the choices of the users, even in cases when none of the recommendations was actually chosen [144]. In the frame of tabular data (census data), we proposed an algorithm that identifies the attributes, and associated values, that cause the value of other attributes [232]. This work has been the starting point of ongoing work about causal analysis in the frame of financial data. Facing the question of how to form and provide a user a sequence of recommendations, we proposed a multi-objective ant colony-based recommender system. This model has been evaluated in the cultural domain (Art museum of Nancy) [311] and has been complemented [335] to assess the accuracy of sequential recommendations in an off-line educational framework.

Computational Biology

- **Knowledge discovery and structural databases :**

This work addresses the development of innovative methods based on machine learning to discover new relations in large graphs of interactions representing complex biological systems. Applications are protein annotation or drug-adverse effects. In the field of protein annotation, we have proposed and validated two new methods for assigning functions to proteins or protein domains. Both methods (CODAC and GrAPFI) are based on graph representation of protein relationships [79, 106, 447, 195]. This has enabled two PhD students to perform a 3-month mobility in two prestigious research centers : EBI (European Bioinformatics Institute, UK) for Zia Alborzi and MILA (Quebec Artificial Intelligence Institute, CA) for Bishnu Sarker, and the team to participate in the international CAFA challenge for protein annotation [169]. In addition, the CAPSID team has been invited to coordinate a workpackage dedicated to network science in one of the four RHUs funded in France for the period 2015-2020 (RHU FIGHT-HF).

- **Multi-component assembly techniques for integrative structural biology :**

This work addresses the problem of modelling the complex systems formed by multi-component assemblies in structural bioinformatics. In the easiest cases, the structure of isolated components is known and the question is to determine how they interact with computational "docking" methods. The search space is so huge that algorithms need to be as fast as possible and/or to include experimental constraints. In more complex cases, the structure of all isolated components is not known. This happens either because one protein has not been purified in sufficient amount to undergo experimental structure determination, or because one of the component contains highly flexible regions, such as single-stranded RNA or DNA.

Multi-component assemblies include the study of host-virus interactions and this has lead us to start several anti-Covid projects in 2020, particularly in the finding the best inhibitors candidate of protein-ligand interactions for pathogenic host-virus assemblies .

David W. Ritchie, has developed the SAM algorithm for symmetrical docking of protein symmetric assemblies [75] and extended the Kpax algorithm for structure-based multiple alignment [74]. This latter software has been used to publish in Nature Methods a large-scale study of protein quaternary structures [113]. Through the PhD thesis of Maria-Elisa Ruiz-Echartea, the team also introduced an innovative method for protein-protein docking, based on a systematic exploration of the rotational space [162, 194]. Our expertise in protein docking has allowed us to regularly participate in the CAPRI challenge [90, 147]. The team is also well known for virtual screening of active molecules which led us to several successful propositions of new anti-fungal compounds in collaboration with brazilian labs [51, 56, 135, 146, 161].

Robotics and neuro-robotics

- **Life-long autonomy :**

In the domain of adaptation to unforeseen damage conditions, the ResiBots ERC project of J.-B. Mouret (2015-2020) focused on data-efficient trial and error algorithms to recover from unforeseen damage (e.g., a legged-robot missing leg) in less than 2 minutes, without any information about the damage. We proposed several new trial-error algorithms to solve this problem : the Black-DROPS (Black-Box Data-efficient Policy Search for Robotics) [260, 279, 289] that exploits Gaussian processes and evolutionary algorithms for data-efficient policy search, the reset-free trial and error (RTE) [83] which makes it possible for a legged robot to recover by taking the environment into account during learning, or the Fast Adaptation through Meta-Learning Embeddings (FAMLE) [327] which leverages meta-learning and simulations to quickly adapt the dynamical model of a damaged robot. Please see the portfolio about the ERC ResiBots for more details.

- **Navigation of mobile robots :**

Indoor localisation based on audio source localization using a microphone array (on the robot), and on a sensing floor (designed in collaboration with the Hikob company) was studied. We proposed an approach to control the robot movements so as to locate an audio source using the Monte-Carlo Tree Search algorithm [244][267, 154]. We addressed the localization with floor sensing using a specific adaptation of the Extended Kalman filter[244] and also by computer vision to track and recognize generic objects among which humans [47]. Efficient strategies to navigate in natural environments were developed by studying those of Flying insects. To understand these strategies, we have developed a cable-driven parallel robot, named *lab-on-cables*, for tracking and filming free-flying insects. We design a reactive controller that minimizes the online tracking error between the position of the flying insect, provided by an embedded stereo-vision system and the position of the moving lab, computed from the cable lengths ([190]).

- **Human movement analysis :**

This work concerns the analysis of temporal signals obtained by sensors worn by people or in the environment : recognition of human gesture or activity, prediction of human movement to optimize the control of exoskeletons, evaluation of human activity in its ecological environment at home (assisting elderly) or at work(ergonomic evaluation), prediction of pedestrian behavior for autonomous vehicles. Several software packages have been developed, some of which have been transferred to industrial partners.

In the context of the H2020 AnDy project (LARSEN), we collected several datasets (from wearable IMU sensors) where human participants perform whole-body movements and activities. We used Hidden Markov Model combined with a feature selection method to automatically recognize the current human posture and action during industry-like work. The datasets have been carefully annotated, documented, and are released as open-source to the community [151]. The database was used to train and test our activity recognition module, and showed that we could achieve good recognition performance even with a small number of inputs [149]. We also conducted a thorough assessment of a novel passive exoskeleton that provides arm support during overhead work and we demonstrated reduction of physical strain and fatigue without negatively impacting the productivity of industrial tasks [188]. During the first wave of the COVID-19 pandemic, we conducted a study on the use back-support exoskeleton to assist physicians in the ICU during patient care ; this pilot study allowed the deployment of exoskeletons in the ICU of the hospital in April 2020 [196].

- **Natural Interaction with robots :**

We see tele-operation as a particular human-robot interaction. To teleoperate a humanoid robot with a motion capture suit, we implemented a retargeting controller based on quadratic programming and successfully tested it on iCub (full-featured, child-size humanoid). This work is now continued on the Talos humanoid robot (adult size). To improve the performance of the controllers, we developed algorithms to optimize task-specific and generic whole-body controllers ; to do so, we proposed a formulation of the problem of finding task-specific and generic whole-body controllers as finding optimized parameters, task weights or priorities by using both single-objective, stochastic, derivative-free methods [243, 278, 309] and multi-objective optimization [193]. In the field of human-robot natural interactions, we have shown that plastic central pattern generators (CPG) models embodied in humanoid robot (Pepper) or robotic arm, make the robot able to learn to produce more human-like movements, i.e. dynamic discrete and rhythmic. These Neuro-controllers can trigger the emergence of a global motor coordination when the robot interacts with the human to realize common socially act with contact (handshake) or without (waving) [121, 288, 394, 421].

- **AI methods for robotics :**

In multi-agent decision making, we work on developing algorithms to derive action policies in various scenarios that require accounting for the presence of multiple agents (robots or humans) interacting in the same environment but can be collaborative or competitive. We have proposed a new algorithm based on the occupancy state statistic (Dec-POMDPs) computing upper- and lower-bounding value function approximators [57] and an efficient reinforcement learning algorithm [282]. We also proposed novel solutions for fully observable stochastic games (SGs) [205], partially observable stochastic games (POSGs) [334], and general POSGs [568].

The quality Diversity algorithms that we have co-introduced in 2015 (Mouret and Clune, 2015) are currently very popular in the evolutionary computation international community, and especially in the main evolutionary computation conference (GECCO). We introduced many improvements to scale-up the initial MAP-Elites algorithm to high-dimensional behavioral/feature spaces [105], to expensive domains (e.g., aerodynamics) [262, 263, 115, 286] (Best paper of the CS track at GECCO 2017), to high-dimensional parameter spaces [301, 325].

Computational Neuroscience :

- **Neuro-musculo-skeletal simulation of human walk :**

The models of central pattern generators applied for motor coordination learning of robots have also been used and adapted for studying motor coordination troubles that appear in human walks due to neural pathologies like Parkinson. We have implemented these models in the open-source musculoskeletal simulator OpenSim (developed by Stanford University) and shown that, taking into account simplified signals descending from basal ganglia, it is possible to simulate several specific motor troubles of walk described in the medical literature ([314]).

- **Healthy and pathological brain rhythms :**

The goal of the work is to better understand the oscillating and synchronization mechanisms underlying cognitive and motor function, such as memory formation, consolidation, and retrieval, as well as to identify the origin of pathological brain rhythms in order to develop new therapeutic strategies. For theoretical aspect about synchrony mechanisms in neural network model we led a theoretical study of synchrony mechanisms in interneuronal (hippocampal-like) networks in

collaboration with University of Houston Clearlake, USA [165]. About modelling of hippocampal rhythms, we have worked in collaboration with the Deutsches Zentrum für Degenerative Erkrankungen, on the mechanisms of oscillatory generation and maintenance of awake hippocampal rhythms [91] and also on a physiologically and anatomically realistic modeling of the slow-wave-sleep and awake oscillatory activities of the hippocampal formation [107] in collaboration with the CRAN (Centre de Recherche en Automatique de Nancy) of UL. In term of biomedical applications, we have developed several original models : of propofol action on hippocampal-like interneuronal networks and possible mechanisms involved in memory processes under general anesthesia. [565], of the epileptic hippocampus in focal temporal lobe drug-resistant epilepsy, of basal ganglia activity to identify the physiological mechanisms yielding pathological oscillations in Parkinson's disease (in collaboration with the team Simbiot, department 3 and the Institut des Maladie Neurodégénératives, Bordeaux)[570][569].

- **Brain-Computer Interfaces (BCI) :**

In the domain of BCI, we study motor patterns in EEG mainly for recovery after stroke and detection of peroperative awareness during general anesthesia. aiming to conceive a passive BCI based on the intention of movement, we proposed a solution based on Median Nerve Stimulation (MNS), which causes specific modulations in the motor cortex and can be altered by an intention of movement. We showed that MNS may provide a foundation for an innovative BCI that would allow the detection of an AAGA [313], [158]. We conducted a study that highlighted the occurrence of movement attempt patterns, mainly changes in oscillations called event-related desynchronization and event-related synchronization in the EEG signal over the motor cortex, in healthy subjects, without and under propofol sedation, during four different motor tasks [159], [419].

Bio-inspired computing architectures

- **Self-organization and population computing :**

The brain is our source of inspiration to define low-level adaptation rules that make it possible to modularize, specialize and differentiate subsets of computing bricks in a massively distributed fine-grain homogeneous computing substrate. These properties are grounded on several levels of self-organization through correlated forms of cortical plasticity. Aiming this, we study Dynamic Neural Fields (DNF) because they are theoretically derived as models of neural populations, and their combination with self-organizing maps (SOM)because of their learning capabilities and properties using complex or hardware-compliant topologies. We defined neuro-inspired pruning and sprouting rules within SOM , where connected neurons that have distant codewords and that have not been selected best matching units since long have a high probability of getting disconnected [412]. we developed association mechanisms between DNF and SOM to autonomously detect unexpected features in the visual environment and robustly track them using DNF [317]. We proposed a new algorithm to find best matching units without the usual computational bottleneck, taking advantage of the topological self-organization of prototypes in SOM [438].

- **Neuromorphic compatibility :**

Our work focuses on the compatibility of our models with hardware constraints and neuromorphic trends. We combined neural and cellular characteristics so as to have the ability to adapt by learning while dealing with decentralization, locality and simplicity. We have started studying how spiking self-organizing maps can be influenced by the use of flexible hardware-constrained underlying structures, such as the ones that can be found in manycore neuromorphic architec-

tures. We evaluated the level of computational simplification that can be applied to the kernel of DNF without changing the emergent behavior [233]. We defined compact neuro-cellular architectures that have all the behavioral characteristics of DNF [340], and we showed how such models can efficiently process naturally spiking data as provided by event cameras. In the field of Self-Organizing Maps (SOM) and spike-based computation, we defined a new spiking SOM model that takes full advantage from a temporal coding scheme [323]. We studied how self-organization and population coding influence fault tolerance. In [275, 116], we investigated the ability of large conglomerates of homogeneous units to compensate for sensor and hardware failures thanks to population-based representations. To ensure better hardware compatibility of SOM, we studied network-programmable SOM using specific topologies that can be implemented with simple local routing nodes [383], and cellular SOM that propagates weight updates from the best matching unit in a cellular way [308]. In the need to modularize populations of bioinspired computing bricks, we investigated how a hardware manycore substrate can take advantage of bio-inspired structural plasticity [397]. To introduce structural plasticity principles, we defined pruning as well as sprouting versions of SOM [412] and implemented them in a cellular way using the SCALP board simulator designed by the Swiss partner of the ANR SOMA project [315].

2.1.5 Scientific production and quality

During the evaluation period of 2016-2021, Department 5 has produced 41 PhD thesis, 5 HDR, 173 journal papers and 227 conference papers in major venues. In terms of the quality of the publication supports, we give here below the list of top journals and conferences in our scientific field of research :

List of top journals in which we have published

Recommender systems and e-education

- Expert Systems With Applications : [114] [130], [145]
- User Modeling and User-Adapted Interaction : [144]
- Journal of Intelligent Information Systems : [45]
- International Journal of Information and Learning Technology : [133]

Artificial Intelligence, Robotics

- Science Robotics : [190]
- Robotics and Autonomous Systems : [83], [72],[83]
- Journal of Artificial Intelligence Research : [57], [76]
- Autonomous Robots : [60], [78], [216],[154]
- IEEE Transactions on Robotics : [173]
- IEEE Transactions on Games : [205]
- IEEE Transactions on Evolutionary Computation : [105]
- Evolutionary Computation : [53], [115]
- Robotics and Automation Letters : [149], [222],[193], [221], [101]
- IEEE Sensors Journal : [47], [86]
- Frontiers in Robotics and AI : [181], [87], [214]
- Frontiers in Neurorobotics : [121]
- International Journal of Social Robotics : [61], [153]
- Nature Machine Intelligence : [141]

Neuroscience, computational neuroscience

- Frontiers in Neuroscience : [158], [186]
- Biological Cybernetics : [142]
- Neural Computing and Applications : [116]
- Neurocomputing : [165]

- Journal of Computational Neuroscience : [107]
- Journal of Neural Engineering : [123], [125]
- Neural Processing Letters : [155]

Computational Biology

- Bioinformatics :[74], [162], [69], [69]
- BMC Bioinformatics : [79], [52] [106], [195]
- Proteins - Structure, Function and Bioinformatics : [147], [194], [64]
- Nature Methods : [113]
- Journal of Computational Chemistry : [164]
- Proceedings of the National Academy of Science (PNAS) : [71]
- Nature Scientific Reports : [180], [220]

List of top conferences in which we have published

Recommender systems and e-education

- International Conference on User Modeling, Adaptation and Personalization (UMAP) : [369], [346], [238], [240], [415], [236]
- European Conference on Information Retrieval (ECIR) : [311]
- European Conference on Technology Enhanced Learning (EC-TEL) : [335]
- Educational Data Mining (EDM) : [321]
- IEEE International Conference on Tools with Artificial Intelligence (ICTAI) : [239], [383], [231], [482], [283],
- IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT) : [319]
- International Conference on Artificial Intelligence in Education (AIED) : [304], [328]
- IEEE International Conference on Advanced Learning Technologies(ICALT) : [329]

Artificial intelligence, neural networks, robotics

- IEEE/RJS International Conference on Intelligent Robots and Systems (IROS) : [253], [327], [327],[371],[244],[260], [288]
- IEEE International Conference on Robotics and Automation (ICRA) : [294], [292], [272], [341],[279], [251], [243]
- IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS) : [242], [281], [480], [274], [266], [235], [242], [295], [268],[278]
- ACM Genetic and Evolutionary Computation Conference (GECCO) : [453], [254], [331], [286], [379], [301], [259],[372], [237], [318], [306], [263], [380],[325]
- International Conference on Neural Information Processing Systems - NeurIPS : [284]
- AAAI Conference on Artificial Intelligence : [293]
- International Conference on Machine Learning (ICML) : [282], [334]
- European Conference on Artificial Intelligence (ECAI) : [232],[333], [293]
- International Conference on Automated Planning and Scheduling (ICAPS) : [252], [322], [522]
- IEEE Conference on Systems, Man and Cybernetics : [332]
- IEEE/RSJ IEEE International Conference on Automation Science and Engineering (CASE) : [291], [470],
- International Conference on Neural Information Processing (ICONIP) : [554], [323], [323]
- International Joint Conference on Neural Networks (IJCNN) : [233], [314]
- Annual Conference of the International Speech Communication Association (Interspeech) : [300]
- International Conference on Artificial Neural Networks (ICANN) : [340], [438]
- IEEE International Conference on Electronics Circuits and Systems (ICECS) : [315], [317]
- International Workshop on Self-Organizing Maps and Learning Vector Quantization, Clustering and Data Visualization (WSOM) : [308], [553], [275], [303], [271]

Neuroscience, Computational neuroscience

- Computational Neuroscience Meeting : [562], [277], [302], [570]
- IEEE/EMBS Conference on Neural Engineering : [312], [269], [270], [452]

- Brain-Computer Interfaces Meeting : [347], [347]

Computational Biology

- International conference on research in computational molecular biology (RECOMB) : [566], [571]
- ISMB SIGs (Intelligent Systems in Molecular Biology - Special Interest Groups) : [249, 257, 561]
- GGMM (Groupe de Graphisme et Modélisation Moléculaire) : [563, 310, 567]
- JOBIM (Journées Ouvertes en Biologie, Informatique, Mathématiques) [564, 299, 503, 330]
- ECML-PKDD [264]

Software We highlight here some of our principal software packages :

- **OpenViBE** : (<http://openvibe.inria.fr/>), a leading platform to build brain-computer interfaces. Participating in the design and development.
- **EROS-DOCK** (<https://erosdock.loria.fr>), and also **GrAPFI**, **NAFRAGDB**, **RNA-PDBComplete** computational biology.
- **SIRENE** : (<http://sirene.gforge.inria.fr/>), simulation of spiking neural networks based on event-driven, time-stepping and voltage-stepping integration methods.
- **Limbo** : (<https://www.resibots.eu/limbo>), Bayesian optimisation and Gaussian processes library [112].
- **InriaWBC** : (https://github.com/resibots/inria_wbc), whole body controller based on quadratic programming.

Academic reputation and appeal

Prix et distinctions. Nous avons obtenu 8 distinctions :

- 4 pour Jean-Baptiste Mouret, LARSEN : 2016 ISAL Award for Outstanding Paper of 2015 in the field of Artificial pour son article dans Nature en 2015 , Prix La Recherche 2016 (Science de l'Information), 2017 International Society for Artificial Life Award for Distinguished Young Investigator in the field of Artificial Life, 2019 International Society for Artificial Life award for the Outstanding Publication of the Decade 2004-2014.
- 1 pour Adam Gaier (encadrants J.-B. Mouret & Alexander Asteiroth) : 2021 ACM SIGEVO dissertation award (honorable mention)
- 2 pour Serena Ivaldi, LARSEN : 2020 Suzanne Zivi Award for excellence in research, 2021 by Robohub and Women in Robotics in the list of “50 Women in Robotics you need to know about”, IEEE RA-L Outstanding Associate Editor 2021.
- 1 pour Anne Boyer : since 2019, she holds the first “chaire d’excellence” at the Galatasaray University, Istanbul, Turkey. The thematic of her ”chaire” is in the field of Artificial Intelligence. Fundings from MAEE and The consortium of French Companies in Turkey.

Nous avons obtenus 8 best papers : LARSEN (AIAA/ISSMO 2017, GECCO 2017, GECCO 2018, JFSMA2019), CAPSID (EGC2017) ; NEURORHYTHMS (CNS 2018 ,IEEE SMC2020), KIWI (UMAP 2016).

Invitations et visites. Department members were invited speakers at international and national events.

- Armelle Brun has been invited speaker at workshop Artificial and Education, at conference PFIA 2018. “What can data mining provide to Learning Analytics ?”
- Malika Smaïl-Tabbone : “Integrative Machine Learning Applied on Drug Side Effect Profiles”, 18th World Congress of Basic and Clinical Pharmacology), 1-6 juillet 2018, Kyoto, Japan

- Marie-Dominique Devignes : “Data science tools and strategies to make sense of omics data”, workshop OLINK (a Proteomics private company) on “Accelerating precision medicine”, 13-15 Nov 2018, Uppsala, Sweden.
- Jean-Baptiste Mouret : 3 keynotes in international conferences (2016 : 9th SIG on Design Theory of the International Design Society, 2018 : 13th APCA International Conference on Automatic Control and Soft Computing, 2019 : 10th International Conference on Information, Intelligence, Systems and Applications), 5 invited talks in international symposiums (2016 : The Origins WorkshopArizona State University ; cross-disciplinary Symposium on Machine Learning and Architecture ; German-French Conference on Humanoids and Legged Robots 2016 & 2018 ; 2018 : French Academy of Science and Leopoldina symposium “Data Science versus Motion Intelligence” ; 2018 : Frontiers Research and Artificial Intelligence Workshop organized by the European Research Council), 5 invited talks in workshops during international conferences (GECCO, ICRA, RSS, IAS), 4 invited talks in meetings of the GDR robotique, 2 invited talks at the Journées Scientifiques Inria (2016 & 2020), as well as several invitations as a distinguished speaker in European universities and international companies.
- Serena Ivaldi : invited talk at ICRA 2020 Workshop on Human-Robot Handovers, invited talk at RSS 2020 Workshop on Closing the academia to real-world gap in service robotics, invited talk at IROS 2020 Workshop on Ergonomic Physical Human-Robot Collaboration,invited talk at Journée GT5 Perception et interaction homme-robot 2020, Panelist at the HRI Pioneers Workshop 2021 – Academic Panel, speaker at European Robotics Forum 2021, speaker at the 2021 IEEE Women In Engineering International Leadership Conference, Invited talk at ICRA 2021 Workshop on Bridging the Gap between Data-driven and Analytical Physics-based Grasping and Manipulation II, plenary lecture at Journée FéDéV 2021 – Université Paris Saclay, invited talk at HUMANOIDS 2020 Workshop Towards Physical-social human-robot interaction, invited talk at HUMANOIDS 2020 Workshop on Talos, invited talk at IROS 2021 Workshop on Human-like Behavior and Cognition in Robots, invited talk at Workshop HRI@Montpellier “AI for improving machine interactions with humans and the environment” at LIRMM, speaker at FUTUROBOT 2021 (Percez les secrets de la robotique – Discover the secrets of robotics) at Centre Prouvé – Nancy
- Patrick Hénaff, 3 invited talks : Illuminate Speaker Series, College of Rehabilitation Sciences, University of Manitoba, Winnipeg, Canada, Dec. 2019 ; 12th International Conference on Computer Vision Systems, ICVS2019, Thessaloniki, Greece ; International Conference on Computer Science and Computational Intelligence (ICCSCI) organized by Binus university of Jakarta, October 2017
- L. Bougrain : invited talk at the french National Academy of Medicine and french Academy of Technologies (November 2, 2020) to present haptic and tangible brain-computer interface for stroke patients.

Projets et contrats. External fundings occupy the largest part of the total fundings of Department 5. The department has obtained 10 European projects, 4 other international projects, 10 national projects (ANR, FUI, DGA, CNRS...), 8 regional/local projects, 3 PIA projects, and 9 CIFRE thesis contracts.

Editorial and organizational activities Department members participated in the programme committees and steering committees of many national and international conferences. All the members of the department are regular reviewers for major international journals and conferences in all the scientific domains of the department. Several members organized or co-

organized regularly workshops and conferences (national and international).

Program, steering and conference Committees (non-exhaustive list) :

IEEE IJCNN '16,17,18,19' ; EDM, EC-TEL, DataMod, Edrecsys@LAK2020 ; ECCB (European Conference on Computational Biology) ; CORIA (Conférence Francophone sur la Recherche d'Information et ses Applications) ; IEEE/RAS Humanoids 2019;ICRA 2021, ICRA 2020, ICRA 2019, IROS 2019, IEA 2018, IROS 2018, RSS 2016 ; IJCAI '16-'20, ICML 19, AAAI '16-'20, ICAPS '18 '19, AAMAS '16, UAI '17, '18, JFPDA '16-'20, JFSMA 2019–20, GECCO '16-'20, ALIFE/ECAL '16-'20 ;

Reviewer and editorial responsibilities for Journal (non-exhaustive list) : Journal Autonomous Robots ; PLOS Computation Biology ; Frontiers in AI and Robotics ; Springer Journal of Intelligent Service Robotics ; Frontiers in AI and Robotics ; IEEE Transactions on Robotics ; Proceedings of the Royal Society B ; Journal of Artificial Intelligence Research ; RIA journal ; Journal of Proteomics and Computational Biology ; Frontiers in Neurorobotics ; Evolutionary Computation ; Nature ; Nature Communications ; Nature Scientific Reports ; Artificial Life ; PLoSOne ; Computational Intelligence and Neuroscience (special issue 2016), Journal JIIS, RIA (now ROAI), TSI.

Editor in chief.

International Journal of Social Robotics (Springer Nature)

Associate editor (non-exhaustive list).

ICRA 2020, ICRA 2021, IROS 2021, IEEE Robotics and Automation Letter, ACM Transactions on Evolutionary Learning and Optimization (TELO) since 2019

Workshop organizations (non-exhaustive list).

RSS 2022, ICRA 2022 (3 Workshops), ICRA 2021 (2 Workshops), ICRA 2021 , ROMAN 2020, ICRA 2020 (2 workshops), HUMANOIDS 2019, RSS 2019, ICRA 2019, IEA 2018, HUMANOIDS 2017, IROS2017, IROS 2016, ALIFE/ECAL 2016 and 2017

Conference organizations and co-organization

PFIA 2018, MSDM@IDCM2020, ADORE@LAK2020, EDRECSYS@LAK2020, LSAC 2019,CORL 2021, HUMANOIDS 2019 (Program chair), ARSO 2018, ICDL 2017, HUMANOIDS 2017, GEC-CO'2019, ICAPS 2020 (conference chair), JNRH 2018, Rob&IA@PFIA 2018

Services as expert or evaluator

Thesis and habilitation committees, Hiring committees.

We participated in over 75 PhD juries and over 9 Habilitation juries as external examiners and reviewers. We also served in several hiring committees both in Nancy and in France. Department members were international assessor or international member of committee for PhD or HDR in foreign countries (Germany, Norway, Switzerland, South Africa,).

Non-local scientific responsibilities.

Department members are/were : member of CNU, “Chargé de mission” for the French ministry of higher education and research (HER), president of foundation in e-education, expert for the DGA (IA and Robotics), expert for the French Ministry (DGRI/MEI) for bilateral calls ; experts

for the French research ministry for the “Crédit Impot Recherche”; GDR Robotic scientific committee, ANR evaluation committee, ANR expert,

2.1.6 Life of the department

Seminars At the level of the department, we organize each year a day of seminars called “la journée des doctorants”. This seminar is organized as follows : during the morning, each PhD student presents rapidly (pitch) his (her) work in front of all the department members (PhDs, professors, associate professors, researchers, and engineers), while during the afternoon the work is presented in several interactive thematic sessions. The goal of this seminar day is to get to know the PhD students, understand their topics, and thus know the scientific issues of each team.

Covid 19 pandemic impacted greatly the life of the department because of numerous experiments that had to suddenly stop during 5 months. Several PhD thesis were impacted and were delayed. And the “journées des doctorants” based on interactive demonstrations was cancelled in 2020 and 2021.

Governance. In terms of administration of the department, we created a “council” that consists of the head of the department and the heads of the teams. The role of this council is to handle at the level of the department the evaluation and ranking of PhD candidates for UL contracts, the department budget. Some department meetings include two elected PhD student representatives. They have the role of “interface” between the students and the head of the department for all problems or questions other than science.

Recruitments and gender parity. The department is not in charge of the recruitment of the permanent researchers. But for recruitment of PhDs and Master interns, the department takes care of gender parity. The number of PhDs women increased each year during the period : we recruited 50 men and 21 women (30% of women) .

2.1.7 Relations académiques pérennes

Members of Department 5 have several strong and fruitful collaborations with regional teams from Université de Lorraine (CRAN, 2LPN, CHU...), national partners in laboratories and private companies (see teams reports for more details). We list here only international partners with whom we developed particularly strong and productive collaborations (joint publications, joint software development).

International Collaborations **Australia** (CSIRO, Brisbane), **Italy** (Italian Institute of Technology, Politecnico Milan), **Japan** (Kyutech University), **Poland** (Gdansk University), **Switzerland** (HESSO Geneva), **Ukraine** (Kyiv Polytechnic Institute, Taras Shevchenko National University), **Brasil** (State University of Maringá and EMBRAPA), **Canada** (University of Sherbrooke), **Austria** (University Klagenfurt).

Moreover, the department is leader in two international cooperations :

- 2015-2022 : An Erasmus+ program with Ukraine (head P. Hénaff). With Igor Sikorsky Kyiv Polytechnic Institute (KPI) and Taras Shevchenko National University of Ukraine (TSNUK). Research mobilities in the LORIA for Masters (around 30, PhD students (around 10) and 8 teachers. 2 PhDs in cotutelle were defended)
- 2017-2021 : a research collaboration with Kyutech, Japan (head P. Hénaff). With Department “Human Intelligence Systems” of Graduate School of Life Science and Systems

Engineering, Kyutech (Kyutech is one strategic partner of UL) : visiting master students (6), PhDs (2) and Professor (3) from Kyutech (LARSEN and Neurorhythms), 2020). 2 common workshops LORIA/Kyutech “robotic and Neurosciences” organized in Mars 2018 at the LORIA (12 participants), in March 2019 in Kyutech (40 participants).

2.2. Référence 2. : La production scientifique est proportionnée au potentiel de recherche de l'équipe et répartie entre ses personnels

2.2.1 Homogénéité de la production scientifique entre les permanents.

Voir DAE labo.

2.2.2 Accompagnement des jeunes chercheurs.

Voir DAE labo.

2.2.3 Accompagnement des chercheurs qui reprennent l'activité recherche.

Voir DAE labo.

2.2.4 Production scientifique des doctorants.

The department 5 produced 3.6 publications per PhD student in average, with a strong involvement in the experimental platform based validation and software development.

3. Domaine 4 : Inscription des activités de recherche dans la société

3.1. Référence 1 : L'équipe se distingue par la qualité de ses interactions non-académiques

Department 5 had and has several number of CIFRE contracts with industrial partners in the Grand Est region (Pharmagest, ST Gobain PAM, AGORAA, Xtramile, Yupeek) or outside (PSA, Safran, Facebook). Research collaborations are also on going based on research contracts or PhD funding with several non-academic institutions : INRS (institut national de recherche et de sécurité) specifically in the field of robotics and human/robot interactions, DGA (délégation générale de l'armement), CNED (Centre national d'enseignement à distance) and the CHRU of Nancy, IRR of Nancy (Institut Régional de Réadaptation, OHS (office d'hygiène sociale), Arts Museum of Nancy.

3.2. Référence 2 : L'équipe développe des produits à destination du monde socio-économique

Cooperation with different companies through CIFRE contracts allows the department to transfer its knowledge to the economic sphere.

3.3. Référence 3 : L'équipe partage ses connaissances avec le grand public et intervient dans des débats de société

Members of the department are highly involved in scientific dissemination activities. The most important and regular activities are listed here :

3.3.1 Recurrent activities

- café des sciences ;
- forum for Cognitive Sciences, Université de Lorraine.
- demonstrations in “fête de la sciences”, “Village de la Science”, “Nuits de la Science”, Hôpital Virtuel de Lorraine ;
- several “Brain week” at central hospital, Nancy.

3.3.2 Non-recurrent activities

- interviews for major newspapers and magazines : Est Républicain, 20 Minutes, Les Echos, Le Monde, Telerama, L'Humanité, Les Inrockuptibles, Actu IA ;
- interviews and scientific spots in regional or national media : TV (France 3), radios (Europe 1, france Info, france bleu, france culture), newspapers (Le Monde, Est-Républicain, Internet (Youtube, commentcamarache.net,...)) ;
- participation to RING the festival (art festival on numeric) at Nancy ;
- articles in transfer journals.

Références bibliographiques du département 5

Thèses	27
Habilitations à diriger des recherches	29
Journaux internationaux	29
Conférences invitées	46
Conférences internationales majeures	47
Autre conférences internationales	57
Journaux nationaux	71
Conférences nationales	71
Ouvrages	74
Ouvrages collectifs ou actes de conférence	74
Chapitres de livres	76
Médiation scientifique	78
Autres publications	79

Thèses

- [1] Benoît CHAPPET DE VANGEL. "Cellular model of dynamic neural fields". Thèse de doct. Université de Lorraine, novembre 2016. [tel-01482251](#).
- [2] Abdallah DIB. "Toward a motion capture system in 3D for a mobile robot moving in a cluttered environment". Thèse de doct. Université de Lorraine, mai 2016. [tel-01752233](#).
- [3] Lina FAHED. "Predicting and influencing the appearance of events in a complex sequence". Thèse de doct. Université de Lorraine, octobre 2016. [tel-01470524](#).
- [4] Mariia FEDOTENKOVA. "Extraction of multivariate components in brain signals obtained during general anesthesia". Thèse de doct. Université de Lorraine, décembre 2016. [tel-01527901](#).
- [5] Meysam HASHEMI. "Analytical and numerical studies of thalamo-cortical neural populationmodels during general anesthesia". Thèse de doct. Université de Lorraine, janvier 2016. [tel-01754610](#).
- [6] Marharyta ALEKSANDROVA. "Matrix Factorization and Contrast Analysis Techniques for Recommendation". Thèse de doct. Université de Lorraine, juillet 2017. [tel-01585248](#).
- [7] Mohamad DAHER. "High Integrity Personal Tracking Using Fault Tolerant Multi-Sensor Data Fusion". Thèse de doct. Université de Lille 1, Sciences et Technologies ; CRISTAL UMR 9189, décembre 2017. [tel-01740905](#).
- [8] Iñaki FERNÁNDEZ PÉREZ. "Distributed Embodied Evolutionary Adaptation of Behaviors in Swarms of Robotic Agents". Thèse de doct. Université de Lorraine, décembre 2017. [tel-01695773](#).

- [9] Francesco GIOVANNINI. "Mathematical Modelling of Neural Oscillations in Hippocampal Memory Networks during Waking and under General Anaesthesia". Thèse de doct. Université de Lorraine, septembre 2017. [tel-01661465](#).
- [10] Nassim KALDE. "Robotic Coverage and Exploration as Sequential Decision-Making Problems". Thèse de doct. Université de Lorraine, décembre 2017. [tel-01701729](#).
- [11] Cecilia LINDIG LEÓN. "Multilabel classification of EEG-based combined motor imageries implemented for the 3D control of a robotic arm". Thèse de doct. Université de Lorraine, janvier 2017. [tel-01549139](#).
- [12] Van Quan NGUYEN. "Mapping of a sound environment by a mobile robot". Thèse de doct. Université de Lorraine, novembre 2017. [tel-01661501](#).
- [13] Yacine ABOUD. "Pattern mining : between accessibility and robustness". Thèse de doct. Université de Lorraine, novembre 2018. [tel-01977804](#).
- [14] Seyed Ziaeddin ALBORZI. "Automatic Discovery of Hidden Associations Using Vector Similarity : Application to Biological Annotation Prediction". Thèse de doct. Université de Lorraine, février 2018. [tel-01792299](#).
- [15] Konstantinos CHATZILYGEROUDIS. "Micro-Data Reinforcement Learning for Adaptive Robots". Thèse de doct. Universite de Lorraine, décembre 2018. [tel-01966770](#).
- [16] Oriane DERMY. "Movement Prediction : From Simple Gesture to Whole-Body Movements." Thèse de doct. Université de Lorraine, décembre 2018. [tel-01966873](#).
- [17] Benjamin GRAS. "The forgotten users of social recommendation". Thèse de doct. Université de Lorraine, janvier 2018. [tel-01764021](#).
- [18] Amaury L'HUILLIER. "Modeling diversity over time to understand user context in recommender systems". Thèse de doct. Université de Lorraine, novembre 2018. [tel-01976800](#).
- [19] Gabin PERSONENI. "Contribution of domain ontologies for knowledge discovery in biomedical data". Thèse de doct. Université de Lorraine, novembre 2018. [tel-01925461](#).
- [20] Matthieu ZIMMER. "Developmental reinforcement learning". Thèse de doct. Université de Lorraine, janvier 2018. [tel-01735202](#).
- [21] Amélie AUSSEL. "Computational modeling of healthy and epileptic hippocampal oscillations". Thèse de doct. Université de Lorraine, novembre 2019. [tel-02437326](#).
- [22] Pedro CHAVEZ BARRIOS. "Design of information and technology tools to support the process of creativity and innovation". Thèse de doct. Université de Lorraine, septembre 2019. [tel-02499176](#).
- [23] Maria-Elisa RUIZ-ECHARTEA. "Pairwise and Multi-Component Protein-Protein Docking Using Exhaustive Branch-and-Bound Tri-Dimensional Rotational Searches". Thèse de doct. Université de Lorraine, décembre 2019. [tel-02860654](#).
- [24] Andrii Dmytryvych SHACHYKOV. "Neural modeling of human motor coordination inspired by biological signals aiming for parkinsonian gaits". Thèse de doct. Université de Lorraine ; Institut polytechnique de Kiev (Ukraine), décembre 2019. [tel-02735309](#).
- [25] Julie BU DAHER. "Sequential Pattern Generalization for Mining Multi-source Data". Thèse de doct. Université de Lorraine, décembre 2020. [tel-03184696](#).
- [26] Adam GAIER. "Accelerating Evolutionary Design Exploration with Predictive and Generative Models". Thèse de doct. Université de Lorraine, juillet 2020. [tel-02964666](#).

- [27] Melanie JOUAITI. "Improving Motor Coordination in Human-Robot Interactions using Bio-inspired Controllers". Thèse de doct. Université de Lorraine, juin 2020. [tel-02929729](#).
- [28] Rituraj KAUSHIK. "Data-Efficient Robot Learning using Priors from Simulators". Thèse de doct. Université de Lorraine, juillet 2020. [tel-02976390](#).
- [29] Antoine MAHE. "Neural network based system identification for model predictive control". Thèse de doct. CentraleSupélec, décembre 2020. [tel-03564478](#).
- [30] Adrien MALAISÉ. "Human movement learning with wearable sensors : towards ergonomic assessment automation". Thèse de doct. Université de lorraine, juillet 2020. [tel-02896582](#).
- [31] Sébastien RIMBERT. "Contribution of median nerve stimulation in the design of a BCI based on cerebral motor activity : towards improvement in the detection of intraoperative awareness during general anaesthesia". Thèse de doct. Université de Lorraine, juillet 2020. [tel-02949285](#).
- [32] Oleksii AVILOV. "Deep learning methods for motor imagery detection from raw EEG : applications to brain-computer interfaces". Thèse de doct. Université de Lorraine ; Institut polytechnique de Kiev (Ukraine), février 2021. [tel-03229010](#).
- [33] Yann BERNARD. "Neuromorphic computing for robust exploration and categorization of visual and multimodal environments in embedded systems." Thèse de doct. Université de Lorraine, décembre 2021. [tel-03547909](#).
- [34] Yassine EL KHADIRI. "Bayesian inference for activities of daily living detection for elderly home care applications". Thèse de doct. Université de Lorraine, juillet 2021. [tel-03542586](#).
- [35] Waldez GOMES. "Improving Ergonomics Through Physical Human-Robot Collaboration". Thèse de doct. Université de lorraine, décembre 2021. [tel-03500477](#).
- [36] Wissem INOUBLI. "Analysis and Mining of Large Dynamic Graphs : case of graph clustering". Thèse de doct. Université de Tunis El Manar (Tunisie), janvier 2021. [tel-03428615](#).
- [37] Baptiste MENGES. "Study and design of a robotic systemcooperative in a severe steel environment". Thèse de doct. Université de Lorraine, décembre 2021. [tel-03598213](#).
- [38] Barbara MOISSA. "Maximizing students' engagement through effort-based recommendations". Thèse de doct. Université de Lorraine, décembre 2021. [tel-03564001](#).
- [39] Pierre-Edouard OSCHE. "Recommanding sequences in a multidimensional space". Thèse de doct. Université de Lorraine, février 2021. [tel-03248061](#).
- [40] Bishnu SARKER. "On Graph-Based Approaches for Protein Function Annotation and Knowledge Discovery". Thèse de doct. Université de Lorraine, avril 2021. [tel-03274084](#).

Habilitations à diriger des recherches

- [41] Olivier BUFFET. "Prise de décision séquentielle dans l'incertain : Exploiter la structure et rester dans le cadre". Habilitation à diriger des recherches. Université de Lorraine, décembre 2017. [tel-01673278](#).

- [42] Francis COLAS. "Modélisation bayésienne et robotique". Habilitation à diriger des recherches. Université de Lorraine, mai 2017. [tel-01647934](#).
- [43] Armelle BRUN. "Sur les traces du futur : entre comprendre et predire". Habilitation à diriger des recherches. Université de Lorraine, avril 2018. [tel-01832540](#).
- [44] Laure BUHRY. "The Music of the Brain : Modeling the Mechanisms of Genesis and Maintenance of Neuronal Oscillatory Rhythms". Habilitation à diriger des recherches. Université de Lorraine, mars 2021. [tel-03172559](#).

Journaux internationaux

- [45] marharyta aleksandrova marharyta, Armelle BRUN, Anne BOYER et Oleg CHERTOV. "Identifying Representative Users in Matrix Factorization-based Recommender Systems : Application to Solving the Content-less New Item Cold-start Problem". In : *Journal of Intelligent Information Systems* 48.2 (décembre 2016), p. 365-397. DOI : [10.1007/s10844-016-0418-3](https://doi.org/10.1007/s10844-016-0418-3). hal-01336300.
- [46] Chloé C. AMBROSET, Charles COLUZZI, Gérard GUÉDON, Marie-Dominique DEVIGNES, Valentin LOUX, Thomas LACROIX, Sophie PAYOT et Nathalie N. LEBLOND-BOURGET. "New Insights into the Classification and Integration Specificity of Streptococcus Integrative Conjugative Elements through Extensive Genome Exploration". In : *Frontiers in Microbiology* 6.6 (janvier 2016), p. 1483. DOI : [10.3389/fmicb.2015.01483](https://doi.org/10.3389/fmicb.2015.01483). hal-01262284.
- [47] Mihai ANDRIES, Olivier SIMONIN et François CHARPILLET. "Localisation of humans, objects and robots interacting on load-sensing floors". In : *IEEE Sensors Journal* 16.4 (février 2016), p. 1026-1037. DOI : [10.1109/JSEN.2015.2493122](https://doi.org/10.1109/JSEN.2015.2493122). hal-01196042.
- [48] Sabeur ARIDHI et Engelbert MEPHU. "Big Graph Mining : Frameworks and Techniques". In : *Big Data Research* 6 (décembre 2016), p. 1-10. DOI : [10.1016/j.bdr.2016.07.002](https://doi.org/10.1016/j.bdr.2016.07.002). hal-03025930.
- [49] Sabeur ARIDHI, Haïtham SGHAIER, Manel ZOGHLAMI, Mondher MADDOURI et Engelbert Mephu NGUIFO. "Prediction of Ionizing Radiation Resistance in Bacteria Using a Multiple Instance Learning Model". In : *Journal of Computational Biology* 23.1 (janvier 2016), p. 10-20. DOI : [10.1089/cmb.2015.0134](https://doi.org/10.1089/cmb.2015.0134). hal-01807946.
- [50] Pierre BESSIÈRE, Julien DIARD et Francis COLAS. "Modèles probabilistes formels pour problèmes cognitifs usuels". In : *Intellectica - La revue de l'Association pour la Recherche sur les sciences de la Cognition (ARCo)*. Nouvelles approches en robotique cognitive 65.1 (juin 2016), p. 111-141. DOI : [10.3406/intel.2016.1792](https://doi.org/10.3406/intel.2016.1792). hal-01345697.
- [51] Emmanuel BRESSO, Vincent LEROUX, Martin URBAN, Kim HAMMOND-KOSACK, Bernard MAIGRET et Natália Florêncio MARTINS. "Structure-based virtual screening of hypothetical inhibitors of the enzyme longiborneol synthase-a potential target to reduce Fusarium head blight disease". In : *Journal of Molecular Modeling* 22.7 (juillet 2016). DOI : [10.1007/s00894-016-3021-1](https://doi.org/10.1007/s00894-016-3021-1). hal-01392851.
- [52] Emmanuel BRESSO, Roberto TOGAWA, Kim HAMMOND-KOSACK, Martin URBAN, Bernard MAIGRET et Natalia Florencio MARTINS. "GPCRs from fusarium graminearum detection, modeling and virtual screening - the search for new routes to control head blight disease". In : *BMC Bioinformatics* 17.S18 (décembre 2016), p. 14. DOI : [10.1186/s12859-016-1342-9](https://doi.org/10.1186/s12859-016-1342-9). hal-01537771.

- [53] Antoine CULLY et Jean-Baptiste MOURET. "Evolving a Behavioral Repertoire for a Walking Robot". In : *Evolutionary Computation* 24.1 (2016), p. 33. DOI : [10.1162/EVCO_a_00143](https://doi.org/10.1162/EVCO_a_00143). hal-01095543.
- [54] Priscilla DA SILVA FIGUEIREDO CELESTINO GOMES, Isaure CHAUVOT DE BEAUCHÈNE, Nicolas PANEL, Sophie LOPES, Paulo De SEPULVEDA, Pedro G PASCUTTI, E SOLARY et Luba TCHERTANOV. "Insight on mutation-induced resistance from molecular dynamics simulations of the native and mutated CSF-1R and KIT". In : *PLoS ONE* 11.7 (juillet 2016). DOI : [10.1371/journal.pone.0160165](https://doi.org/10.1371/journal.pone.0160165). hal-01505869.
- [55] Mohamad DAHER, Ahmad DIAB, Maan EL BADAOUI EL NAJJAR, Mohamad KHALIL et François CHARPILLETT. "Automatic Fall Detection System using Sensing Floors". In : *International Journal of Computing and Information Sciences (IJCIS)* 12.1 (décembre 2016), p. 75-82. DOI : [10.21700/ijcis.2016.110](https://doi.org/10.21700/ijcis.2016.110). hal-01393478.
- [56] Hugo de ALMEIDA, Vincent LEROUX, Flávia Nader MOTTA, Philippe GRELLIER, Bernard MAIGRET, Jaime Martins SANTANA et Izabela Marques Dourado BASTOS. "Identification of novel Trypanosoma cruzi prolyl oligopeptidase inhibitors by structure-based virtual screening". In : *Journal of Computer-Aided Molecular Design* (octobre 2016). DOI : [10.1007/s10822-016-9985-1](https://doi.org/10.1007/s10822-016-9985-1). hal-01392842.
- [57] Jilles Steeve DIBANGOYE, Christopher AMATO, Olivier BUFFET et François CHARPILLETT. "Optimally Solving Dec-POMDPs as Continuous-State MDPs". In : *Journal of Artificial Intelligence Research* 55 (février 2016), p. 443-497. DOI : [10.1613/jair.4623](https://doi.org/10.1613/jair.4623). hal-01279444.
- [58] Ilaria GAUDIELLO, Elisabetta ZIBETTI, Sébastien LEFORT, Mohamed CHETOUANI et Serena IVALDI. "Trust as indicator of robot functional and social acceptance. An experimental study on user conformation to iCub answers". In : *Computers in Human Behavior* (2016). DOI : [10.1016/j.chb.2016.03.057](https://doi.org/10.1016/j.chb.2016.03.057). hal-01298502.
- [59] Simon GAY, Alain MILLE, Olivier GEORGEON et Alain DUTECH. "Autonomous construction and exploitation of a spatial memory by a self-motivated agent". In : *Cognitive Systems Research* 41 (2016), p. 1-35. DOI : [10.1016/j.cogsys.2016.07.004](https://doi.org/10.1016/j.cogsys.2016.07.004). hal-01371877.
- [60] Serena IVALDI, Jan BABIČ, Michael MISTRY et Robin MURPHY. "Special Issue on Whole-body control of contacts and dynamics for humanoid robots". In : *Autonomous Robots* (janvier 2016). DOI : [10.1007/s10514-016-9545-5](https://doi.org/10.1007/s10514-016-9545-5). hal-01258282.
- [61] Serena IVALDI, Sébastien LEFORT, Jan PETERS, Mohamed CHETOUANI, Joelle PROVASI et Elisabetta ZIBETTI. "Towards engagement models that consider individual factors in HRI : on the relation of extroversion and negative attitude towards robots to gaze and speech during a human-robot assembly task : Experiments with the iCub humanoid robot". In : *International Journal of Social Robotics* (2016). DOI : [10.1007/s12369-016-0357-8](https://doi.org/10.1007/s12369-016-0357-8). hal-01322231.
- [62] Lucile JOLLY, Florent PITTEL, Jean-Pierre CAUDAL, Jean-Baptiste MOURET, Cécilia HOUDELIER, Sophie LUMINEAU et Emmanuel DE MARGERIE. "Animal-to-robot social attachment : initial requisites in a gallinaceous bird". In : *Bioinspiration and Biomimetics* 11.1 (février 2016), p. 016007. DOI : [10.1088/1748-3190/11/1/016007](https://doi.org/10.1088/1748-3190/11/1/016007). hal-01274231.
- [63] Ghania KHENSOUS, Belhadri MESSABIH, Abdellah CHOUARFIA et Bernard MAIGRET. "Comparison of Cuckoo Search, Tabu Search and TS-Simplex algorithms for unconstrained global optimization". In : *Computer Modelling and New Technologies* 20.4 (décembre 2016), p. 23-29. hal-01537775.

- [64] Marc F. LENSIK, Sameer VELANKAR et al. "Prediction of homo- and hetero-protein complexes by protein docking and template-based modeling : a CASP-CAPRI experiment". In : *Proteins - Structure, Function and Bioinformatics*. Special Issue : Eleventh Meeting on the Critical Assessment of Techniques for Protein Structure Prediction 84.S1 (septembre 2016), p. 323-348. DOI : [10.1002/prot.25007](https://doi.org/10.1002/prot.25007). hal-01309105.
- [65] Yongxin LIAO, Mario LEZOCHÉ, Hervé PANETTO et Nacer BOUDJLIDA. "Semantic annotations for semantic interoperability in a product lifecycle management context". In : *International Journal of Production Research* 54.18 (septembre 2016), p. 5534-5553. DOI : [10.1080/00207543.2016.1165875](https://doi.org/10.1080/00207543.2016.1165875). hal-01286475.
- [66] Natália Florêncio MARTINS, Emmanuel BRESSO, Roberto C. TOGAWA, Martin URBAN, John ANTONIW, Bernard MAIGRET et Kim HAMMOND-KOSACK. "Searching for Novel Targets to Control Wheat Head Blight Disease-I-Protein Identification, 3D Modeling and Virtual Screening". In : *Advances in Microbiology* 06.11 (septembre 2016), p. 811-830. DOI : [10.4236/aim.2016.611079](https://doi.org/10.4236/aim.2016.611079). hal-01392860.
- [67] Henok MENGISTU, Joost HUIZINGA, Jean-Baptiste MOURET et Jeff CLUNE. "The Evolutionary Origins of Hierarchy". In : *PLoS Computational Biology* 12.6 (2016), p. 23. DOI : [10.1371/journal.pcbi.1004829.s021](https://doi.org/10.1371/journal.pcbi.1004829.s021). hal-01330681.
- [68] Jean-Baptiste MOURET. "Micro-Data Learning : The Other End of the Spectrum". In : *ERCIM News* 107 (septembre 2016). arXiv : [1610.00946](https://arxiv.org/abs/1610.00946), p. 2. hal-01374786.
- [69] Emilie NEVEU, David RITCHIE, Petr POPOV et Sergei GRUDININ. "PEPSI-Dock : a detailed data-driven protein–protein interaction potential accelerated by polar Fourier correlation". In : *Bioinformatics* 32.7 (août 2016), p. i693-i701. DOI : [10.1093/bioinformatics/btw443](https://doi.org/10.1093/bioinformatics/btw443). hal-01358645.
- [70] Thanh G NGUYEN, Antoine MANZANERA, Walter G KROPATSCH et Xuan Son NGUYEN. "Topological Attribute Patterns for Texture Recognition". In : *Pattern Recognition Letters* 80 (2016), p. 91-97. DOI : [10.1016/j.patrec.2016.06.003](https://doi.org/10.1016/j.patrec.2016.06.003). hal-01451126.
- [71] Dzmitry PADHORNY, Andrey KAZENNOV, Brandon S ZERBE, Kathryn A PORTER, Bing XIA, Scott MOTTARELLA, Yaroslav KHOLODOV, David RITCHIE, Sandor VAJDA et Dima KOZAKOV. "Protein–protein docking by fast generalized Fourier transforms on 5D rotational manifolds". In : *Proceedings of the National Academy of Sciences of the United States of America* 113.30 (mai 2016), E4286-E4293. DOI : [10.1073/pnas.1603929113](https://doi.org/10.1073/pnas.1603929113). hal-01371087.
- [72] Vincent PADOIS, Serena IVALDI, Jan BABIČ, Michael MISTRY, Jan PETERS et Francesco NORI. "Whole-body multi-contact motion in humans and humanoids : Advances of the CoDyCo European project". In : *Robotics and Autonomous Systems* (2016). DOI : [10.1016/j.robot.2016.08.017](https://doi.org/10.1016/j.robot.2016.08.017). hal-01399360.
- [73] Mylène RICHARD, Alicia CHATEAU, Christian JELSCH, Claude DIDIERJEAN, Xavier MANIVAL, Christophe CHARRON, Bernard MAIGRET, Muriel BARBERI-HEYOB, Yves CHAPLEUR, Cédric BOURA et Nadia PELLEGRINI-MOISE. "Carbohydrate-based peptidomimetics targeting neuropilin-1 : synthesis, molecular docking study and in vitro biological activities". In : *Bioorganic and Medicinal Chemistry* 24.21 (novembre 2016), p. 5315-5325. DOI : [10.1016/j.bmc.2016.08.052](https://doi.org/10.1016/j.bmc.2016.08.052). hal-02356229.
- [74] David RITCHIE. "Calculating and scoring high quality multiple flexible protein structure alignments". In : *Bioinformatics* 32.17 (mai 2016), p. 2650-2658. DOI : [10.1093/bioinformatics/btw300](https://doi.org/10.1093/bioinformatics/btw300). hal-01371083.

- [75] David W. RITCHIE et Sergei GRUDININ. "Spherical polar Fourier assembly of protein complexes with arbitrary point group symmetry". In : *Journal of Applied Crystallography* 49.1 (février 2016), p. 158-167. DOI : [10.1107/S1600576715022931](https://doi.org/10.1107/S1600576715022931). hal-01261402.
- [76] Marcel STEINMETZ, Joerg HOFFMANN et Olivier BUFFET. "Goal Probability Analysis in MDP Probabilistic Planning : Exploring and Enhancing the State of the Art". In : *Journal of Artificial Intelligence Research* 57 (octobre 2016), p. 229-271. DOI : [10.1613/jair.5153](https://doi.org/10.1613/jair.5153). hal-01413047.
- [77] Tamara TOŠIĆ, Kristin K. SELLERS, Flavio FRÖHLICH, Mariia FEDOTENKOVA, Peter BEIM GRABEN et Axel HUTT. "Statistical Frequency-Dependent Analysis of Trial-to-Trial Variability in Single Time Series by Recurrence Plots". In : *Frontiers in Systems Neuroscience* 9.184 (janvier 2016). DOI : [10.3389/fnsys.2015.00184](https://doi.org/10.3389/fnsys.2015.00184). hal-01159664.
- [78] Arash AJOURDANI, Andrea Maria ZANCHETTIN, Serena IVALDI, Alin ALBU-SCHÄFFER, Kazuhiro KOSUGE et Oussama KHATIB. "Progress and Prospects of the Human-Robot Collaboration". In : *Autonomous Robots* (2017), p. 1-17. DOI : [10.1007/s10514-017-9677-2](https://doi.org/10.1007/s10514-017-9677-2). hal-01643655.
- [79] Seyed Ziaeddin ALBORZI, Marie-Dominique DEVIGNES et David W. RITCHIE. "ECDomainMiner : discovering hidden associations between enzyme commission numbers and Pfam domains". In : *BMC Bioinformatics* 18.1 (décembre 2017), p. 107. DOI : [10.1186/s12859-017-1519-x](https://doi.org/10.1186/s12859-017-1519-x). hal-01466842.
- [80] Salvatore Maria ANZALONE, Giovanna VARNI, Serena IVALDI et Mohamed CHETOUANI. "Automated prediction of Extraversion during Human-Humanoid interaction". In : *International Journal of Social Robotics* (2017). DOI : [10.1007/s12369-017-0399-6](https://doi.org/10.1007/s12369-017-0399-6). hal-01492787.
- [81] Sabeur ARIDHI, Alberto MONTRESOR et Yannis VELEGRAKIS. "BLADYG : A Graph Processing Framework for Large Dynamic Graphs". In : *Big Data Research* (2017). arXiv : [1701.00546v1](https://arxiv.org/abs/1701.00546v1). DOI : [10.1016/j.bdr.2017.05.003](https://doi.org/10.1016/j.bdr.2017.05.003). hal-01577882.
- [82] Clémence CHAMARD-JOVENIN, Charlène THIÉBAUT, Amand CHESNEL, Emmanuel BRESSO, Chloé MOREL, Malika SMAÏL-TABBONE, Marie-Dominique DEVIGNES, Taha BOUKHOBZA et Hélène DUMOND. "Low-dose alkylphenol exposure promotes mammary epithelium alterations and transgenerational developmental defects, but does not enhance tumorigenic behaviour of breast cancer cells". In : *Frontiers in Endocrinology* 8 (octobre 2017), p. 272. DOI : [10.3389/fendo.2017.00272](https://doi.org/10.3389/fendo.2017.00272). hal-01609240.
- [83] Konstantinos CHATZILYGEROUDIS, Vassilis VASSILIADES et Jean-Baptiste MOURET. "Reset-free Trial-and-Error Learning for Robot Damage Recovery". In : *Robotics and Autonomous Systems* (2017). arXiv : [1610.04213](https://arxiv.org/abs/1610.04213) - 18 pages, 16 figures, 3 tables, 6 pseudocodes/algorithms, video at @normalcrurlhttps://youtu.be/IqtyHFrB3BU, p. 1-19. DOI : [10.1016/j.robot.2017.11.010](https://doi.org/10.1016/j.robot.2017.11.010). hal-01654641.
- [84] Charles COLUZZI, Gérard GUÉDON, Marie-Dominique DEVIGNES, Chloé C. AMBROSET, Valentin LOUX, Thomas LACROIX, Sophie PAYOT et Nathalie N. LEBLOND-BOURGET. "A Glimpse into the World of Integrative and Mobilizable Elements in Streptococci Reveals an Unexpected Diversity and Novel Families of Mobilization Proteins". In : *Frontiers in Microbiology* 8 (mars 2017), p. 16. DOI : [10.3389/fmicb.2017.00443](https://doi.org/10.3389/fmicb.2017.00443). hal-01580789.
- [85] Pierre COUVINEAU, Hugo de ALMEIDA, Bernard MAIGRET, Catherine LLORENS-CORTES et Xavier ITURRIOZ. "Involvement of arginine 878 together with Ca2+ in aminopeptidase A substrate specificity for N-terminal acidic amino-acid residues." In : *PLoS ONE* 12.9 (septembre 2017), e0184237. DOI : [10.1371/journal.pone.0184237](https://doi.org/10.1371/journal.pone.0184237). hal-01580832.

- [86] Mohamad DAHER, Ahmad DIAB, Maan EL BADAQUI EL NAJJAR, Mohamad KHALIL et François CHARPILLET. "Elder Tracking and Fall Detection System using Smart Tiles". In : *IEEE Sensors Journal* 17.2 (janvier 2017). DOI : [10.1109/JSEN.2016.2625099](https://doi.org/10.1109/JSEN.2016.2625099). hal-01393492.
- [87] Oriane DERMY, Alexandros PARASCHOS, Marco EWERTON, Jan PETERS, François CHARPILLET et Serena IVALDI. "Prediction of Intention during Interaction with iCub with Probabilistic Movement Primitives". In : *Frontiers in Robotics and AI* 4 (2017). DOI : [10.3389/frrob.2017.00045](https://doi.org/10.3389/frrob.2017.00045). hal-01613671.
- [88] Wajdi DHIFLI, Sabeur ARIDHI et Engelbert MEPHU NGUIFO. "MR-SimLab : Scalable subgraph selection with label similarity for big data". In : *Information Systems* 69 (2017), p. 155-163. DOI : [10.1016/j.is.2017.05.006](https://doi.org/10.1016/j.is.2017.05.006). hal-01573398.
- [89] Amandine DUBOIS et François CHARPILLET. "Measuring frailty and detecting falls for elderly home care using depth camera". In : *JAISE - Journal of Ambient Intelligence and Smart Environments* 9.4 (juin 2017), p. 469-481. DOI : [10.3233/AIS-170444](https://doi.org/10.3233/AIS-170444). hal-01657234.
- [90] Marwa EL HOUASLI, Bernard MAIGRET, Marie-Dominique DEVIGNES, Anisah W GHOORAH, Sergei GRUDININ et David RITCHIE. "Modeling and minimizing CAPRI round 30 symmetrical protein complexes from CASP-11 structural models". In : *Proteins : Structure, Function, and Genetics*. Special Issue : Sixth Meeting on the Critical Assessment of Predicted Interactions 85.3 (mars 2017), p. 463-469. DOI : [10.1002/prot.25182](https://doi.org/10.1002/prot.25182). hal-01388654.
- [91] Francesco GIOVANNINI, Beate KNAUER, Motoharu YOSHIDA et Laure BUHRY. "The CAN-In network : a biologically-inspired model for self-sustained theta oscillations and memory maintenance in the hippocampus ". In : *Hippocampus* (janvier 2017). DOI : [10.1002/hipo.22704](https://doi.org/10.1002/hipo.22704). hal-01426362.
- [92] Hoang Nam Ho, Mourad RABAH, Samuel NOWAKOWSKI et Pascal ESTRAILLER. "Ap-proche de présélection multicritère à base de traces pour la prise de décision dans les applications interactives de type jeux". In : *Revue des Sciences et Technologies de l'Information - Série RIA : Revue d'Intelligence Artificielle* 31.3 (juin 2017), p. 311-335. DOI : [10.3166/ria.31.311-335](https://doi.org/10.3166/ria.31.311-335). hal-01576934.
- [93] Abderrahman IGGIDR, Jair KOILLER, Maria Lucia F. PENNA, Gauthier SALLET, Moacyr Alvim Silva SILVA et Max O. SOUZA. "Vector borne diseases on an urban environment : the effects of heterogeneity and human circulation". In : *Ecological Complexity* 30 (2017), p. 76-90. DOI : [10.1016/j.ecocom.2016.12.006](https://doi.org/10.1016/j.ecocom.2016.12.006). hal-01422432.
- [94] Fanélie JOUENNE, Isaure CHAUVOT DE BEAUCHÈNE, Emeline BOLLAERT, Marie-Francoise AVRIL, Olivier CARON, Olivier INGSTER, Axel LECESNE, Patrick BENUISIGLIO, Philippe TERRIER, Vincent CAUMETTE, Daniel PISSALOUX, Arnaud DE LA FOUCHEARDIERE, Odile CABARET, Birama N'DIAYE, Amélie VELGHE, Gaëlle BOUGEARD, Graham J. MANN, Serge KOSCIELNY, Jennifer H. BARRETT, Mark HARLAND, Julia NEWTON-BISHOP, Nelleke GRUIS, Remco VAN DOORN, Marion GAUTHIER-VILLARS, Gaelle PIERRON, Dominique STOPPA-LYONNET, Isabelle COUPIER, Rosine GUIMBAUD, Capucine DELNATTE, Jean Yves SCOAZEC, Alexander EGGERMONT, Jean FEUNTEUN, Luba TCHERTANOV, Jean-Baptiste DEMOULIN, Thierry FREBOURG et Brigitte BRESSAC DE PAILLERETS. "Germline CDKN2A/P16INK4A mutations contribute to genetic determinism of sarcoma". In : *Journal of Medical Genetics* 54.9 (septembre 2017), p. 607-612. DOI : [10.1136/jmedgenet-2016-104402](https://doi.org/10.1136/jmedgenet-2016-104402). hal-01580787.

- [95] Nour El Islem KARABADJI, Hassina SERIDI, Fouad BOUSETOUANE, Wajdi DHIFLI et Sabeur ARIDHI. "An evolutionary scheme for decision tree construction". In : *Knowledge-Based Systems* 119 (mars 2017), p. 166-177. DOI : [10.1016/j.knosys.2016.12.011](https://doi.org/10.1016/j.knosys.2016.12.011). hal-01574079.
- [96] Kunihiro MORISHIMA, Mitsuaki KUNO, Akira NISHIO, Nobuko KITAGAWA, Yuta MANABE, Masaki MOTO, Fumihiro TAKASAKI, Hirofumi FUJII, Kotaro SATOH, Hideyo KODAMA, Kohei HAYASHI, Shigeru ODAKA, Sébastien PROCUREUR, David ATTÉ, Simon BOUTEILLE, Denis CALVET, Christopher FILOSA, Patrick MAGNIER, Irakli MANDJAVIDZE, Marc RIALLOT, Benoit MARINI, Pierre GABLE, Yoshikatsu DATE, Makiko SUGIURA, Yasser ELSHAYEB, Tamer ELNADY, Mustapha EZZY, Emmanuel GUERRIERO, Vincent STEIGER, Nicolas SERIKOFF, Jean-Baptiste MOURET, Bernard CHARLÈS, Hany HELAL et Mehdi TAYOUBI. "Discovery of a big void in Khufu's Pyramid by observation of cosmic-ray muons". In : *Nature* 542 (novembre 2017), p. 386-390. DOI : [10.1038/nature24647](https://doi.org/10.1038/nature24647). hal-01630260.
- [97] Xuan Son NGUYEN, Thanh Phuong NGUYEN, François CHARPILLET et Ngoc-Son VU. "Local Derivative Pattern for Action Recognition in Depth Images". In : *Multimedia Tools and Applications* (mai 2017), p. 1-19. DOI : [10.1007/s11042-017-4749-z](https://doi.org/10.1007/s11042-017-4749-z). hal-01657473.
- [98] Samuel NOWAKOWSKI. "In the jungle of the cyberspace". In : *L'Eléphant* (juillet 2017). hal-01660339.
- [99] Gabin PERSONENI, Emmanuel BRESSO, Marie-Dominique DEVIGNES, Michel DUMONTIER, Malika SMAÏL-TABBONE et Adrien COULET. "Discovering associations between adverse drug events using pattern structures and ontologies". In : *Journal of Biomedical Semantics* 93 (2017), p. 539-546. DOI : [10.1186/s13326-017-0137-x](https://doi.org/10.1186/s13326-017-0137-x). hal-01576341.
- [100] John RIEFFEL, Jean-Baptiste MOURET, Nicolas BREDECHE et Evert HAASDIJK. "Introduction to the Evolution of Physical Systems". In : *Artificial Life* 23.2 (mai 2017), p. 119-123. DOI : [10.1162/ARTL_e_00232](https://doi.org/10.1162/ARTL_e_00232). hal-01631648.
- [101] Francesco ROMANO, Gabriele NAVA, Morteza AZAD, Jernej CAMERNIK, Stefano DAFARRA, Oriane DERMY, Claudia LATELLA, Maria LAZZARONI, Ryan LOBER, Marta LORENZINI, Daniele PUCCI, Olivier SIGAUD, Silvio TRAVERSARO, Jan BABIČ, Serena IVALDI, Michael MISTRY, Vincent PADOIS et Francesco NORI. "The CoDyCo Project achievements and beyond : Towards Human Aware Whole-body Controllers for Physical Human Robot Interaction". In : *IEEE Robotics and Automation Letters* (2017). DOI : [10.1109/LRA.2017.2768126](https://doi.org/10.1109/LRA.2017.2768126). hal-01620789.
- [102] Sandro ROSELLI, Alexandre OLRY, Sonia VAUTRIN, Olivier O. CORITON, David RITCHIE, Gianni GALATI, Nicolas NAVROT, Celia KRIEGER, Guilhem VIALART, Helene H. BERGES, Frederic BOURGAUD et Alain HEHN. "A bacterial artificial chromosome (BAC) genomic approach reveals partial clustering of the furanocoumarin pathway genes in parsnip". In : *Plant Journal* 89.6 (février 2017), p. 1119-1132. DOI : [10.1111/tpj.13450](https://doi.org/10.1111/tpj.13450). hal-01531248.
- [103] Alexander SASSE, Sjoerd Jacob DE VRIES, christina Eva Maria SCHINDLER, Isaure CHAUVOT DE BEAUCHÈNE et Martin ZACHARIAS. "Rapid Design of Knowledge-Based Scoring Potentials for Enrichment of Near-Native Geometries in Protein-Protein Docking". In : *PLoS ONE* (janvier 2017). DOI : [10.1371/journal.pone.0170625](https://doi.org/10.1371/journal.pone.0170625). hal-01505866.

- [104] christina Eva Maria SCHINDLER, Isaure CHAUVOT DE BEAUCHÊNE, Sjoerd Jacob DE VRIES et Martin ZACHARIAS. "Protein-protein and peptide-protein docking and refinement using ATTRACT in CAPRI". In : *Proteins : Structure, Function, and Genetics* (mars 2017). DOI : [10.1002/prot.25196](https://doi.org/10.1002/prot.25196). hal-01505867.
- [105] Vassilis VASSILIADES, Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "Using Centroidal Voronoi Tessellations to Scale Up the Multi-dimensional Archive of Phenotypic Elites Algorithm". In : *IEEE Transactions on Evolutionary Computation* (2017), p. 9. DOI : [10.1109/TEVC.2017.2735550](https://doi.org/10.1109/TEVC.2017.2735550). hal-01630627.
- [106] Seyed Ziaeddin ALBORZI, David RITCHIE et Marie-Dominique DEVIGNES. "Computational Discovery of Direct Associations between GO terms and Protein Domains". In : *BMC Bioinformatics* 19.Suppl 14 (novembre 2018), p. 413. DOI : [10.1186/s12859-018-2380-2](https://doi.org/10.1186/s12859-018-2380-2). hal-01777508.
- [107] Amélie AUSSEL, Laure BUHRY, Louise TYVAERT et Radu RANTA. "A detailed anatomical and mathematical model of the hippocampal formation for the generation of sharp-wave ripples and theta-nested gamma oscillations". In : *Journal of Computational Neuroscience* 45.3 (décembre 2018), p. 207. DOI : [10.1007/s10827-018-0704-x](https://doi.org/10.1007/s10827-018-0704-x). hal-01917285.
- [108] Oleksii AVILOV, Anton POPOV, Vladimir TIMOFIEIEV, Laurent BOUGRAIN et Patrick HENAFF. "Estimation of Imaginary Movements Quality Based on Machine Learning for Brain Computer Interface Applications". In : *Microsystems, Electronics and Acoustics* 23.5 (octobre 2018), p. 25-31. DOI : [10.20535/2523-4455.2018.23.5.134021](https://doi.org/10.20535/2523-4455.2018.23.5.134021). hal-02153795.
- [109] Derdei BICHARA et Abderrahman IGGIDR. "Multi-patch and multi-group epidemic models : A new framework". In : *Journal of Mathematical Biology* 77.1 (2018). arXiv : [1703.04554](https://arxiv.org/abs/1703.04554), p. 107-134. DOI : [10.1007/s00285-017-1191-9](https://doi.org/10.1007/s00285-017-1191-9). hal-01490764.
- [110] Karim BOUYAR MANE et Abderrahmane KHEDDAR. "Non-Decoupled Locomotion and Manipulation Planning for Low-Dimensional Systems". In : *Journal of Intelligent and Robotic Systems* 91.3-4 (2018), p. 377-401. DOI : [10.1007/s10846-017-0692-5](https://doi.org/10.1007/s10846-017-0692-5). hal-01523752.
- [111] Karim BOUYAR MANE et Abderrahmane KHEDDAR. "On Weight-Prioritized Multi-Task Control of Humanoid Robots". In : *IEEE Transactions on Automatic Control* 63.6 (2018), p. 1632-1647. DOI : [10.1109/TAC.2017.2752085](https://doi.org/10.1109/TAC.2017.2752085). hal-01247118.
- [112] Antoine CULLY, Konstantinos CHATZILYGEROUDIS, Federico ALLOCATI et Jean-Baptiste MOURET. "Limbo : A Flexible High-performance Library for Gaussian Processes modeling and Data-Efficient Optimization". In : *Journal of Open Source Software* 3.26 (juin 2018). DOI : [10.21105/joss.00545](https://doi.org/10.21105/joss.00545). hal-01884299.
- [113] Sucharita DEY, David RITCHIE et Emmanuel D LEVY. "PDB-wide identification of biological assemblies from conserved quaternary structure geometry". In : *Nature Methods* 15 (2018), p. 67-72. DOI : [10.1038/nmeth.4510](https://doi.org/10.1038/nmeth.4510). hal-01652359.
- [114] Lina FAHED, Armelle BRUN et Anne BOYER. "DEER : Distant and Essential Episode Rules for early prediction". In : *Expert Systems with Applications* (mars 2018). DOI : [10.1016/j.eswa.2017.10.035](https://doi.org/10.1016/j.eswa.2017.10.035). hal-01963859.
- [115] Adam GAIER, Alexander ASTEROTH et Jean-Baptiste MOURET. "Data-Efficient Design Exploration through Surrogate-Assisted Illumination". In : *Evolutionary Computation* 26.3 (2018), p. 381-410. DOI : [10.1162/evcoa_00231](https://doi.org/10.1162/evcoa_00231). hal-01817505.

- [116] Bernard GIRAU et César TORRES-HUITZIL. "Fault Tolerance of Self Organizing Maps". In : *Neural Computing and Applications* (octobre 2018). DOI : [10.1007/s00521-018-3769-6](https://doi.org/10.1007/s00521-018-3769-6). hal-02058459.
- [117] Meysam HASHEMI, Axel HUTT, Laure BUHRY et Jamie SLEIGH. "Optimal Model Parameter Estimation from EEG Power Spectrum Features Observed during General Anesthesia". In : *Neuroinformatics* 16.2 (avril 2018), p. 231-251. DOI : [10.1007/s12021-018-9369-x](https://doi.org/10.1007/s12021-018-9369-x). hal-03602902.
- [118] Wissem INOUBLI, Sabeur ARIDHI, Haithem MEZNI, Mondher MADDOURI et Engelbert MEPHU NGUIFO. "An experimental survey on big data frameworks". In : *Future Generation Computer Systems* 86 (septembre 2018), p. 546-564. DOI : [10.1016/j.future.2018.04.032](https://doi.org/10.1016/j.future.2018.04.032). hal-01926259.
- [119] Serena IVALDI. "Intelligent Human-Robot Collaboration with Prediction and Anticipation". In : *ERCIM News* (2018). hal-01859614.
- [120] Serena IVALDI et Maria PATERAKI. "Introduction to the Special Theme on Human-Robot Interaction". In : *ERCIM News* (2018). hal-01859728.
- [121] Melanie JOUAITI, Lancelot CARON et Patrick HENAFF. "Hebbian Plasticity in CPG Controllers Facilitates Self-Synchronization for Human-Robot Handshaking". In : *Frontiers in Neurorobotics* 12 (juin 2018), p. 1-15. DOI : [10.3389/fnbot.2018.00029](https://doi.org/10.3389/fnbot.2018.00029). hal-01811316.
- [122] Celia KRIEGER, Sandro ROSELLI, Sandra KELLNER-THIELMANN, Gianni GALATI, Bernd SCHNEIDER, Jeremy GROSJEAN, Alexandre OLRY, David RITCHIE, Ulrich MATERN, Frederic BOURGAUD et Alain HEHN. "The CYP71AZ P450 Subfamily : A Driving Factor for the Diversification of Coumarin Biosynthesis in Apiaceous Plants". In : *Frontiers in Plant Science* 9 (2018), p. 820. DOI : [10.3389/fpls.2018.00820](https://doi.org/10.3389/fpls.2018.00820). hal-01899038.
- [123] Fabien LOTTE, Laurent BOUGRAIN, Andrzej CICHOCKI, Maureen CLERC, Marco CONGEDO, Alain RAKOTOMAMONJY et Florian YGER. "A Review of Classification Algorithms for EEG-based Brain-Computer Interfaces : A 10-year Update". In : *Journal of Neural Engineering* 15.3 (avril 2018), p. 55. DOI : [10.1088/1741-2552/aab2f2](https://doi.org/10.1088/1741-2552/aab2f2). hal-01846433.
- [124] Florian MARCHAL, Sylvain CASTAGNOS et Anne BOYER. "First Attempt to Predict User Memory from Gaze Data". In : *International Journal on Artificial Intelligence Tools* (septembre 2018). DOI : [10.1142/S021821301850029X](https://doi.org/10.1142/S021821301850029X). hal-02471988.
- [125] Dominique MARTINEZ, Maxime CLÉMENT, Belkacem MESSAOUDI, Damien GERVASONI, Philippe LITAUDON et Nathalie BUONVISO. "Adaptive quantization of local field potentials for wireless implants in freely moving animals : an open-source neural recording device". In : *Journal of Neural Engineering* 15.2 (avril 2018), p. 025001. DOI : [10.1088/1741-2552/aaa041](https://doi.org/10.1088/1741-2552/aaa041). hal-02104576.
- [126] Haithem MEZNI, Sabeur ARIDHI et Allel HADJALI. "The uncertain cloud : State of the art and research challenges". In : *International Journal of Approximate Reasoning* 103 (décembre 2018), p. 139-151. DOI : [10.1016/j.ijar.2018.09.009](https://doi.org/10.1016/j.ijar.2018.09.009). hal-01926257.
- [127] John RIEFFEL et Jean-Baptiste MOURET. "Adaptive and Resilient Soft Tensegrity Robots". In : *Soft Robotics* 5.3 (2018). arXiv : [1702.03258](https://arxiv.org/abs/1702.03258), p. 318-329. DOI : [10.1089/soro.2017.0066](https://doi.org/10.1089/soro.2017.0066). hal-01800749.
- [128] Sébastien RIMBERT, Rahaf AL-CHWA, Manuel ZAEPFFEL et Laurent BOUGRAIN. "Electroencephalographic modulations during an open- or closed-eyes motor task". In : *PeerJ* 6 (2018), p. 1-18. DOI : [10.7717/peerj.4492](https://doi.org/10.7717/peerj.4492). hal-01736600.

- [129] Andrii Dmytryvych SHACHYKOV, Patrick HENAFF et Olexandr Petrovych SHULYAK. “Neuro-musculoskeletal simulator of rhythmic movements of human hip joint”. In : *Bulletin of National Technical University of Ukraine "KPI". Series Instrument Making* 55(1) (juin 2018), p. 118-125. DOI : [10.20535/1970.55\(1\).2018.135832](https://doi.org/10.20535/1970.55(1).2018.135832). hal-01798576.
- [130] Y ABOUD, Armelle BRUN et Anne BOYER. “C3Ro : An efficient mining algorithm of extended-closed contiguous robust sequential patterns in noisy data”. In : *Expert Systems with Applications* 131 (2019), p. 172-189. DOI : [10.1016/j.eswa.2019.04.058](https://doi.org/10.1016/j.eswa.2019.04.058). hal-02977461.
- [131] Joffrey BECKER, Virginie ANDRE et Alain DUTECH. “QUALCOM : une expérience sur la qualification des comportements d'une lampe robotique”. In : *Techniques et culture. Varia* (2019). hal-02075467.
- [132] Emmanuel BRESSO, Diana FERNANDEZ, Deisy X AMORA, Philippe NOEL, Anne-Sophie PETITOT, Maria-Eugênia LISEI DE SA, Erika V S ALBUQUERQUE, Etienne DANCHIN, Bernard MAIGRET et Natália F MARTINS. “A Chemosensory GPCR as a Potential Target to Control the Root-Knot Nematode Meloidogyne incognita Parasitism in Plants”. In : *Molecules* 24.20 (2019), p. 3798. DOI : [10.3390/molecules24203798](https://doi.org/10.3390/molecules24203798). hal-02324816.
- [133] Armelle BRUN, Geoffray BONNIN, Sylvain CASTAGNOS, Azim ROUSSANALY et Anne BOYER. “Learning Analytics Made in France : The METAL project”. In : *International Journal of Information and Learning Technology* 3.36 (2019). arXiv : [1904.02528](https://arxiv.org/abs/1904.02528), p. 16. DOI : [10.1108/IJILT-02-2019-0022](https://doi.org/10.1108/IJILT-02-2019-0022). hal-02090145.
- [134] Isis Regina Grenier CAPOCI, Daniella Renata FARIA, Karina Mayumi SAKITA, Franciele Abigail Vilugron RODRIGUES-VENDRAMINI, Patricia de Souza BONFIM-MENDONÇA, Tania Cristina Alexandrino BECKER, Erika Seki KIOSHIMA, Terezinha Inez Estivalet SVIDZINSKI et Bernard MAIGRET. “Repurposing approach identifies new treatment options for invasive fungal disease”. In : *Bioorganic Chemistry* 84 (mars 2019), p. 87-97. DOI : [10.1016/j.bioorg.2018.11.019](https://doi.org/10.1016/j.bioorg.2018.11.019). hal-02151642.
- [135] Isis Regina Grenier CAPOCI, Karina Mayumi SAKITA, Daniella Renata FARIA, Franciele Abigail Vilugron RODRIGUES-VENDRAMINI, Gláucia Sayuri ARITA, Admilton Gonçalves de OLIVEIRA, Maria Sueli FELIPE, Bernard MAIGRET, Patricia de Souza BONFIM-MENDONÇA, Erika Seki KIOSHIMA et Terezinha Inez Estivalet SVIDZINSKI. “Two New 1,3,4-Oxadiazoles With Effective Antifungal Activity Against *Candida albicans*”. In : *Frontiers in Microbiology* 10 (septembre 2019). DOI : [10.3389/fmicb.2019.02130](https://doi.org/10.3389/fmicb.2019.02130). hal-03029417.
- [136] Mohamad DAHER, Joelle Al HAGE, Maan El BADAOUI El NAJJAR, Ahmad DIAB, Khalil MOHAMAD et François CHARPILLET. “Toward High Integrity Personal Localization System Based on Informational Formalism”. In : *IEEE Transactions on Instrumentation and Measurement* 68.11 (novembre 2019), p. 4590-4599. DOI : [10.1109/TIM.2018.2886976](https://doi.org/10.1109/TIM.2018.2886976). hal-02427488.
- [137] Jean DEVIGNES, Malika SMAÏL-TABBONE, Alex HERVÉ, Geoffroy CAGNINACCI, Marie-Dominique DEVIGNES, Thomas LECOMPTE, Stéphane ZUILY et Denis WAHL. “Extended persistence of antiphospholipid antibodies beyond the twelve-week time interval : Association with baseline antiphospholipid antibodies titres”. In : *International Journal of Laboratory Hematology* 41.6 (septembre 2019), p. 726-730. DOI : [10.1111/ijlh.13094](https://doi.org/10.1111/ijlh.13094). hal-02395258.



- [138] Joao Pedro FERREIRA, Kévin DUARTE, Holger WOEHRLE, Martin COWIE, Christiane ANGERMANN, Marie-Pia D'ORTHO, Erland ERDMANN, Patrick LEVY, Anita SIMONDS, Virend SOMERS, Helmut TESCHLER, Karl WEGSCHEIDER, Emmanuel BRESSO, Marie DOMINIQUE-DEVIGNES, Patrick ROSSIGNOL, Wolfgang KOENIG et Faiez ZANNAD. "Bio-profiles and mechanistic pathways associated with Cheyne-Stokes respiration : insights from the SERVE-HF trial". In : *Clinical Research in Cardiology* 109.7 (novembre 2019), p. 881-891. DOI : [10.1007/s00392-019-01578-9](https://doi.org/10.1007/s00392-019-01578-9). hal-02513627.
- [139] Khensous GHANIA, Belhadri MESSABIH, Abdellah CHOUARFIA et Bernard MAIGRET. "Flexible molecular docking : application of hybrid tabu-simplex optimisation". In : *International journal of computational biology and drug design* 12.1 (2019), p. 34. DOI : [10.1504/IJCBDD.2019.098178](https://doi.org/10.1504/IJCBDD.2019.098178). hal-01927105.
- [140] Allel HADJALI, Haithem MEZNI, Sabeur ARIDHI et Andrei TCHERNYKH. "Special issue on "Uncertainty in Cloud Computing : Concepts, Challenges and Current Solutions"". In : *International Journal of Approximate Reasoning* 111 (août 2019), p. 53-55. DOI : [10.1016/j.ijar.2019.05.008](https://doi.org/10.1016/j.ijar.2019.05.008). hal-03025894.
- [141] David HOWARD, Agoston E EIBEN, Danielle Frances KENNEDY, Jean-Baptiste MOURET, Philip VALENCIA et Dave WINKLER. "Evolving embodied intelligence from materials to machines". In : *Nature Machine Intelligence* 1.1 (janvier 2019), p. 12-19. DOI : [10.1038/s42256-018-0009-9](https://doi.org/10.1038/s42256-018-0009-9). hal-01986599.
- [142] Melanie JOUAITI et Patrick HENAFF. "Comparative Study of Forced Oscillators for the Adaptive Generation of Rhythmic Movements in Robot Controllers". In : *Biological Cybernetics (Modeling)* 113.5-6 (octobre 2019), p. 547-560. DOI : [10.1007/s00422-019-00807-8](https://doi.org/10.1007/s00422-019-00807-8). hal-02291575.
- [143] Melanie JOUAITI et Patrick HENAFF. "Robot-Based Motor Rehabilitation in Autism : A Systematic Review". In : *International Journal of Social Robotics* 11.5 (2019), p. 753-764. DOI : [10.1007/s12369-019-00598-9](https://doi.org/10.1007/s12369-019-00598-9). hal-02295952.
- [144] Iman KAMEHKHOSH, Geoffray BONNIN et Dietmar JANNACH. "Effects of recommendations on the playlist creation behavior of users". In : *User Modeling and User-Adapted Interaction* (2019). DOI : [10.1007/s11257-019-09237-4](https://doi.org/10.1007/s11257-019-09237-4). hal-02476936.
- [145] Nour El Islam KARABADJI, Ilyes KHELF, Hassina SERIDI, Sabeur ARIDHI, Didier RÉMOND et Wajdi DHIFLI. "A data sampling and attribute selection strategy for improving decision tree construction". In : *Expert Systems with Applications* 129 (septembre 2019), p. 84-96. DOI : [10.1016/j.eswa.2019.03.052](https://doi.org/10.1016/j.eswa.2019.03.052). hal-03025844.
- [146] Erika Seki KIOSHIMA, Cristiane Suemi SHINOBU-MESQUITA, Ana Karina Rodrigues ABADIO, Maria Sueli Soares FELIPE, Terezinha Inez Estivalet SVIDZINSKI et Bernard MAIGRET. "Selection of potential anti-adhesion drugs by in silico approaches targeted to ALS3 from Candida albicans". In : *Biotechnology Letters* 41.12 (décembre 2019), p. 1391-1401. DOI : [10.1007/s10529-019-02747-6](https://doi.org/10.1007/s10529-019-02747-6). hal-03029420.
- [147] Marc LENSIK, Guillaume BRYSBERT et al. "Blind prediction of homo- and hetero-protein complexes : The CASP13-CAPRI experiment". In : *Proteins - Structure, Function and Bioinformatics* 87.12 (octobre 2019), p. 1200-1221. DOI : [10.1002/prot.25838](https://doi.org/10.1002/prot.25838). hal-02320974.

- [148] Fabien LOTTE, Camille JEUNET, Ricardo CHAVARRIAGA, Laurent BOUGRAIN, Dave THOMPSON, Reinhold SCHERER, Md Rakibul MOWLA, Andrea KÜBLER, Moritz GROSSE-WENTRUP, Karen DIJKSTRA et Natalie DAYAN. "Turning negative into positives! Exploiting "negative" results in Brain-Machine Interface (BMI) research". In : *Brain-Computer Interfaces* 6.4 (2019). DOI : [10.1080/2326263X.2019.1697143](https://doi.org/10.1080/2326263X.2019.1697143). hal-02375400.
- [149] Adrien MALAISÉ, Pauline MAURICE, Francis COLAS et Serena IVALDI. "Activity Recognition for Ergonomics Assessment of Industrial Tasks with Automatic Feature Selection". In : *IEEE Robotics and Automation Letters* 4.2 (janvier 2019), p. 1132-1139. DOI : [10.1109/LRA.2019.2894389](https://doi.org/10.1109/LRA.2019.2894389). hal-01985013.
- [150] Dominique MARTINEZ, Javier BURGUÉS et Santiago MARCO. "Fast Measurements with MOX Sensors : A Least-Squares Approach to Blind Deconvolution". In : *Sensors* 19.18 (septembre 2019), p. 4029. DOI : [10.3390/s19184029](https://doi.org/10.3390/s19184029). hal-02313793.
- [151] Pauline MAURICE, Adrien MALAISÉ, Clémie AMIOT, Nicolas PARIS, Guy-Junior RICHARD, Olivier ROCHEL et Serena IVALDI. "Human Movement and Ergonomics : an Industry-Oriented Dataset for Collaborative Robotics". In : *The International Journal of Robotics Research* 38.14 (décembre 2019), p. 1529-1537. DOI : [10.1177/0278364919882089](https://doi.org/10.1177/0278364919882089). hal-02289107.
- [152] Pauline MAURICE, Vincent PADOIS, Yvan MEASSON et Philippe BIDAUD. "Assessing and improving human movements using sensitivity analysis and digital human simulation". In : *International Journal of Computer Integrated Manufacturing* 32.6 (2019), p. 546-558. DOI : [10.1080/0951192X.2019.1599432](https://doi.org/10.1080/0951192X.2019.1599432). hal-01221647.
- [153] Artem MELNYK et Patrick HENAFF. "Physical Analysis of Handshaking Between Humans : Mutual Synchronisation and Social Context". In : *International Journal of Social Robotics* (2019). DOI : [10.1007/s12369-019-00525-y](https://doi.org/10.1007/s12369-019-00525-y). hal-01988627.
- [154] Van Quan NGUYEN, Francis COLAS, Emmanuel VINCENT et François CHARPILLET. "Motion planning for robot audition". In : *Autonomous Robots* 43.8 (décembre 2019), p. 2293-2317. DOI : [10.1007/s10514-019-09880-1](https://doi.org/10.1007/s10514-019-09880-1). hal-02188342.
- [155] Viacheslav OSAULENKO, Bernard GIRAU, Oleksandr MAKARENKO et Patrick HENAFF. "Increasing Capacity of Association Memory by Means of Synaptic Clustering". In : *Neural Processing Letters* 50.3 (mai 2019), p. 2717-2730. DOI : [10.1007/s11063-019-10051-7](https://doi.org/10.1007/s11063-019-10051-7). hal-02143550.
- [156] Luigi PENCO, Nicola SCIANCA, Valerio MODUGNO, Leonardo LANARI, Giuseppe ORIOLO et Serena IVALDI. "A Multi-Mode Teleoperation Framework for Humanoid Loco-Manipulation : An Application for the iCub Robot". In : *IEEE Robotics and Automation Magazine* 26.4 (décembre 2019), p. 73-82. DOI : [10.1109/MRA.2019.2941245](https://doi.org/10.1109/MRA.2019.2941245). hal-02291907.
- [157] Sébastien RIMBERT, Nathalie T H GAYRAUD, Laurent BOUGRAIN, Maureen CLERC et Stéphanie FLECK. "Can a Subjective Questionnaire Be Used as Brain-Computer Interface Performance Predictor ?" In : *Frontiers in Human Neuroscience* 12 (janvier 2019), p. 11. DOI : [10.3389/fnhum.2018.00529](https://doi.org/10.3389/fnhum.2018.00529). hal-01990935.
- [158] Sébastien RIMBERT, Pierre RIFF, Nathalie GAYRAUD, Denis SCHMARTZ et Laurent BOUGRAIN. "Median Nerve Stimulation Based BCI : A New Approach to Detect Intraoperative Awareness During General Anesthesia". In : *Frontiers in Neuroscience* 13 (juin 2019), p. 13. DOI : [10.3389/fnins.2019.00622](https://doi.org/10.3389/fnins.2019.00622). hal-02159777.

- [159] Sébastien RIMBERT, Denis SCHMARTZ, Laurent BOUGRAIN, Claude MEISTELMAN, Cédric BAUMANN et Philippe GUERCI. "MOTANA : study protocol to investigate motor cerebral activity during a propofol sedation". In : *Trial* 20.534 (septembre 2019), p. 9. DOI : [10.1186/s13063-019-3596-9](https://doi.org/10.1186/s13063-019-3596-9). hal-02270649.
- [160] Sébastien RIMBERT, Manuel ZAEPFFEL, Pierre RIFF, Perrine ADAM et Laurent BOUGRAIN. "Hypnotic State Modulates Sensorimotor Beta Rhythms During Real Movement and Motor Imagery". In : *Frontiers in Psychology* 10 (octobre 2019). DOI : [10.3389/fpsyg.2019.02341](https://doi.org/10.3389/fpsyg.2019.02341). hal-02325588.
- [161] Franciele Abigail Vilugron RODRIGUES-VENDRAMINI, Daniella Renata FARIA, Glauzia Sayuri ARITA, Isis Regina Grenier CAPOCI, Karina Mayumi SAKITA, Silvana Martins CAPARROZ-ASSEF, Tania Cristina Alexandrino BECKER, Patrícia de SOUZA BONFIM-MENDONÇA, Maria Sueli FELIPE, Terezinha Inez Estivalet SVIDZINSKI, Bernard MAIGRET, Erika Seki KIOSHIMA et Pamela SMALL. "Antifungal activity of two oxadiazole compounds for the paracoccidioidomycosis treatment". In : *PLoS Neglected Tropical Diseases* 13.6 (juin 2019), e0007441. DOI : [10.1371/journal.pntd.0007441](https://doi.org/10.1371/journal.pntd.0007441). hal-02151638.
- [162] Maria Elisa RUIZ ECHARTEA, Isaure CHAUVOT DE BEAUCHÈNE et David RITCHIE. "EROS-DOCK : Protein-Protein Docking Using Exhaustive Branch-and-Bound Rotational Search". In : *Bioinformatics* 35.23 (2019), p. 5003-5010. DOI : [10.1093/bioinformatics/btz434](https://doi.org/10.1093/bioinformatics/btz434). hal-02269812.
- [163] Carolina SAAVEDRA, Rodrigo SALAS et Laurent BOUGRAIN. "Wavelet-Based Semblance Methods to Enhance the Single-Trial Detection of Event-Related Potentials for a BCI Spelling System". In : *Computational Intelligence and Neuroscience* 2019. Article ID 8432953 (août 2019), p. 10. DOI : [10.1155/2019/8432953](https://doi.org/10.1155/2019/8432953). hal-02313981.
- [164] Sergey SAMSONOV, Martin ZACHARIAS et Isaure CHAUVOT DE BEAUCHÈNE. "Modeling large protein-glycosaminoglycan complexes using a fragment-based approach". In : *Journal of Computational Chemistry* 40.14 (avril 2019), p. 1429-1439. DOI : [10.1002/jcc.25797](https://doi.org/10.1002/jcc.25797). hal-02088192.
- [165] Liejune SHIAU et Laure BUHRY. "Interneuronal gamma oscillations in hippocampus via adaptive exponential integrate-and-fire neurons". In : *Neurocomputing* 331 (février 2019), p. 220-234. DOI : [10.1016/j.neucom.2018.11.017](https://doi.org/10.1016/j.neucom.2018.11.017). hal-02431627.
- [166] Malika SMAIL-TABBONE et Bastien RANCE. "Contributions from the 2018 Literature on Bioinformatics and Translational Informatics". In : *IMIA Yearbook of Medical Informatics* 28.01 (août 2019), p. 190-193. DOI : [10.1055/s-0039-1677945](https://doi.org/10.1055/s-0039-1677945). hal-02413623.
- [167] Nicolas SOLER, Emilie ROBERT, Isaure CHAUVOT DE BEAUCHÈNE, Philippe MONTEIRO, Virginie LIBANTE, Bernard MAIGRET, Johan STAUB, David W. RITCHIE, Gérard GUÉDON, Sophie PAYOT, Marie-Dominique DEVIGNES et Nathalie N. LEBLOND-BOURGET. "Characterization of a relaxase belonging to the MOBT family, a widespread family in Firmicutes mediating the transfer of ICEs". In : *Mobile DNA* 10.1 (décembre 2019), p. 1-16. DOI : [10.1186/s13100-019-0160-9](https://doi.org/10.1186/s13100-019-0160-9). hal-02138843.
- [168] Urszula UCIECHOWSKA-KACZMARZYK, Isaure CHAUVOT DE BEAUCHÈNE et Sergey SAMSONOV. "Docking software performance in protein-glycosaminoglycan systems". In : *Journal of Molecular Graphics and Modelling*. Journal of Molecular Graphics and Modelling 90 (avril 2019), p. 42-50. DOI : [10.1016/j.jmgm.2019.04.001](https://doi.org/10.1016/j.jmgm.2019.04.001). hal-02391852.

- [169] Naihui ZHOU et al. "The CAFA challenge reports improved protein function prediction and new functional annotations for hundreds of genes through experimental screens". In : *Genome Biology* 20.1 (décembre 2019). DOI : [10.1186/s13059-019-1835-8](https://doi.org/10.1186/s13059-019-1835-8). hal-02393202.
- [170] Sabeur ARIDHI, José MACEDO, Engelbert Mephu NGUIFO et Karine ZEITOUNI. "Special issue on "Advances on Large Evolving Graphs"". In : *Future Generation Computer Systems* 110 (septembre 2020), p. 310. DOI : [10.1016/j.future.2020.04.023](https://doi.org/10.1016/j.future.2020.04.023). hal-03025790.
- [171] Nathalie AZEVEDO CARVALHO, Sylvain CONTASSOT-VIVIER, Laure BUHRY et Dominique MARTINEZ. "Simulation of Large Scale Neural Models With Event-Driven Connectivity Generation". In : *Frontiers in Neuroinformatics* 14 (octobre 2020), p. 14. DOI : [10.3389/fninf.2020.522000](https://doi.org/10.3389/fninf.2020.522000). hal-03041616.
- [172] Emmanuel BRESSO, Alessandro FURLAN, Philippe NOEL, Vincent LEROUX, Flavio MAINA, Rosanna DONO et Bernard MAIGRET. "Large-Scale Virtual Screening Against the MET Kinase Domain Identifies a New Putative Inhibitor Type". In : *Molecules* 25.4 (février 2020), p. 938. DOI : [10.3390/molecules25040938](https://doi.org/10.3390/molecules25040938). hal-03049726.
- [173] Konstantinos CHATZILYGEROUDIS, Vassilis VASSILIADES, Freek STULP, Sylvain CALINON et Jean-Baptiste MOURET. "A survey on policy search algorithms for learning robot controllers in a handful of trials". In : *IEEE Transactions on Robotics* 36.2 (2020), p. 328-347. DOI : [10.1109/TRO.2019.2958211](https://doi.org/10.1109/TRO.2019.2958211). hal-02393432.
- [174] Jessica COLOMBEL, Vincent BONNET, David DANAY, Raphaël DUMAS, Antoine SEILLES et François CHARPILLETT. "Physically Consistent Whole-Body Kinematics Assessment Based on an RGB-D Sensor. Application to Simple Rehabilitation Exercises". In : *Sensors* 20.10 (janvier 2020), 18p. DOI : [10.3390/s20102848](https://doi.org/10.3390/s20102848). hal-02639281.
- [175] Pierre COUVINEAU, Hugo de ALMEIDA, Vincent LEROUX, Bernard ROQUES, Bernard MAIGRET, Catherine LLORENS-CORTES et Xavier ITURRIOZ. "Structural insight into the catalytic mechanism and inhibitor binding of aminopeptidase A". In : *Biochemical Journal* 477.21 (novembre 2020), p. 4133-4148. DOI : [10.1042/BCJ20200307](https://doi.org/10.1042/BCJ20200307). hal-03029058.
- [176] Kevin DALLEAU, Miguel COUCEIRO et Malika SMAÏL-TABBONE. "Unsupervised Extra Trees : a stochastic approach to compute similarities in heterogeneous data." In : *International Journal of Data Science and Analytics. Advances in Intelligent Data Analysis XVIII - 18th International Symposium on Intelligent Data Analysis, IDA 2020 Lecture Notes in Computer Science*.12080 (mars 2020), p. 132-144. DOI : [10.1007/s41060-020-00214-4](https://doi.org/10.1007/s41060-020-00214-4). hal-01982232.
- [177] Joao Pedro FERREIRA, Zohra LAMIRAL, Constance XHAARD, Kévin DUARTE, Emmanuel BRESSO, Marie-Dominique DEVIGNES, Edith LE FLOC'H, Claire Dandine ROULLAND, Jean-François DELEUZE, Sandra WAGNER, Bruno GUERCI, Nicolas GIRERD, Faiez ZANNAD, Jean-Marc BOIVIN et Patrick ROSSIGNOL. "Circulating plasma proteins and new-onset diabetes in a population-based study : proteomic and genomic insights from the STANIS-LAS cohort". In : *European Journal of Endocrinology* 183.3 (septembre 2020), p. 285-295. DOI : [10.1530/EJE-20-0246](https://doi.org/10.1530/EJE-20-0246). hal-02917113.
- [178] Joao Pedro FERREIRA, Anne PIZARD, Jean-Loup MACHU, Emmanuel BRESSO, Hans-Peter BRUNNER-LAROCQUE, Nicolas GIRERD, Céline LEROY, Arantxa GONZÁLEZ, Javier DÍEZ, Stephane HEYMANS, Marie-Dominique DEVIGNES, Patrick ROSSIGNOL et Faiez ZANNAD. "Plasma protein biomarkers and their association with mutually exclusive cardiovascular phenotypes : the FIBRO-TARGETS case-control analyses". In : *Clinical Re-*

search in Cardiology 109.1 (2020), p. 22-33. DOI : [10.1007/s00392-019-01480-4](https://doi.org/10.1007/s00392-019-01480-4). hal-02138814.

- [179] Nicolas GIRARD, Emmanuel BRESSO, Marie-Dominique DEVIGNES et Patrick ROSSIGNOL. "Insulin-like growth factor binding protein 2 : A prognostic biomarker for heart failure hardly redundant with natriuretic peptides". In : *International Journal of Cardiology* 300 (février 2020), p. 252-254. DOI : [10.1016/j.ijcard.2019.11.100](https://doi.org/10.1016/j.ijcard.2019.11.100). hal-02517502.
- [180] François INIZAN, Myriam HANNA, Maxim STOLYARCHUK, Isaure CHAUVOT DE BEAUCHÈNE et Luba TCHERTANOV. "The First 3D Model of the Full-Length KIT Cytoplasmic Domain Reveals a New Look for an Old Receptor". In : *Scientific Reports* (mars 2020). DOI : [10.1038/s41598-020-62460-7](https://doi.org/10.1038/s41598-020-62460-7). hal-03000379.
- [181] Rituraj KAUSHIK, Pierre DESREUMAUX et Jean-Baptiste MOURET. "Adaptive Prior Selection for Repertoire-based Online Adaptation in Robotics". In : *Frontiers in Robotics and AI* 6 (janvier 2020). arXiv : [1907.07029](https://arxiv.org/abs/1907.07029) - Video : @normalcurlhttp://tiny.cc/aprol_video. DOI : [10.3389/frobt.2019.00151](https://doi.org/10.3389/frobt.2019.00151). hal-02462935.
- [182] Audrey KNAUF et Julien FALGAS. "The issues of hybridization for coactive learning : feedback from higher education". In : *Distances et Médiations des Savoirs* 30 (juin 2020), [En ligne]. DOI : [10.4000/dms.5073](https://doi.org/10.4000/dms.5073). hal-02885906.
- [183] Catherine LE BERRE, William J. SANDBORN, Sabeur ARIDHI, Marie-Dominique DEVIGNES, Laure FOURNIER, Malika SMAİL-TABBONE, Silvio DANESE et Laurent PEYRIN-BIROULET. "Application of Artificial Intelligence to Gastroenterology and Hepatology". In : *Gastroenterology* 158.1 (janvier 2020), 76-94.e2. DOI : [10.1053/j.gastro.2019.08.058](https://doi.org/10.1053/j.gastro.2019.08.058). hal-02393130.
- [184] Joël LEGRAND, Romain GOGDEMIR, Cedric BOUSQUET, Kevin DALLEAU, Marie-Dominique DEVIGNES, William DIGAN, Chia-Ju LEE, Ndeye-Coumba NDIAYE, Nadine PETITPAIN, Patrice RINGOT, Malika SMAİL-TABBONE, Yannick TOUSSAINT et Adrien COULET. "PGx-Corpus, a manually annotated corpus for pharmacogenomics". In : *Scientific Data* 7 (janvier 2020), p. 3. DOI : [10.1038/s41597-019-0342-9](https://doi.org/10.1038/s41597-019-0342-9). hal-02547607.
- [185] Joel LEHMAN, Jeff CLUNE, Dusan MISEVIC, Christoph ADAMI, Julie BEAULIEU, Peter J. BENTLEY, Samuel BERNARD, Guillaume BESLON, David M. BRYSON, Nick CHENEY, Antoine CULLY, Stéphane DONCIEUX, Fred C. DYER, Kai Olav ELLEFSEN, Robert FELDT, Stephan FISCHER, Stephanie FORREST, Antoine FRENOY, Christian GAGNÉ, Leni LE GOFF, Laura M. GRABOWSKI, Babak HODJAT, Laurent KELLER, Carole KNIBBE, Peter KRCAH, Richard E. LENSKI, Hod LIPSON, Robert MACCURDY, Carlos MAESTRE, Risto MIKKULAINEN, Sara MITRI, David E. MORIARTY, Jean-Baptiste MOURET, Anh Duc NGUYEN, Charles OFRIA, Marc PARIZEAU, David PARSONS, Robert T. PENNOCK, William F. PUNCH, Thomas S. RAY, Marc SCHOENAUER, Eric SHULTE, Karl SIMS, Kenneth O. STANLEY, Francois TADDEI, Danesh TARAPORE, Simon THIBAULT, Westley WEIMER, Richard WATSON et Jason YOSINKSI. "The Surprising Creativity of Digital Evolution : A Collection of Anecdotes from the Evolutionary Computation and Artificial Life Research Communities". In : *Artificial Life* 26.2 (juin 2020). arXiv : [1803.03453](https://arxiv.org/abs/1803.03453), p. 274-306. DOI : [10.1162/artl_a_00319](https://doi.org/10.1162/artl_a_00319). hal-01735473.
- [186] Cecilia LINDIG-LEÓN, Sébastien RIMBERT et Laurent BOUGRAIN. "Multiclass Classification Based on Combined Motor Imageries". In : *Frontiers in Neuroscience* 14 (novembre 2020). DOI : [10.3389/fnins.2020.559858](https://doi.org/10.3389/fnins.2020.559858). hal-03013795.

- [187] Gabriel Machado LUNARDI, Guilherme Medeiros MACHADO, Vinicius MARAN et José Palazzo M. de OLIVEIRA. "A metric for Filter Bubble measurement in recommender algorithms considering the news domain". In : *Applied Soft Computing* 97 (décembre 2020), p. 106771. DOI : [10.1016/j.asoc.2020.106771](https://doi.org/10.1016/j.asoc.2020.106771). hal-03013566.
- [188] Pauline MAURICE, Jernej CAMERNIK, Dasa GORJAN, Benjamin SCHIRRMEISTER, Jonas BORNMANN, Luca TAGLIAPIETRA, Claudia LATELLA, Daniele PUCCI, Lars FRITZSCHE, Serena IVALDI et Jan BABIČ. "Objective and Subjective Effects of a Passive Exoskeleton on Overhead Work". In : *IEEE Transactions on Neural Systems and Rehabilitation Engineering* 28.1 (2020), p. 152-164. DOI : [10.1109/TNSRE.2019.2945368](https://doi.org/10.1109/TNSRE.2019.2945368). hal-02301922.
- [189] Jean-Baptiste MOURET. "Evolving the behavior of machines : from micro to macroevolution". In : *iScience* (octobre 2020), p. 101731. DOI : [10.1016/j.isci.2020.101731](https://doi.org/10.1016/j.isci.2020.101731). hal-02982114.
- [190] Rémi PANNEQUIN, Melanie JOUAITI, Mohamed BOUTAYEB, Philippe LUCAS et Dominique MARTINEZ. "Automatic tracking of free-flying insects using a cable-driven robot". In : *Science Robotics* 5.43 (juin 2020), eabb2890. DOI : [10.1126/scirobotics.abb2890](https://doi.org/10.1126/scirobotics.abb2890). hal-02891766.
- [191] Supratik PAUL, Konstantinos CHATZILYGEROUDIS, Kamil CIOSEK, Jean-Baptiste MOURET, Michael A OSBORNE et Shimon WHITESON. "Robust Reinforcement Learning with Bayesian Optimisation and Quadrature". In : *Journal of Machine Learning Research* 21 (2020), p. 1-31. hal-02943567.
- [192] Stephen PAWSON, Jessica KERR, Brooke O'CONNOR, Philippe LUCAS, Dominique MARTINEZ, Jeremy ALLISON et Tara STRAND. "Light-Weight Portable Electroantennography Device as a Future Field-Based Tool for Applied Chemical Ecology". In : *Journal of Chemical Ecology* 46 (juin 2020), p. 557-566. DOI : [10.1007/s10886-020-01190-6](https://doi.org/10.1007/s10886-020-01190-6). hal-02891776.
- [193] Luigi PENCO, Enrico Mingo HOFFMAN, Valerio MODUGNO, Waldez GOMES, Jean-Baptiste MOURET et Serena IVALDI. "Learning Robust Task Priorities and Gains for Control of Redundant Robots". In : *IEEE Robotics and Automation Letters* 5.2 (2020), p. 2626-2633. DOI : [10.1109/LRA.2020.2972847](https://doi.org/10.1109/LRA.2020.2972847). hal-02456663.
- [194] Maria Elisa RUIZ ECHARTEA, David RITCHIE et Isaure CHAUVOT DE BEAUCHÈNE. "Using Restraints in EROS-Dock Improves Model Quality in Pairwise and Multicomponent Protein Docking". In : *Proteins - Structure, Function and Bioinformatics* 88.8 (août 2020), p. 1121-1128. DOI : [10.1002/prot.25959](https://doi.org/10.1002/prot.25959). hal-02930827.
- [195] Bishnu SARKER, David RITCHIE et Sabeur ARIDHI. "GrAPFI : predicting enzymatic function of proteins from domain similarity graphs". In : *BMC Bioinformatics* (avril 2020). This work is dedicated to the memory of David W. Ritchie, who recently passed away. DOI : [10.1186/s12859-020-3460-7](https://doi.org/10.1186/s12859-020-3460-7). hal-03022601.
- [196] Nicla SETTEMBRE, Pauline MAURICE, Jean PAYSANT, Jean THEUREL, Laurent CLAUDON, Antoine KIMMOUN, Bruno LEVY, Hind HANI, Bruno CHENUEL et Serena IVALDI. "The use of exoskeletons to help with prone positioning in the intensive care unit during COVID-19". In : *Annals of Physical and Rehabilitation Medicine* 63.4 (juin 2020), p. 379-382. DOI : [10.1016/j.rehab.2020.05.004](https://doi.org/10.1016/j.rehab.2020.05.004). hal-02944154.
- [197] Malika SMAÏL-TABBONE et Bastien RANCE. "Contributions from the 2019 Literature on Bioinformatics and Translational Informatics". In : *IMIA Yearbook of Medical Informatics* 29.01 (août 2020), p. 188-192. DOI : [10.1055/s-0040-1702002](https://doi.org/10.1055/s-0040-1702002). hal-03144080.

- [198] Susan STIENEN, Joao Pedro FERREIRA, Masatake KOBAYASHI, Gregoire PREUD'HOMME, Daniela DOBRE, Jean-Loup MACHU, Kévin DUARTE, Emmanuel BRESSO, Marie-Dominique DEVIGNES, Natalia LÓPEZ ANDRÉS, Nicolas GIRERD, Svend AAKHUS, Giuseppe AMBROSIO, Hans-Peter BRUNNER-LA ROCCA, Ricardo FONTES-CARVALHO, Alan G FRASER, Loek van HEEREBEEK, Stephane HEYMANS, Gilles de KEULENAER, Paolo MARINO, Kenneth McDONALD, Alexandre MEBAZAA, Zoltàn PAPP, Riccardo RADDINO, Carsten TSCHÖPE, Walter PAULUS, Faiez ZANNAD et Patrick ROSSIGNOL. "Enhanced clinical phenotyping by mechanistic bioprofiling in heart failure with preserved ejection fraction : insights from the MEDIA-DHF study (The Metabolic Road to Diastolic Heart Failure)". In : *Biomarkers* 25.2 (février 2020), p. 201-211. DOI : [10.1080/1354750X.2020.1727015](https://doi.org/10.1080/1354750X.2020.1727015). hal-02732968.
- [199] Susan STIENEN, Joao Pedro FERREIRA, Masatake KOBAYASHI, Gregoire PREUD'HOMME, Daniela DOBRE, Jean-Loup MACHU, Kévin DUARTE, Emmanuel BRESSO, Marie-Dominique DEVIGNES, Natalia López ANDRÉS, Nicolas GIRERD, Svend AAKHUS, Giuseppe AMBROSIO, Hans-Peter Brunner-La ROCCA, Ricardo FONTES-CARVALHO, Alan FRASER, Loek van HEEREBEEK, Gilles de KEULENAER, Paolo MARINO, Kenneth McDONALD, Alexandre MEBAZAA, Zoltàn PAPP, Riccardo RADDINO, Carsten TSCHÖPE, Walter PAULUS, Faiez ZANNAD et Patrick ROSSIGNOL. "Sex differences in circulating proteins in heart failure with preserved ejection fraction". In : *Biology of Sex Differences* 11.1 (décembre 2020), p. 47. DOI : [10.1186/s13293-020-00322-7](https://doi.org/10.1186/s13293-020-00322-7). hal-02928742.
- [200] Manel ZOGHLAMI, Sabeur ARIDHI, Mondher MADDOURI et Engelbert MEPHU NGUIFO. "Multiple instance learning for sequence data with across bag dependencies". In : *International journal of machine learning and cybernetics* 11 (2020). arXiv : [1602.00163](https://arxiv.org/abs/1602.00163), p. 629-642. DOI : [10.1007/s13042-019-01021-5](https://doi.org/10.1007/s13042-019-01021-5). hal-02393742.
- [201] Seyed Ziaeddin ALBORZI, Amina AHMED NACER, Hiba NAJJAR, David RITCHIE et Marie-Dominique DEVIGNES. "PPIDomainMiner : Inferring domain-domain interactions from multiple sources of proteinprotein interactions". In : *PLoS Computational Biology* 17.8 (2021), e1008844. DOI : [10.1371/journal.pcbi.1008844](https://doi.org/10.1371/journal.pcbi.1008844). hal-03435140.
- [202] Oleksii AVILOV, Sébastien RIMBERT, Anton POPOV et Laurent BOUGRAIN. "Optimizing Motor Intention Detection with Deep Learning : Towards Management of Intraoperative Awareness". In : *IEEE Transactions on Biomedical Engineering* (mars 2021), p. 10. DOI : [10.1109/TBME.2021.3064794](https://doi.org/10.1109/TBME.2021.3064794). hal-03166495.
- [203] Ahoefa Ablavi AWUSSI, Emeline ROUX, Catherine HUMEAU, Zeeshan HAFEEZ, Bernard MAIGRET, Oun Ki CHANG, Xavier LECOMTE, Gérard HUMBERT, Laurent MICLO, Magali GENAY, Clarisse PERRIN et Annie DARY-MOUROT. "Role of the Sortase A in the Release of Cell-Wall Proteinase PrtS in the Growth Medium of Streptococcus thermophilus 4F44". In : *Microorganisms* 9.11 (novembre 2021), p. 2380. DOI : [10.3390/microorganisms9112380](https://doi.org/10.3390/microorganisms9112380). hal-03537548.
- [204] Emmanuel BRESSO, Pierre MONNIN, Cédric BOUSQUET, François-Elie CALVIER, Ndeye-Coumba NDIAYE, Nadine PETITPAIN, Malika SMAÏL-TABBONE et Adrien COULET. "Investigating ADR mechanisms with Explainable AI : a feasibility study with knowledge graph mining". In : *BMC Medical Informatics and Decision Making* 21.1 (mai 2021), p. 171. DOI : [10.1186/s12911-021-01518-6](https://doi.org/10.1186/s12911-021-01518-6). hal-03240476.
- [205] Olivier BUFFET, Jilles DIBANGOYE, Abdallah SAFFIDINE et Vincent THOMAS. "Heuristic Search Value Iteration for zero-sum Stochastic Games". In : *IEEE Transactions on Games* 13.3 (2021), p. 1-10. DOI : [10.1109/TG.2020.3005214](https://doi.org/10.1109/TG.2020.3005214). hal-03080314.

- [206] Pedro CORREA-CAICEDO, Horacio ROSTRO-GONZÁLEZ, Martin RODRIGUEZ-LICEA, Óscar Octavio GUTIÉRREZ-FRÍAS, Carlos Alonso HERRERA-RAMÍREZ, Iris MÉNDEZ-GURROLA, Miroslava CANO-LARA et Alejandro BARRANCO-GUTIÉRREZ. "GPS Data Correction Based on Fuzzy Logic for Tracking Land Vehicles". In : *Mathematics* 9.21 (novembre 2021), p. 2818. DOI : [10.3390/math9212818](https://doi.org/10.3390/math9212818). hal-03549310.
- [207] Jérémie FIX, Chengfang REN, Arthur COSTA LOPES, Guillaume MORICE, Shuwa KOBAYASHI, Thierry LETERTRE et Israel HINOSTROZA. "Deep learning for aircraft classification from VHF radar signatures". In : *IET Radar Sonar and Navigation* (avril 2021). DOI : [10.1049/rsn2.12067](https://doi.org/10.1049/rsn2.12067). hal-03227950.
- [208] Lars FRITZSCHE, Pavel E GALIBAROV, Christian GÄRTNER, Jonas BORNMANN, Michael DAMSGAARD, Rudolf WALL, Benjamin SCHIRRMEISTER, Jose GONZALEZ-VARGAS, Daniele PUCCI, Pauline MAURICE, Serena IVALDI et Jan BABIČ. "Assessing the efficiency of exoskeletons in physical strain reduction by biomechanical simulation with AnyBody Modelling System". In : *Wearable Technologies* 2 (juin 2021). DOI : [10.1017/wtc.2021.5](https://doi.org/10.1017/wtc.2021.5). hal-03243419.
- [209] Bernard GIRAU, Benoit MIRAMOND, Nicolas P. ROUGIER et Andres UPEGUI. "Self-Organizing Machine Architecture". In : *ERCIM News* 125 (avril 2021). hal-03186497.
- [210] Alex HIRTZ, Nolwenn LEBOURDAIS, Fabien RECH, Yann BAILLY, Athénaïs VAGINAY, Malika SMAÏL-TABBONE, Hélène DUBOIS-POT-SCHNEIDER et Hélène DUMOND. "GPER agonist G-1 disrupts tubulin dynamics and potentiates temozolomide to impair glioblastoma cell proliferation". In : *Cells* 10 (décembre 2021), p. 3438. DOI : [10.3390/cells10123438](https://doi.org/10.3390/cells10123438). hal-03472082.
- [211] Md Kamrul ISLAM, Sabeur ARIDHI et Malika SMAÏL-TABBONE. "An Experimental Evaluation of Similarity-Based and Embedding-Based Link Prediction Methods on Graphs". In : *International Journal of Data Mining & Knowledge Management Process* 11 (septembre 2021), p. 1-18. DOI : [10.5121/ijdkp.2021.11501](https://doi.org/10.5121/ijdkp.2021.11501). hal-03540515.
- [212] Muneo KITAJIMA, Makoto TOYOTA et Jérôme DINET. "How Resonance Works for Development and Propagation of Memes". In : *International Journal On Advances in Systems and Measurements* 14.1 & 2 (décembre 2021), p. 148-161. hal-03548379.
- [213] Masatake KOBAYASHI, Olivier HUTTIN, Martin MAGNUSSON, João Pedro FERREIRA, Erwan BOZEC, Anne-Cecile HUBY, Gregoire PREUD'HOMME, Kevin DUARTE, Zohra LAMIRAL, Kevin DALLEAU, Emmanuel BRESSO, Malika SMAÏL-TABBONE, Marie-Dominique DEVIGNES, Peter M NILSSON, Margret LEOSDOTTIR, Jean-Marc BOIVIN, Faiez ZANNAD, Patrick ROSSIGNOL et Nicolas GIRERD. "Machine Learning-Derived Echocardiographic Phenotypes Predict Heart Failure Incidence in Asymptomatic Individuals". In : *JACC : Cardiovascular Imaging* S1936-878X.21 (septembre 2021), p. 00556-8. DOI : [10.1016/j.jcmg.2021.07.004](https://doi.org/10.1016/j.jcmg.2021.07.004). hal-03357064.
- [214] Pierre LACLAU, Vladislav TEMPEZ, Franck RUFFIER, Enrico NATALIZIO et Jean-Baptiste MOURET. "Signal-Based Self-Organization of a Chain of UAVs for Subterranean Exploration". In : *Frontiers in Robotics and AI* 8 (avril 2021). DOI : [10.3389/frobt.2021.614206](https://doi.org/10.3389/frobt.2021.614206). hal-03209269.

- [215] Claudia LATELLA, Yeshasvi TIRUPACHURI, Luca TAGLIAPIETRA, Lorenzo RAPETTI, Benjamin SCHIRRMEISTER, Jonas BORNMANN, Daša GORJAN, Jernej ČAMERNIK, Pauline MAURICE, Lars FRITZSCHE, Jose GONZALEZ-VARGAS, Serena IVALDI, Jan BABIČ, Francesco NORI et Daniele PUCCI. "Analysis of Human Whole-body Joint Torques during Overhead Work with a Passive Exoskeleton". In : *IEEE Transactions on Human-Machine Systems* (2021). DOI : [10.1109/THMS.2021.3128892](https://doi.org/10.1109/THMS.2021.3128892). hal-03428469.
- [216] Stéphane MAGNENAT et Francis COLAS. "A Bayesian tracker for synthesizing mobile robot behaviour from demonstration". In : *Autonomous Robots* (octobre 2021). DOI : [10.1007/s10514-021-10019-4](https://doi.org/10.1007/s10514-021-10019-4). hal-03408925.
- [217] Haithem MEZNI, Mokhtar SELLAMI, Sabeur ARIDHI et Faouzi Ben CHARRADA. "Towards big services : a synergy between service computing and parallel programming". In : *Computing* 103.11 (novembre 2021), p. 2479-2519. DOI : [10.1007/s00607-021-00999-7](https://doi.org/10.1007/s00607-021-00999-7). hal-03540412.
- [218] Tat'y MWATA-VELU, Juan Gabriel AVINA-CERVANTES, Jorge Mario CRUZ-DUARTE, Horacio ROSTRO-GONZALEZ et Jose RUIZ-PINALES. "Imaginary Finger Movements Decoding Using Empirical Mode Decomposition and a Stacked BiLSTM Architecture". In : *Mathematics. Special Issue Numerical Analysis of Artificial Neural Networks* 9.24 (décembre 2021), p. 3297. DOI : [10.3390/math9243297](https://doi.org/10.3390/math9243297). hal-03550052.
- [219] Samuel NOWAKOWSKI et Anne-Marie COTTON. "Enseigner l'esprit critique : nouvelles postures pour enseigner et pour attendre. D'un programme intensif européen vers l'université(s)ité : une expérience pédagogique dans la ville avec la ville". In : *Scientia Paedagogica Experimentalis* (août 2021). hal-03542745.
- [220] Gregoire PREUD'HOMME, Kévin DUARTE, Kevin DALLEAU, Claire LACOMBLEZ, Emmanuel BRESSO, Malika SMAÏL-TABBONE, Miguel COUCEIRO, Marie-Dominique DEVIGNES, Masatake KOBAYASHI, Olivier HUTTIN, João Pedro FERREIRA, Faiez ZANNAD, Patrick ROSSIGNOL et Nicolas GIRERD. "Head-to-head comparison of clustering methods for heterogeneous data : a simulation-driven benchmark". In : *Scientific Reports* 11.1 (février 2021), p. 4202. DOI : [10.1038/s41598-021-83340-8](https://doi.org/10.1038/s41598-021-83340-8). hal-03165272.
- [221] Mario SELVAGGIO, Marco COGNETTI, Stefanos NIKOLAIDIS, Serena IVALDI et Bruno SICILIANO. "Autonomy in Physical Human-Robot Interaction : a Brief Survey". In : *IEEE Robotics and Automation Letters* (2021). DOI : [10.1109/LRA.2021.3100603](https://doi.org/10.1109/LRA.2021.3100603). hal-03413654.
- [222] Lorenzo VIANELLO, Jean-Baptiste MOURET, Eloïse DALIN, Alexis AUBRY et Serena IVALDI. "Human posture prediction during physical human-robot interaction". In : *IEEE Robotics and Automation Letters* 6.3 (juillet 2021), p. 6046-6053. DOI : [10.1109/LRA.2021.3086666](https://doi.org/10.1109/LRA.2021.3086666). hal-03115242.
- [223] Lorenzo VIANELLO, Luigi PENCO, Waldez GOMES, Yang YOU, Salvatore Maria ANZALONE, Pauline MAURICE, Vincent THOMAS et Serena IVALDI. "Human-humanoid interaction and cooperation : a review". In : *Current Robotics Reports* 2.4 (décembre 2021), p. 441-454. DOI : [10.1007/s43154-021-00068-z](https://doi.org/10.1007/s43154-021-00068-z). hal-03413650.

Conférences invitées

- [224] Henaff PATRICK. "Biological control for humanoid robots ". In : *2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON)*. kiev, Ukraine, mai 2017. [hal-01843714](#).
- [225] Henaff PATRICK. "From the control of biological complex systems toward the control of robotic complex systems ". In : *International Conference on Computer Science and Computational Intelligence (ICCSCI)*. bali, Indonesia, octobre 2017. [hal-01843711](#).
- [226] Thomas DURAND, Laurent PETIT, Samuel NOWAKOWSKI et Sandrine PHILIPPE. "Apprendre aujourd’hui à l’heure des nouveaux médias : l’exemple de Youtube". In : *Conférence Canopé Apprendre aujourd’hui à l’heure des nouveaux médias : l’exemple de YouTube*. Canopé and Science&You and Université de Lorraine and Maison pour la science en Lorraine. Epinal, France, février 2019. [hal-02006088](#).
- [227] Pedro Chávez BARRIOS, Davy MONTICOLO et Sahbi SIDHOM. "Results of multi-agent system and ontology to manage ideas and represent knowledge in a challenge of creativity". In : *International Multi-Conference OCTA'2019 on Organization of Knowledge and Advanced Technologies*. Sous la dir. d'University of TUNIS (TUNISIA). T. 1 : SIIE Chapter in OCTA. Proceedings of OCTA international multi-conference. arXiv : [2009.05282](#). University of Tunis (Tunisia) & International scholarly society ISKO Maghreb. Tunis (ALECSO), Tunisia, février 2020, pp.6-17. DOI : [10.1109/OCTA49274.2020.9151857](#). [hal-02935779](#).
- [228] N BOURKACHE, Sahbi SIDHOM et M LAGHROUCHE. "Medical image information representation : Gabor Filter solution for the Big Data". In : *OCTA'2019 - Multi-Conference on Organization of Knowledge and Advanced Technologies Unifying the scientific contributions of the following conferences : SIE'2019 & ISKO-Maghreb'2019 & CITED'2019 & TBMS'2019*. Sous la dir. d'University of Tunis (Tunisia) HABIB SIDHOM, University og Lorraine (France) SAHBI SIDHOM, University of Carthage (Tunisia) AMIRA KADDOUR, University of Tunis (Tunisia) SAOUSEN KRICHEN et University of Tunis (Tunisia) KHALED KCHIR. T. 4 : TBMS Chapter on : " Big-Data-Analytics Technologies for Strategic Management : innovation and competitiveness ". Proceedings of international Multi-Conference OCTA'2019 on "Organization of Knowledge and Advanced Technologies". University of Carthage (Tunisia), ALECSO Tunis (Tunisia), ANPR (Tunisia) & International scholarly society ISKO Maghreb. Tunis (ALECSO), Tunisia, février 2020, pp.35-38. [hal-02935829](#).
- [229] Jérôme DINET, Rui NOUCHI, Kohei SAKAKI, Laurent DUPONT, Laure COUDRAT et François CHARPILLET. "Promoting Physical Activity for Elderly People : Towards a Hybrid Coaching ?" In : *ERGO'IA 2021*. Bidart, France, octobre 2021. [hal-03365471](#).
- [230] Eloïse ZEHNDER, Jérôme DINET et François CHARPILLET. "Anthropomorphism, privacy and security concerns : preliminary work". In : *ERGO'IA 2021*. Bidart, France, octobre 2021. [hal-03365472](#).

Conférences internationales majeures

- [231] Marharyta ALEKSANDROVA, Armelle BRUN, Oleg CHERTOV et Anne BOYER. "Sets of contrasting rules : a supervised descriptive rule induction pattern for identification of

- trigger factors". In : *Proceedings of the annual IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*. 2016 IEEE 28th International Conference on Tools with Artificial Intelligence (ICTAI). San Jose, United States, novembre 2016. DOI : [10.1109/ICTAI.2016.0072](https://doi.org/10.1109/ICTAI.2016.0072). hal-03238843.
- [232] marharyta aleksandrova marharyta, Armelle BRUN, Oleg CHERTOV et Anne BOYER. "Automatic Formation of Sets of Contrasting Rules to Identify Trigger Factors". In : *ECAI - European Conference on Artificial Intelligence*. La Hague, Netherlands, août 2016. hal-01336303.
 - [233] Benoît CHAPPET DE VANGEL et Jérémie FIX. "In the quest of efficient hardware implementations of dynamic neural fields : an experimental study on the influence of the kernel shape". In : *International Joint Conference on Neural Networks (IJCNN)*. 2016 International Joint Conference on Neural Networks (IJCNN). Vancouver, Canada, juillet 2016. DOI : [10.1109/IJCNN.2016.7727446](https://doi.org/10.1109/IJCNN.2016.7727446). hal-01482258.
 - [234] Benoît CHAPPET DE VANGEL, Cesar TORRES-HUITZIL et Bernard GIRAU. "Event based visual attention with dynamic neural field on FPGA". In : *International Conference on Distributed Smart Camera*. Paris, France, septembre 2016. hal-01482160.
 - [235] Alessandro Di FAVA, Karim BOUYARMANE, Kevin CHAPPELLET, Emanuele RUFFALDI et Abderrahmane KHEDDAR. "Multi-Contact Motion Retargeting from Human to Humanoid Robot". In : *Humanoids*. Proceedings of the IEEE-RAS International Conference on Humanoid Robots. Cancun, Mexico, novembre 2016, p. 1081-1086. DOI : [10.1109/HUMANOIDS.2016.7803405](https://doi.org/10.1109/HUMANOIDS.2016.7803405). hal-01414986.
 - [236] benjamin gras benjamin, Armelle BRUN et Boyer ANNE. "Identifying Grey Sheep Users in Collaborative Filtering : a Distribution-Based Technique". In : *ACM UMAP*. Halifax, Canada, juillet 2016, p. 17-26. DOI : [10.1145/2930238.2930242](https://doi.org/10.1145/2930238.2930242). hal-01303284.
 - [237] Joost HUIZINGA, Jean-Baptiste MOURET et Jeff CLUNE. "Does Aligning Phenotypic and Genotypic Modularity Improve the Evolution of Neural Networks ?" In : *Proceedings of the 25th Genetic and Evolutionary Computation Conference (GECCO)*. ACM. Denver, France, 2016, p. 125-132. DOI : [10.1145/2908812.2908836](https://doi.org/10.1145/2908812.2908836). hal-01402502.
 - [238] Dietmar JANNACH, Iman KAMEHKHOSH et Geoffray BONNIN. "Biases in Automated Music Playlist Generation : A Comparison of Next-Track Recommending Techniques". In : *User Modeling, Adaptation and Personalization*. Halifax, Canada, juillet 2016. DOI : [10.1145/2930238.2930283](https://doi.org/10.1145/2930238.2930283). hal-01305105.
 - [239] Florian MARCHAL, Sylvain CASTAGNOS et Anne BOYER. "A First Step toward Recommendations Based on the Memory of Users". In : *28th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2016)*. San Jose, United States, novembre 2016. DOI : [10.1109/ICTAI.2016.0019](https://doi.org/10.1109/ICTAI.2016.0019). hal-01421558.
 - [240] Florian MARCHAL, Sylvain CASTAGNOS et Anne BOYER. "Tell Me What You See, I Will Tell You What You Remember". In : *24th Conference on User Modeling, Adaptation and Personalization (UMAP'16)*. T. Proceedings of the 24th Conference on User Modeling, Adaptation and Personalization (UMAP'16). Halifax, Canada, juillet 2016. hal-01305030.
 - [241] Sebastian MARICHAL, Adrien MALAISÉ, Valerio MODUGNO, Oriane DERMY, François CHARPILLETT et Serena IVALDI. "One-shot Evaluation of the Control Interface of a Robotic Arm by Non-Experts". In : *International Conference on Social Robotics*. Kansas City, United States, novembre 2016. hal-01353809.

- [242] Valerio MODUGNO, Ugo CHERVET, Giuseppe ORIOLO et Serena IVALDI. "Learning soft task priorities for safe control of humanoid robots with constrained stochastic optimization". In : *IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS)*. Cancun, Mexico, novembre 2016. [hal-01377690](#).
- [243] Valerio MODUGNO, Gerard NEUMANN, Elmar RUECKERT, Giuseppe ORIOLO, Jan PETERS et Serena IVALDI. "Learning soft task priorities for control of redundant robots". In : *IEEE International Conference on Robotics and Automation (ICRA 2016)*. Stockholm, Sweden, mai 2016. [hal-01273409](#).
- [244] Van Quan NGUYEN, Francis COLAS, Emmanuel VINCENT et François CHARPILLET. "Localizing an intermittent and moving sound source using a mobile robot". In : *International Conference on Intelligent Robots and Systems (IROS)*. Deajeon, South Korea, octobre 2016. [hal-01354006](#).
- [245] Xuan Son NGUYEN, Thanh Phuong NGUYEN et François CHARPILLET. "Effective Surface Normals Based Action Recognition in Depth Images". In : *ICPR 2016 - 23rd International Conference on Pattern Recognition*. Cancun, Mexico, décembre 2016. [hal-01409021](#).
- [246] Xuan Son NGUYEN, Thanh Phuong NGUYEN et François CHARPILLET. "Improving Surface Normals Based Action Recognition in Depth Images". In : *13th International Conference on Advanced Video and Signal-Based Surveillance*. Colorado Springs, United States, août 2016. [hal-01409043](#).
- [247] Pierre-Edouard OSCHE, Sylvain CASTAGNOS, Amedeo NAPOLI et Yannick NAUDET. "Walk the line : Toward an efficient user model for recommendations in museums". In : *11th International Workshop on Semantic and Social Media Adaptation and Personalization (SMAP 2016)*. Thessaloniki, Greece, octobre 2016, p. 83-88. DOI : [10.1109/SMAP.2016.7753389](https://doi.org/10.1109/SMAP.2016.7753389). [hal-01421548](#).
- [248] Vaios PAPASPYROS, Konstantinos CHATZILYGEROUDIS, Vassilis VASSILIADES et Jean-Baptiste MOURET. "Safety-Aware Robot Damage Recovery Using Constrained Bayesian Optimization and Simulated Priors". In : *Bayesian Optimization : Black-box Optimization and Beyond (workshop at NIPS)*. Barcelone, Spain, 2016. [hal-01407757](#).
- [249] Gabin PERSONENI, Marie-Dominique DEVIGNES, Michel DUMONTIER, Malika SMAÏL-TABBONE et Adrien COULET. "Discovering ADE associations from EHRs using pattern structures and ontologies". In : *Phenotype Day, Bio-Ontologies SIG, ISMB*. Orlando, United States, juillet 2016. [hal-01369448](#).
- [250] Sébastien RIMBERT et Laurent BOUGRAIN. "Comparison Between Discrete and Continuous Motor Imageries : toward a Faster Detection". In : *International Brain Computer Interface Meeting 2016*. California, United States, mai 2016. [hal-01389948](#).
- [251] Maxime RIO, Francis COLAS, Mihai ANDRIES et François CHARPILLET. "Probabilistic sensor data processing for robot localization on load-sensing floors". In : *IEEE International Conference on Robotics and Automation (ICRA)*. Stockholm, Sweden, mai 2016. [hal-01274696](#).
- [252] Marcel STEINMETZ, Joerg HOFFMANN et Olivier BUFFET. "Revisiting Goal Probability Analysis in Probabilistic Planning". In : *26th International Conference on Automated Planning and Scheduling*. Proceedings of the 26th International Conference on Automated Planning and Scheduling. London, United Kingdom, juin 2016. [hal-01413035](#).

- [253] Gilles TAGNE, Patrick HENAFF et Nicolas GRÉGORI. "Measurement and analysis of physical parameters of the handshake between two persons according to simple social contexts". In : *2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. Daejeon, France : IEEE, octobre 2016. DOI : [10.1109/IROS.2016.7759125](https://doi.org/10.1109/IROS.2016.7759125). hal-01843162.
- [254] Danesh TARAPORE, Jeff CLUNE, Antoine CULLY et Jean-Baptiste MOURET. "How Do Different Encodings Influence the Performance of the MAP-Elites Algorithm?" In : *Genetic and Evolutionary Computation Conference*. Denver, United States, 2016. DOI : [10.1145/2908812.2908875](https://doi.org/10.1145/2908812.2908875). hal-01302658.
- [255] Shiling WANG, Francis COLAS, Ming LIU, Francesco MONDADA et Stéphane MAGNENAT. "Localization of inexpensive robots with low-bandwidth sensors". In : *13th International Symposium on Distributed Autonomous Robotic Systems*. London, United Kingdom, novembre 2016. hal-01379218.
- [256] Petro AKSONENKO, Vadym AVRUTOV, Yu F. LAZAREV, Patrick HENAFF et Laurent CIARLETTA. "Overclocking Algorithms for SINS". In : *APUAVD 2017 - 4th IEEE International Conference Actual Problems of Unmanned Aerial Vehicles Developments*. Kiev, Ukraine : IEEE, octobre 2017, p. 125-129. DOI : [10.1109/APUAVD.2017.8308791](https://doi.org/10.1109/APUAVD.2017.8308791). hal-01843054.
- [257] Seyed Ziaeddin ALBORZI, Sabeur ARIDHI, Marie-Dominique DEVIGNES, Rabie SAIDI, Alexandre RENAUX, Maria-Jesus MARTIN et David W. RITCHIE. "Automatic Generation of Functional Annotation Rules Using Inferred GO-Domain Associations". In : *Function-SIG ISMB/ECCB 2017*. biofunctionprediction.org. Prague, Czech Republic, juillet 2017. hal-01573070.
- [258] V V AVRUTOV, P M AKSONENKO, P HENAFF et Laurent CIARLETTA. "3D-Calibration of the IMU". In : *ELNANO 2017 - IEEE 37th International Conference on Electronics and Nanotechnology*. Electronics and Nanotechnology (ELNANO), 2017 IEEE 37th International Conference on. KIEV, Ukraine : IEEE, avril 2017, p. 1-6. DOI : [10.1109/ELNANO.2017.7939782](https://doi.org/10.1109/ELNANO.2017.7939782). hal-01654279.
- [259] Amine BOUMAZA. "Phylogeny of Embodied Evolutionary Robotics". In : *Second Workshop on Evolving Collective Behaviors in Robotics at GECCO'17*. Proceedings (Companion) of The Genetic and Evolutionary Computation Conference 2017. Berlin, Germany, juillet 2017, p. 1681-1682. DOI : [10.1145/3067695.3082547](https://doi.org/10.1145/3067695.3082547). hal-01516044.
- [260] Konstantinos CHATZILYGEROUDIS, Roberto RAMA, Rituraj KAUSHIK, Dorian GOEPP, Vassilis VASSILIADES et Jean-Baptiste MOURET. "Black-Box Data-efficient Policy Search for Robotics". In : *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. Vancouver, Canada, septembre 2017. hal-01576683.
- [261] Iñaki FERNÁNDEZ PÉREZ, Amine BOUMAZA et François CHARPILLETT. "Learning Collaborative Foraging in a Swarm of Robots using Embodied Evolution". In : *ECAL 2017 – 14th European Conference on Artificial Life*. Inria. Lyon, France, septembre 2017. hal-01534242.
- [262] Adam GAIER, Alexander ASTEROTH et Jean-Baptiste MOURET. "Aerodynamic Design Exploration through Surrogate-Assisted Illumination". In : *18th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference*. Denver, Colorado, United States, 2017. hal-01518786.

- [263] Adam GAIER, Alexander ASTEROOTH et Jean-Baptiste MOURET. "Data-Efficient Exploration, Optimization, and Modeling of Diverse Designs through Surrogate-Assisted Illumination". In : *Genetic and Evolutionary Computation Conference (GECCO 2017)*. arXiv : [1702.03713](https://arxiv.org/abs/1702.03713). Berlin, Germany, 2017. DOI : [10.1145/3071178.3071282](https://doi.org/10.1145/3071178.3071282). hal-01518698.
- [264] Wissem INOUBLI, Livia ALMADA, Ticiana L. COELHO DA SILVA, Gustavo COUTINHO, Lucas PERES, Regis PIRES MAGALHAES, Jose ANTONIO F. DE MACEDO, Sabeur ARIDHI et Engelbert MEPHU NGUIFO. "A Distributed Framework for Large-Scale Time-Dependent Graph Analysis". In : *ECML PKDD 2017 - TD-LSG 2017 : workshop Advances in Mining Large-Scale Time Dependent Graphs*. Skopje, Macedonia, septembre 2017, p. 6. hal-01590675.
- [265] Serena IVALDI, Lars FRITZSCHE, Jan BABIČ, Freek STULP, Michael DAMSGAARD, Bernhard GRAIMANN, Giovanni BELLUSCI et Francesco NORI. "Anticipatory models of human movements and dynamics : the roadmap of the AnDy project". In : *Digital Human Models (DHM)*. Bonn, Germany, juin 2017. hal-01539731.
- [266] Valerio MODUGNO, Gabriele NAVA, Daniele PUCCI, Francesco NORI, Giuseppe ORIOLO et Serena IVALDI. "Safe trajectory optimization for whole-body motion of humanoids". In : *IEEE-RAS International Conference on Humanoid Robots*. Birmingham, United Kingdom, novembre 2017. hal-01613646.
- [267] Quan NGUYEN VAN, Francis COLAS, Emmanuel VINCENT et François CHARPILLET. "Long-term robot motion planning for active sound source localization with Monte Carlo tree search". In : *HSCMA 2017 - Hands-free Speech Communication and Microphone Arrays*. San Francisco, United States, mars 2017. hal-01447787.
- [268] Kazuya OTANI et Karim BOUYARMANE. "Adaptive Whole-Body Manipulation in Human-to-Humanoid Multi-Contact Motion Retargeting". In : *HUMANOIDS 2017 - IEEE-RAS International Conference on Humanoid Robots*. Submitted to Humanoids 2017. Birmingham, United Kingdom, novembre 2017, p. 1-8. hal-01569390.
- [269] Sébastien RIMBERT, Cecilia LINDIG-LEÓN et Laurent BOUGRAIN. "Profiling BCI users based on contralateral activity to improve kinesthetic motor imagery detection". In : *8th International IEEE EMBS Conference On Neural Engineering*. Shanghai, China, mai 2017. hal-01484636.
- [270] Sébastien RIMBERT, Cecilia LINDIG-LEÓN, Mariia FEDOTENKOVA et Laurent BOUGRAIN. "Modulation of beta power in EEG during discrete and continuous motor imageries". In : *8th International IEEE EMBS Conference On Neural Engineering*. Shanghai, China, mai 2017. hal-01484503.
- [271] Nicolas P. ROUGIER et Yann BONIFACE. "Motivated Self-Organization". In : *12th International Workshop on Self-Organizing Maps and Learning Vector Quantization*. Nancy, France, juin 2017. hal-01513519.
- [272] Vincent SAMY, Karim BOUYARMANE et Abderrahmane KHEDDAR. "QP-based Adaptive-Gains Compliance Control in Humanoid Falls". In : *ICRA : International Conference on Robotics and Automation*. Singapour, Singapore, mai 2017, p. 4762-4767. DOI : [10.1109/ICRA.2017.7989553](https://doi.org/10.1109/ICRA.2017.7989553). hal-01365108.
- [273] Vincent SAMY, Stéphane CARON, Karim BOUYARMANE et Abderrahmane KHEDDAR. "Post-Impact Adaptive Compliance for Humanoid Falls Using Predictive Control of a Reduced Model". In : *Humanoids*. Birmingham, United Kingdom, novembre 2017, p. 655-660. DOI : [10.1109/HUMANOIDS.2017.8246942](https://doi.org/10.1109/HUMANOIDS.2017.8246942). hal-01569819.

- [274] Jonathan SPITZ, Karim BOUYARMANE, Serena IVALDI et Jean-Baptiste MOURET. "Trial-and-Error Learning of Repulsors for Humanoid QP-based Whole-Body Control". In : *IEEE RAS International Conference on Humanoid Robots*. Birmingham, France, 2017. [hal-01569948](#).
- [275] Cesar TORRES-HUITZIL, Oleksandr POPOVYCH et Bernard GIRAU. "Fault Tolerance of Self Organizing Maps ". In : *WSOM+17 - 12th International Workshop on Self-Organizing Maps and Learning Vector Quantization, Clustering and Data Visualization*. Nancy, France, juin 2017. [hal-01574212](#).
- [276] Petro AKSONENKO, Vadym AVRUTOV, Yu F. LAZAREV, Patrick HENAFF et Laurent CIARLETTA. "Expanded Algorithm for Inertial Navigation". In : *SAI 2018 - IEEE Computing Conference*. londres, United Kingdom, juillet 2018. [hal-01843047](#).
- [277] Amélie AUSSSEL, Radu RANTA, Laure BUHRY, Louise TYVAERT et Patrick HENAFF. "A detailed model of the hippocampal formation for the generation of sharp-wave ripples and theta-nested gamma oscillations". In : *27th Annual Computational Neuroscience Meeting, CNS*2018*. Seatle, WA, United States, juillet 2018. [hal-01843023](#).
- [278] Marie CHARBONNEAU, Valerio MODUGNO, Francesco NORI, Giuseppe ORIOLO, Daniele PUCCI et Serena IVALDI. "Learning robust task priorities of QP-based whole-body torque-controllers". In : *HUMANOIDS 2018 - IEEE-RAS 18th International Conference on Humanoid Robots*. Beijing, China, novembre 2018. [hal-01895146](#).
- [279] Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "Using Parameterized Black-Box Priors to Scale Up Model-Based Policy Search for Robotics". In : *ICRA 2018 - International Conference on Robotics and Automation*. arXiv : [1709.06917](#). brisbane, Australia, mai 2018. [hal-01768285](#).
- [280] Kevin DALLEAU, Miguel COUCEIRO et Malika SMAÏL-TABBONE. "Unsupervised extremely randomized trees". In : *PAKDD 2018 - The 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining*. Melbourne, Australia, mai 2018. [hal-01667317](#).
- [281] Oriane DERMY, Maxime CHAVEROCHE, Francis COLAS, François CHARPILLET et Serena IVALDI. "Prediction of Human Whole-Body Movements with AE-ProMPs". In : *IEEE-RAS 18th International Conference on Humanoid Robots (HUMANOIDS 2018)*. Beijing, China, novembre 2018, p. 572-579. [hal-01895148](#).
- [282] Jilles DIBANGOYE et Olivier BUFFET. "Learning to Act in Decentralized Partially Observable MDPs". In : *ICML 2018 - 35th International Conference on Machine Learning*. T. 80. Proceedings of Machine Learning Research. Stockholm, Sweden : PMLR, juillet 2018, p. 1233-1242. [hal-01851806](#).
- [283] Yassine EL KHADIRI, Gabriel CORONA, Cédric ROSE et François CHARPILLET. "Sleep Activity Recognition using Binary Motion Sensors". In : *ICTAI 2018 - 30th International Conference on Tools with Artificial Intelligence*. IEEE. Volos, Greece, novembre 2018. [hal-01943463](#).
- [284] Mathieu FEHR, Olivier BUFFET, Vincent THOMAS et Jilles DIBANGOYE. " ρ -POMDPs have Lipschitz-Continuous -Optimal Value Functions". In : *NIPS 2018 - Thirty-second Conference on Neural Information Processing Systems*. Montréal, Canada, décembre 2018, p. 1-27. [hal-01903685](#).
- [285] Iñaki FERNÁNDEZ PÉREZ, Amine BOUMAZA et François CHARPILLET. "Maintaining Diversity in Robot Swarms with Distributed Embodied Evolution". In : *ANTS 2018 - International Conference on Swarm Intelligence*. Rome, Italy, octobre 2018. [hal-01937119](#).

- [286] Adam GAIER, Alexander ASTEROOTH et Jean-Baptiste MOURET. "Data-efficient Neuroevolution with Kernel-Based Surrogate Models". In : *GECCO 2018 - Genetic and Evolutionary Computation Conference*. arXiv : [1804.05364](https://arxiv.org/abs/1804.05364). Kyoto, Japan, juillet 2018. DOI : [10.1145/3205455.3205510](https://doi.org/10.1145/3205455.3205510). hal-01768248.
- [287] Tristan GILLARD, Jean LIEBER et Emmanuel NAUER. "Improving Adaptation Knowledge Discovery by Exploiting Negative Cases : First Experiment in a Boolean Setting". In : *ICCBR 2018 - 26th International Conference on Case-Based Reasoning*. Stockholm, Sweden, juillet 2018. hal-01905077.
- [288] Melanie JOUAITI et Patrick HENAFF. "CPG-based Controllers can Generate Both Discrete and Rhythmic Movements". In : *IROS 2018 - IEEE/RSJ International Conference on Intelligent Robots and Systems*. Madrid, Spain, octobre 2018. hal-01837189.
- [289] Rituraj KAUSHIK, Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "Multi-objective Model-based Policy Search for Data-efficient Learning with Sparse Rewards". In : *CoRL 2018 - Conference on Robot Learning*. arXiv : [1806.09351](https://arxiv.org/abs/1806.09351). Zurich, Switzerland, octobre 2018. hal-01884294.
- [290] Adrien MALAISÉ, Pauline MAURICE, Francis COLAS, François CHARPILLET et Serena IVALDI. "Activity Recognition With Multiple Wearable Sensors for Industrial Applications". In : *ACHI 2018 - Eleventh International Conference on Advances in Computer-Human Interactions*. Rome, Italy, mars 2018. hal-01701996.
- [291] Baptiste MENGES, Michaël SARREY et Patrick HENAFF. "Integration of collaborative robot in a hard steel industrial environment". In : *CASE 2018 - 14th IEEE International Conference on Automation Science and Engineering*. munich, Germany, août 2018. hal-01843017.
- [292] Kazuya OTANI, Karim BOUYARMANE et Serena IVALDI. "Generating Assistive Humanoid Motions for Co-Manipulation Tasks with a Multi-Robot Quadratic Program Controller". In : *ICRA 2018 - International Conference on Robotics and Automation*. Brisbane, Australia, mai 2018. hal-01590678.
- [293] Supratik PAUL, Konstantinos CHATZILYGEROUDIS, Kamil CIOSEK, Jean-Baptiste MOURET, Michael A OSBORNE et Shimon WHITESON. "Alternating Optimisation and Quadrature for Robust Control". In : *AAAI 2018 - The Thirty-Second AAAI Conference on Artificial Intelligence*. arXiv : [1605.07496](https://arxiv.org/abs/1605.07496). New Orleans, United States, février 2018. hal-01644063.
- [294] Rémi PAUTRAT, Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "Bayesian Optimization with Automatic Prior Selection for Data-Efficient Direct Policy Search". In : *ICRA 2018 - International Conference on Robotics and Automation*. arXiv : [1709.06919](https://arxiv.org/abs/1709.06919). Brisbane, Australia, mai 2018. hal-01768279.
- [295] Luigi PENCO, Brice CLÉMENT, Valerio MODUGNO, Enrico Mingo HOFFMAN, Gabriele NAVA, Daniele PUCCI, Nikos TSAGARAKIS, Jean-Baptiste MOURET et Serena IVALDI. "Robust Real-time Whole-Body Motion Retargeting from Human to Humanoid". In : *HUMANOIDS 2018 - IEEE-RAS 18th International Conference on Humanoid Robots*. Beijing, China, novembre 2018. hal-01895145.
- [296] Gabin PERSONENI, Marie-Dominique DEVIGNES, Malika SMAÏL-TABBONE, Philippe JONVEAUX, Céline BONNET et Adrien COULET. "Cooperation of bio-ontologies for the classification of genetic intellectual disabilities : a diseasesome approach". In : *Proceedings of the 11th International Conference on Semantic Web Applications and Tools for Healthcare and Life Sciences (SWAT4HCLS 2018)*. Antwerp, Belgium, décembre 2018. hal-01925471.

- [297] Sébastien RIMBERT, Nathalie GAYRAUD, Maureen CLERC, Stéphanie FLECK et Laurent BOUGRAIN. "Can the MIQ-RS questionnaire be used to estimate the performance of a MI-based BCI?" In : *2018 Seventh International BCI Meeting*. Pacific Grove, United States, mai 2018. [hal-01889864](#).
- [298] Vincent SAMY, Karim BOUYARMANE et Abderrahmane KHEDDAR. "Analysis of a simple model for post-impact dynamics active compliance in humanoids falls with nonlinear optimization". In : *IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR 2018)*. Brisbane, Australia : IEEE, mai 2018, p. 62-67. DOI : [10.1109/SIMPAR.2018.8376272](https://doi.org/10.1109/SIMPAR.2018.8376272). [lirmm-03131379](#).
- [299] Chinmay SINGHAL, Yann PONTY et Isaure CHAUVOT DE BEAUCHÈNE. "A hybrid combinatorial method for docking single stranded RNAs in a protein pocket at the thermodynamic equilibrium". In : *JOBIM (Journées Ouvertes en Biologie, Informatique et Mathématiques)*. Marseille, France, juillet 2018. [hal-02394529](#).
- [300] Lucas TERISSI, Gonzalo SAD, Mauricio CERDA, Slim OUNI, Rodrigo GALVEZ, Juan B. GÓMEZ, Bernard GIRAU et Nancy HITSCHFELD-KAHLER. "A French-Spanish Multimodal Speech Communication Corpus Incorporating Acoustic Data, Facial, Hands and Arms Gestures Information". In : *Interspeech 2018 - 19th Annual Conference of the International Speech Communication Association*. Hyderabad, India, septembre 2018. [hal-01862585](#).
- [301] Vassilis VASSILIADES et Jean-Baptiste MOURET. "Discovering the Elite Hypervolume by Leveraging Interspecies Correlation". In : *GECCO 2018 - Genetic and Evolutionary Computation Conference*. arXiv : [1804.03906](https://arxiv.org/abs/1804.03906). Kyoto, Japan, juillet 2018. DOI : [10.1145/3205455.3205602](https://doi.org/10.1145/3205455.3205602). [hal-01764739](#).
- [302] Amélie AUSSEL, Harry TRAN, Laure BUHRY, Steven LE CAM, Louis MAILLARD, Sophie COLNAT-COULBOIS, Valérie LOUIS-DORR et Radu RANTA. "Extracellular synaptic and action potential signatures in the hippocampal formation : a modelling study". In : *28th Annual Computational Neuroscience Meeting, CNS*2019*. Barcelone, Spain, juillet 2019. [hal-02284821](#).
- [303] Yann BERNARD, Nicolas HUEBER et Bernard GIRAU. "Novelty detection with self-organizing maps for autonomous extraction of salient tracking features". In : *13th International Workshop on Self-Organizing Maps and Learning Vector Quantization, Clustering and Data Visualization*. Barcelona, Spain, juin 2019. DOI : [10.1007/978-3-030-19642-4_10](https://doi.org/10.1007/978-3-030-19642-4_10). [hal-02156627](#).
- [304] Maël BEUGET, Sylvain CASTAGNOS, Christophe LUXEMBOURGER et Anne BOYER. "Eye Gaze Sequence Analysis to Model Memory in E-education". In : *20th international conference on Artificial Intelligence in Education (AIED 2019)*. Chicago, United States, juin 2019. [hal-02471999](#).
- [305] Amine BOUMAZA. "Introducing Weighted Intermediate Recombination in On-line Collective Robotics, the ($\mu/\mu W$, 1)-On-line EEA". In : *Applications of Evolutionary Computation*. Leipzig, Germany, avril 2019. [hal-02185694](#).
- [306] Amine BOUMAZA. "When Mating Improves On-line Collective Robotics". In : *GECCO'19 Proceedings of the 2019 Genetic and Evolutionary Computation Conference*. Prague, Czech Republic, juillet 2019. [hal-02185645](#).
- [307] Adrien DUFRAUX, Emmanuel VINCENT, Awni HANNUN, Armelle BRUN et Matthijs DOUZE. "Lead2Gold : Towards exploiting the full potential of noisy transcriptions for speech recognition". In : *ASRU 2019 - IEEE Automatic Speech Recognition and Understanding Workshop*. Singapour, Singapore, décembre 2019. [hal-02316572](#).

- [308] Bernard GIRAU et Andres UPEGUI. "Cellular Self-Organising Maps - CSOM". In : *WSOM'19 - 13th International Workshop on Self-Organizing Maps and Learning Vector Quantization, Clustering and Data Visualization*. Barcelona, Spain, juin 2019. DOI : [10.1007/978-3-030-19642-4_4](https://doi.org/10.1007/978-3-030-19642-4_4). [hal-02156280](https://hal.archives-ouvertes.fr/hal-02156280).
- [309] Waldez GOMES, Vishnu RADHAKRISHNAN, Luigi PENCO, Valerio MODUGNO, Jean-Baptiste MOURET et Serena IVALDI. "Humanoid Whole-Body Movement Optimization from Re-targeted Human Motions". In : *IEEE/RAS Int. Conf. on Humanoid Robots*. Toronto, Canada, octobre 2019. [hal-02290473](https://hal.archives-ouvertes.fr/hal-02290473).
- [310] Antoine MONIOT, Sjoerd DE VRIES, Dave RITCHIE et Isaure CHAUVOT DE BEAUCHÈNE. "NAfragDB : A Multi-Purpose Structural Database of Nucleic-Acid/Protein Complexes for Advances Users". In : *21e congrès du Groupe de graphisme et modélisation moléculaire (GGMM)*. Nice, France, avril 2019. [hal-02393039](https://hal.archives-ouvertes.fr/hal-02393039).
- [311] Pierre-Edouard OSCHE, Sylvain CASTAGNOS et Anne BOYER. "AntRS : Recommending Lists through a Multi-Objective Ant Colony System". In : *41st European Conference on Information Retrieval (ECIR 2019)*. Cologne, Germany, avril 2019. [hal-02472002](https://hal.archives-ouvertes.fr/hal-02472002).
- [312] Radu RANTA, Steven LE CAM, Gundars BERGMANIS-KORATS, Sébastien RIMBERT et Laurent BOUGRAIN. "On source space resolution in EEG brain imaging for motor imagery". In : *9th International IEEE EMBS Conference on Neural Engineering, NER 2019*. San Francisco, United States, mars 2019. [hal-01985178](https://hal.archives-ouvertes.fr/hal-01985178).
- [313] Sébastien RIMBERT, Philippe GUERCI, Nathalie GAYRAUD, Claude MEISTELMAN et Laurent BOUGRAIN. "Innovative Brain-Computer Interface based on motor cortex activity to detect accidental awareness during general anesthesia". In : *IEEE SMC 2019 - IEEE International Conference on Systems, Man, and Cybernetics*. Bari, Italy, octobre 2019. [hal-02166934](https://hal.archives-ouvertes.fr/hal-02166934).
- [314] Andrii Dmytryvych SHACHYKOV, Oleksandr SHULIAK et Patrick HENAFF. "Closed-loop Central Pattern Generator Control of Human Gaits in OpenSim Simulator". In : *IJCNN 2019 - International Joint Conference on Neural Networks*. Budapest, Hungary, juillet 2019. [hal-02309658](https://hal.archives-ouvertes.fr/hal-02309658).
- [315] Diego BARRIENTOS, Claudio SOUSA, Andres UPEGUI et Bernard GIRAU. "SCALPsim, a tool for modeling asynchronous Self-Organizing 3-D NoC architectures". In : *ICECS 2020, 27th IEEE International Conference on Electronics Circuits and Systems*. Glasgow/Virtual, United Kingdom, novembre 2020. [hal-02984429](https://hal.archives-ouvertes.fr/hal-02984429).
- [316] Alexandre BAZIN, Miguel COUCEIRO, Marie-Dominique DEVIGNES et Amedeo NAPOLI. "Explaining Multicriteria Decision Making with Formal Concept Analysis". In : *Concept Lattices and Applications 2020*. T. 2668. CEUR Workshop Proceedings. Tallinn, Estonia, juin 2020. [hal-02909383](https://hal.archives-ouvertes.fr/hal-02909383).
- [317] Yann BERNARD, Nicolas HUEBER et Bernard GIRAU. "Novelty Detection in Images Using Vector Quantization with Topological Learning". In : *ICECS 2020, 27th IEEE International Conference on Electronics Circuits and Systems*. Glasgow/Virtual, United Kingdom, novembre 2020. [hal-02984427](https://hal.archives-ouvertes.fr/hal-02984427).
- [318] David M BOSSENS, Jean-Baptiste MOURET et Danesh TARAPORE. "Learning behaviour-performance maps with meta-evolution". In : *GECCO'20 - Genetic and Evolutionary Computation Conference*. Cancun, Mexico, juillet 2020. [hal-02555231](https://hal.archives-ouvertes.fr/hal-02555231).

- [319] Julie Bu DAHER et Armelle BRUN. "Handling Item Similarity in Behavioral Patterns through General Pattern Mining". In : *The 2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'20)*. Sydney/Virtual, Australia, décembre 2020. [hal-02979142](#).
- [320] Kevin DALLEAU, Miguel COUCEIRO et Malika SMAÏL-TABBONE. "Computing Vertex-Vertex Dissimilarities Using Random Trees : Application to Clustering in Graphs". In : *IDA 2020 -18th International Symposium on Intelligent Data Analysis*. T. 12080. Lecture Notes in Computer Science. Konstanz / Virtual, Germany : Springer, juin 2020, p. 132-144. DOI : [10.1007/978-3-030-44584-3_11](https://doi.org/10.1007/978-3-030-44584-3_11). [hal-02864678](#).
- [321] Oriane DERMY et Armelle BRUN. "Can we Take Advantage of Time-Interval Pattern Mining to Model Students Activity ?" In : *Proceedings of The 13th International Conference on Educational Data Mining (EDM 2020)*. Ifrane, Morocco, juillet 2020. [hal-02974678](#).
- [322] Jonathan FERRER-MESTRES, Thomas G. DIETTERICH, Olivier BUFFET et Iadine CHADÈS. "Solving K-MDPs". In : *ICAPS 2020 - International Conference on Automated Planning and Scheduling*. Nancy (virtuel), France, octobre 2020. [hal-03080154](#).
- [323] Adrien FOIS et Bernard GIRAU. "A Spiking Neural Architecture for Vector Quantization and Clustering". In : *ICONIP 2020, 27th International Conference on Neural Information Processing*. BANGKOK, Thailand, novembre 2020. [hal-02984431](#).
- [324] Hervé FREZZA-BUET. "Self-organizing maps in manifolds with complex topologies : An application to the planning of closed path for indoor UAV patrols". In : *European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning*. Bruges, Belgium, avril 2020. [hal-02489649](#).
- [325] Adam GAIER, Alexander ASTEROOTH et Jean-Baptiste MOURET. "Discovering Representations for Black-box Optimization". In : *GECCO'20 - Genetic and Evolutionary Computation Conference*. Cancun, Mexico, juillet 2020. DOI : [10.1145/3377930.3390221](https://doi.org/10.1145/3377930.3390221). [hal-02555221](#).
- [326] Niels JUSTESEN, Miguel GONZÁLEZ-DUQUE, Daniel CABARCAS, Jean-Baptiste MOURET et Sebastian RISI. "Learning a Behavioral Repertoire from Demonstrations". In : *CoG 2020 - IEEE Conference on Games*. Osaka / Virtual, Japan, 2020. [hal-02868800](#).
- [327] Rituraj KAUSHIK, Timothée ANNE et Jean-Baptiste MOURET. "Fast Online Adaptation in Robotics through Meta-Learning Embeddings of Simulated Priors". In : *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. Las Vegas, United States, 2020. [hal-02909452](#).
- [328] Guilherme MEDEIROS MACHADO, Geoffray BONNIN, Sylvain CASTAGNOS, Lara HOAREAU, Aude THOMAS et Youssef TAZOUTI. "An Approach to Model Children's Inhibition During Early Literacy and Numeracy Acquisition". In : *International Conference on Artificial Intelligence in Education*. T. 12164. Artificial Intelligence in Education. Cyberspace, Morocco : Springer, juillet 2020, p. 203-207. DOI : [10.1007/978-3-030-52240-7_37](https://doi.org/10.1007/978-3-030-52240-7_37). [hal-02963589](#).
- [329] Barbara MOISSA, Geoffray BONNIN et Boyer ANNE. "Towards the exploitation of multimodal data to measure students' mental effort". In : *2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT)*. 2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT). Tartu/ Virtual, Estonia, juillet 2020. DOI : [10.1109/ICALT49669.2020.00118](https://doi.org/10.1109/ICALT49669.2020.00118). [hal-02981591](#).

- [330] Antoine MONIOT, Rohit ROY, Yann GUERMEUR et Isaure CHAUVOT DE BEAUCHÈNE. “Docking of RNA Hairpin on Protein Using a Fragment-Based Method”. In : *JOBIM 2020 - Journées Ouvertes en Biologie, Informatique et Mathématiques*. Montpellier, France, juin 2020. [hal-02927185](#).
- [331] Jean-Baptiste MOURET et Glenn MAGUIRE. “Quality Diversity for Multi-task Optimization”. In : *GECCO'20 - Genetic and Evolutionary Computation Conference*. Cancun, Mexico, juillet 2020. DOI : [10.1145/3377930.3390203](https://doi.org/10.1145/3377930.3390203). [hal-02555202](#).
- [332] Sébastien RIMBERT, Laurent BOUGRAIN et Stéphanie FLECK. “Learning How to Generate Kinesthetic Motor Imagery Using a BCI-based Learning Environment : a Comparative Study Based on Guided or Trial-and-Error Approaches”. In : *SMC 2020 - International IEEE Conference on Systems, Man and Cybernetics*. This paper received the 1st Place in the IEEE Brain BMI Workshop Best Student Paper Award. Toronto, Canada, octobre 2020. [hal-02920306](#).
- [333] Vincent THOMAS, Gérémie HUTIN et Olivier BUFFET. “Monte Carlo Information-Oriented Planning”. In : *24th ECAI 2020 - European Conference on Artificial Intelligence*. Santiago de Compostela, Spain, août 2020. [hal-02943028](#).
- [334] Yuxuan XIE, Jilles Steeve DIBANGOYE et Olivier BUFFET. “Optimally Solving Two-Agent Decentralized POMDPs Under One-Sided Information Sharing”. In : *ICML 2020 - 37th International Conference on Machine Learning*. Vienne / Virtual, Austria, juillet 2020, p. 1-10. [hal-03080192](#).
- [335] Zhao ZHANG, Armelle BRUN et Anne BOYER. “New Measures for Offline Evaluation of Learning Path Recommenders”. In : *15th European Conference on Technology Enhanced Learning, EC-TEL 2020*. Heidelberg, Germany, septembre 2020. DOI : [10.1007/978-3-030-57717-9_19](https://doi.org/10.1007/978-3-030-57717-9_19). [hal-02974676](#).

Autre conférences internationales

- [336] Sabeur ARIDHI, Martin BRUGNARA, Alberto MONTRESOR et Yannis VELEGRAKIS. “Distributed k-core decomposition and maintenance in large dynamic graphs”. In : *the 10th ACM International Conference*. Irvine, France : ACM Press, juin 2016, p. 161-168. DOI : [10.1145/2933267.2933299](https://doi.org/10.1145/2933267.2933299). [hal-03025953](#).
- [337] Amélie AUSSEL et Radu RANTA. “Oscillation analysis of ring networks : application on epileptic hippocampus”. In : *Bernstein Conference 2016*. Poster. Berlin, Germany, septembre 2016. DOI : [10.12751/nncn.bc2016.0045](https://doi.org/10.12751/nncn.bc2016.0045). [hal-01418093](#).
- [338] Benjamin CAMUS, Virginie GALTIER, Mathieu CAUJOLLE, Vincent CHEVRIER, Julien VAUBOURG, Laurent CIARLETTA et Christine BOURJOT. “Hybrid Co-simulation of FMUs using DEV&DESS in MECSYCO”. In : *Symposium on Theory of Modeling & Simulation - DEVS Integrative M&S Symposium*. Proceedings of the Symposium on Theory of Modeling & Simulation - DEVS Integrative M&S Symposium (TMS/DEVS 16), SCS/ACM (2016). Pasadena, CA, United States, avril 2016, p. 568-575. [hal-01307616](#).

- [339] Clémence CHAMARD-JOVENIN, Amand CHESNEL, Emmanuel BRESSO, Chloé MOREL, Charlène THIÉBAUT, Malika SMAIL-TABBONE, El-Hadi DJERMOUNE, Marie-Dominique DEVIGNES, Taha BOUKHOBZA et Hélène DUMOND. “Transgenerational effects of ERalpha36 over-expression on mammary gland development and molecular phenotype : clinical perspective for breast cancer risk and therapy.” In : *21st World Congress on Advances in Oncology and 19th International Symposium on Molecular Medicine*. T. 38. International Journal of Molecular Medecine S1. Athens, Greece, octobre 2016. [hal-01416469](#).
- [340] Benoît CHAPPET DE VANGEL et Bernard GIRAU. “Randomly spiking dynamic neural fields driven by a shared random flow”. In : *International Conference on Artificial Neural Networks*. Artificial Neural Networks and Machine Learning – ICANN 2016 9886 & 9887. Barcelona, Spain, septembre 2016. [hal-01482237](#).
- [341] Konstantinos CHATZILYGEROUDIS, Antoine CULLY et Jean-Baptiste MOURET. “Towards semi-episodic learning for robot damage recovery”. In : *Workshop on AI for Long-Term Autonomy at the IEEE International Conference on Robotics and Automation (ICRA)*. arXiv : [1610.01407](#). Lars Kunze and Nick Hawes and Tom Duckett and Gabe Sibley. Stockholm, Sweden, mai 2016. [hal-01376288](#).
- [342] Kevin DALLEAU, Miguel COUCEIRO, Marie-Dominique DEVIGNES, Chedy RAÏSSI et Malika SMAÏL-TABBONE. “Using aggregation functions on structured data : a use case in the FIGHT-HF project”. In : *International Symposium on Aggregation and Structures (ISAS 2016)*. Sous la dir. de Gergely KISS, Jean-Luc MARICHAL et Bruno TEHEUX. International Symposium on Aggregation and Structures (ISAS 2016) - Book of abstracts. Luxembourg, Luxembourg, juillet 2016. [hal-01399232](#).
- [343] Mariia FEDOTENKOVA, Peter BEIM GRABEN, Jamie SLEIGH et Axel HUTT. “Time-Frequency Representations as Phase Space Reconstruction in Recurrence Symbolic Analysis”. In : *International work-conference on Time Series (ITISE)*. Granada, Spain, juin 2016. [hal-01343629](#).
- [344] Hoang Nam HO, Mourad RABAH, Samuel NOWAKOWSKI et Pascal ESTRAILLER. “Toward a Trace-Based PROMETHEE II Method to answer ” What can teachers do ? ” in Online Distance Learning Applications”. In : *13th International Conference on Intelligent Tutoring Systems*. Zagreb, Croatia, juin 2016, p. 480-484. [hal-01334151](#).
- [345] Audrey KNAUF, Joel GAILLARD et Marc MORIEUX. “TICE et enseignement supérieur, quelle efficacité auprès des étudiants issus de Bacs professionnels ?” In : *84e Congrès de l'Acfas*. ACFAS. Montréal, Canada, mai 2016. [hal-01260068](#).
- [346] Amaury L'HUILLIER, Sylvain CASTAGNOS et Anne BOYER. “The New Challenges when Modeling Context through Diversity over Time in Recommender Systems”. In : *Proceedings of the 24th Conference on User Modeling, Adaptation and Personalization (UMAP 2016 Doctoral Consortium)*. Sous la dir. d'ACM. Proceedings of the 24th Conference on User Modeling, Adaptation and Personalization (UMAP 2016 Doctoral Consortium). Halifax, Canada, juillet 2016, p. 341-344. DOI : [10.1145/2930238.2930370](#). [hal-01306790](#).
- [347] Cecilia LINDIG-LEÓN, Nathalie GAYRAUD, Laurent BOUGRAIN et Maureen CLERC. “Comparison of Hierarchical and Non-Hierarchical Classification for Motor Imagery Based BCI Systems”. In : *The Sixth International Brain-Computer Interfaces Meeting*. Pacific Grove, United States, mai 2016. [hal-01287636](#).

- [348] Adrien MALAISÉ, Sophie NERTOMB, François CHARPILLET et Serena IVALDI. "Towards collaboration between professional caregivers and robots - A preliminary study". In : *International Conference on Social Robotics - Workshop "Using social robots to improve the quality of life in the elderly"*. Kansas City, United States, novembre 2016. [hal-01377708](#).
- [349] Artem MELNYK et Patrick HENAFF. "Bio-inspired plastic controller for a robot arm to shake hand with human". In : *IEEE 36th International Conference on ELECTRONICS AND NANOTECHNOLOGY ELNANO-2016*. Univ KPI. Kiev, Ukraine, avril 2016, p. 163-168. [hal-01310304](#).
- [350] Samuel NOWAKOWSKI, Marie CHAGNOUX et Hélène BOULANGER. "Une logique de tiers lieux au service d'une stratégie de formation des enseignants-chercheurs à l'université de Lorraine". In : *3e Colloque international en éducation*. Centre de recherche interuniversitaire sur la formation et la profession enseignante (CRIFPE). Montréal, Canada, mai 2016. [hal-01510637](#).
- [351] Sébastien RIMBERT, Stéphanie FLECK, Jimmy NEX et Laurent BOUGRAIN. "Nécessité d'un protocole d'apprentissage progressif pour la maîtrise d'une imagination motrice après un AVC". In : *28ième conférence francophone sur l'Interaction Homme-Machine*. Atelier sur les Nouvelles technologies pour les Ainées, défis et perspectives. Fribourg, Switzerland, octobre 2016, p. 10-12. [hal-01386665](#).
- [352] Sahbi SIDHOM et Philippe LAMBERT. "Modélisation d'un domaine des compétences et d'innovation en science des matériaux (Nanosciences) : Organisation des connaissances dans la recommandation stratégique". In : *Veille Informationnelle et Gestion des Connaissances (VEIGEC)*. T. 1. Gouvernance des connaissances dans les organisations 1. COLLOQUE INTERNATIONAL SUR LA VEILLE INFORMATIONNELLE ET LA GESTION DES CONNAISSANCES DANS LES ORGANISATIONS. Institut Supérieur de Documentation (ISD-Université de la Manouba-Tunis), Association pour la Gestion des Connaissances dans la Société et les Organisations (AGeCSO-France) et International Society for KnowledgeOrganization des pays du Maghreb (ISKO-Maghreb). Tunis, Tunisia, avril 2016. [hal-01456153](#).
- [353] Nicolas SOLER, Philippe MONTEIRO, Emilie ROBERT, Marie-Dominique DEVIGNES, Bernard MAIGRET, Dave RITCHIE, Gérard GUÉDON, Sophie PAYOT et Nathalie N. LEBLOND-BOURGET. "Characterization of the ICESt3 relaxase active site indicates evolutionary relationship between MOBT relaxases and rolling circle replication proteins of the Rep-trans family." In : *Type IV Secretion in Gram-Negative and Gram-Positive Bacteria conference*. Beilngries, Germany, décembre 2016. [hal-02974522](#).
- [354] Matthieu ZIMMER, Yann BONIFACE et Alain DUTECH. "Neural Fitted Actor-Critic". In : *ESANN 2016 - Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning*. Bruges, Belgium, avril 2016. [hal-01350651](#).
- [355] Matthieu ZIMMER, Yann BONIFACE et Alain DUTECH. "Off-Policy Neural Fitted Actor-Critic". In : *NIPS 2016 - Deep Reinforcement Learning Workshop*. Barcelona, Spain, décembre 2016. [hal-01413886](#).
- [356] Matthieu ZIMMER, Yann BONIFACE et Alain DUTECH. "Toward a data efficient neural actor-critic". In : *EWRL 2016 - The 13th European Workshop on Reinforcement Learning*. European Workshop on Reinforcement Learning. Barcelona, Spain, décembre 2016. [hal-01413885](#).

- [357] Yacine ABOUD, Anne BOYER et Armelle BRUN. "CCPM : A Scalable and Noise-Resistant Closed Contiguous Sequential Patterns Mining Algorithm". In : *13th International Conference on Machine Learning and Data Mining MLDM 2017*. T. 89. New York, United States, juillet 2017, p. 15. DOI : [10.1016/j.knosys.2015.06.014](https://doi.org/10.1016/j.knosys.2015.06.014). hal-01569008.
- [358] Seyed Ziaeddin ALBORZI, Marie-Dominique DEVIGNES et David RITCHIE. "Associating Gene Ontology Terms with Pfam Protein Domains". In : *5th International Working Conference on Bioinformatics and Biomedical Engineering - IWBBIO 2017*. Sous la dir. d'Ignacio ROJAS et Francisco ORTUÑO. T. 10209. Bioinformatics and Biomedical Engineering. Granada, Spain : Springer, avril 2017, p. 127-138. DOI : [10.1007/978-3-319-56154-7_13](https://doi.org/10.1007/978-3-319-56154-7_13). hal-01531204.
- [359] Amélie AUSSEL, Laure BUHRY et Radu RANTA. "Stability conditions of Hopfield ring networks with discontinuous piecewise-affine activation functions". In : *56th IEEE Conference on Decision and Control, CDC 2017*. Melbourne, Australia, décembre 2017. hal-01645410.
- [360] V.V. AVRUTOV, N.I. BOURAOU, L. LAKOZA, O.M. PAVLOVSKYI, Patrick HENAFF, Laurent CIARLETTA et Petro AKSONENKO. "NEMS Gyroscope". In : *ICE ITMC 2017 - 23rd ICE/IEEE International Technology Management Conference*. Porto, Portugal : IEEE, juin 2017, p. 394-398. DOI : [10.1109/ICE.2017.8279912](https://doi.org/10.1109/ICE.2017.8279912). hal-01843148.
- [361] Vadym AVRUTOV, Petro AKSONENKO, Nadiya BOURAOU, Henaff PATRICK et Laurent CIARLETTA. "Expanded Calibration of the MEMS Inertial Sensors". In : *UKRCON 2017 - IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON)*. KIEV, Ukraine, mai 2017. DOI : [10.1109/UKRCON.2017.8100328](https://doi.org/10.1109/UKRCON.2017.8100328). hal-01654275.
- [362] Pedro Chávez BARRIOS, Davy MONTICOLO, Sahbi SIDHOM et Alex GABRIEL. "An Organizational Model to Understand the Creativity Workshop". In : *SITIS - The 13th International Conference on SIGNAL IMAGE TECHNOLOGY & INTERNET BASED SYSTEMS*. Jaipur, India, India, décembre 2017. DOI : [10.1109/SITIS.2017.87](https://doi.org/10.1109/SITIS.2017.87). hal-01713737.
- [363] Oriane DERMY, François CHARPILLET et Serena IVALDI. "Multi-Modal Intention Prediction With Probabilistic Movement Primitives". In : *HFR 2017 - 10th International Workshop on Human-Friendly Robotics*. Napoli, Italy, novembre 2017, p. 1-15. hal-01644585.
- [364] Monique GRANDBASTIEN. "The e-Fran Program : A Nation-Wide Initiative Supporting Research Projects to Foster Learning and Teaching Through Digital Technologies". In : *11th IFIP World Conference on Computers in Education (WCCE)*. Sous la dir. d'Arthur TATNALL et Mary WEBB. T. AICT-515. Tomorrow's Learning : Involving Everyone. Learning with and about Technologies and Computing. Part 1 : Futures of Technology for Learning and Education. Dublin, Ireland : Springer International Publishing, juillet 2017, p. 81-86. DOI : [10.1007/978-3-319-74310-3_10](https://doi.org/10.1007/978-3-319-74310-3_10). hal-01762887.
- [365] Benjamin GRAS, Armelle BRUN et Anne BOYER. "Can Matrix Factorization Improve the Accuracy of Recommendations Provided to Grey Sheep Users ?" In : *13th International Conference on Web Information Systems and Technologies (WEBIST)*. Porto, Portugal, avril 2017, p. 88-96. DOI : [10.5220/0006302700880096](https://doi.org/10.5220/0006302700880096). hal-01569004.
- [366] Audrey KNAUF. "La co-production de contenu par le numérique pour optimiser et renforcer l'apprentissage hybride : retour d'expériences de pédagogie co-active". In : *LUDOVIA*. Ax-les-Thermes, France, août 2017. hal-01637806.

- [367] Audrey KNAUF. "La pédagogie par projet influencée par les espaces d'apprentissage : le rôle de l'enseignant et de l'apprenant au cœur d'un dispositif hybride". In : *AUPTIC*. Genève, France, novembre 2017. [hal-01637807](#).
- [368] Audrey KNAUF. "La veille numérique collaborative au service de l'apprentissage hybride : co-construction et auto-gestion d'un cours par des étudiants de licence". In : *EIAH - Environnements Informatiques pour l'Apprentissage Humain*. Université de Strasbourg and LISEC. Strasbourg, France, juin 2017. [hal-01637805](#).
- [369] Amaury L'HUILIER, Sylvain CASTAGNOS et Anne BOYER. "Are Item Attributes a Good Alternative to Context Elicitation in Recommender Systems?" In : *25th Conference on User Modeling, Adaptation and Personalization (UMAP 2017)*. Bratislava, Slovakia, juillet 2017. [hal-02471982](#).
- [370] Cecilia LINDIG-LEON, Sébastien RIMBERT, Oleksii AVILOV et Laurent BOUGRAIN. "Scalp EEG Activity During Simple and Combined Motor Imageries to Control a Robotic Arm". In : *2017 IEEE First Ukraine Conference on Electrical and Computer Engineering*. Kiev, Ukraine, mai 2017. [hal-01519712](#).
- [371] Pauline MAURICE, Neville HOGAN et Dagmar STERNAD. "Predictability, Effort and (Anti-)Resonance in Complex Object Control". In : *Workshop on Human Movement Understanding at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2017)*. Vancouver, Canada, septembre 2017. [hal-02348655](#).
- [372] Jean-Baptiste MOURET et Konstantinos CHATZILYGEROUDIS. "20 Years of Reality Gap : a few Thoughts about Simulators in Evolutionary Robotics". In : *Workshop "Simulation in Evolutionary Robotics", Genetic and Evolutionary Computation Conference*. Berlin, Germany, 2017. DOI : [10.1145/3067695.3082052](https://doi.org/10.1145/3067695.3082052). [hal-01518764](#).
- [373] Sébastien RIMBERT. "Design of a brain-computer interface allowing intraoperative awareness detection during a general anesthesia". In : *29eme conférence francophone sur l'Interaction Homme-Machine*. Poitiers, France, août 2017. [hal-01568596](#).
- [374] Sébastien RIMBERT, Oleksii AVILOV et Laurent BOUGRAIN. "Discrete motor imageries can be used to allow a faster detection". In : *7th Graz Brain-Computer Interface Conference 2017*. Graz, Austria, septembre 2017. [hal-01512407](#).
- [375] Sébastien RIMBERT, Laurent BOUGRAIN, Romain ORHAND, Jimmy NEX, Sylvain GABORIT et Stéphanie FLECK. "Grasp'it : une interface cerveau-ordinateur pour l'amélioration de l'apprentissage d'une tâche d'imagination motrice kinesthésique". In : *29ème conférence francophone sur l'Interaction Homme-Machine*. Poitiers, France, août 2017, 2 p. [hal-01568588](#).
- [376] Imad SALEH et Sahbi SIDHOM. "Pre-publication status in patent application process : management of sensitive data, impacts and propositions". In : *ISKO Maghreb*. Al-Hoceima, Morocco, mai 2017. [hal-02110987](#).
- [377] Andrii Dmytryovych SHACHYKOV, Patrick HENAFF, Anton POPOV et Olexandr Petrovych SHULYAK. "CPG-based circuitry for controlling musculoskeletal model of human locomotor system". In : *BioCAS 2017 - IEEE Biomedical Circuits and Systems Conference*. Turin, Italy, octobre 2017. [hal-01798605](#).
- [378] Andrii Dmytryovych SHACHYKOV, Patrick HENAFF, Anton POPOV et Olexandr Petrovych SHULYAK. "Neuro-musculoskeletal Simulator of Human Rhythmic Movements". In : *UKRCON 2017 - IEEE First Ukraine Conference on Electrical and Computer Engineering*. Kyiv, Ukraine, mai 2017. [hal-01798629](#).

- [379] Vassilis VASSILIADES, Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "A comparison of illumination algorithms in unbounded spaces". In : *Workshop "Measuring and Promoting Diversity in Evolutionary Algorithms", Genetic and Evolutionary Computation Conference*. Proceedings of The Genetic and Evolutionary Computation Conference Companion 2017. Berlin, Germany, 2017. [hal-01518814](#).
- [380] Vassilis VASSILIADES, Konstantinos CHATZILYGEROUDIS et Jean-Baptiste MOURET. "Comparing multimodal optimization and illumination". In : *Genetic and Evolutionary Computation Conference (GECCO 2017)*. Berlin, Germany, 2017. [hal-01518802](#).
- [381] Virginie ANDRÉ et Yann BONIFACE. "Quelques considérations interactionnelles autour d'une expérience robotique". In : *WACAI 2018 - Workshop sur les "Affects, Compagnons Artificiels et Interactions"*. Ile de Porquerolles, France, juin 2018. [hal-01862725](#).
- [382] Oleksii AVILOV, Anton POPOV, Vladimir Ivanovich TIMOFEYEV, Laurent BOUGRAIN et Patrick HENAFF. "Combined imaginary movements classification using binary classifiers in brain-computer interfaces". In : *XVII International scientific and technical conference "Physical processes and fields of technical and biological objects"*. Kremenchuk, Ukraine, novembre 2018. [hal-01928217](#).
- [383] Yann BERNARD, Emeline BUOY, Adrien FOIS et Bernard GIRAU. "NP-SOM : network programmable self-organizing maps". In : *2018 IEEE 30th International Conference on Tools with Artificial Intelligence (ICTAI)*. Volos, Greece : IEEE, novembre 2018, p. 908-915. DOI : [10.1109/ICTAI.2018.00141](https://doi.org/10.1109/ICTAI.2018.00141). [hal-02058458](#).
- [384] Julie Bu DAHER, Armelle BRUN et Anne BOYER. "Multi-source Data Mining for e-Learning". In : *7th International Symposium "From Data to Models and Back (DataMod)"*. Toulouse, France, juin 2018. [hal-01873449](#).
- [385] Julie Bu DAHER, Armelle BRUN et Anne BOYER. "Multi-source Relations for Contextual Data Mining in Learning Analytics". In : *LSAC Learning and Student Analytics Conference*. Amsterdam, Netherlands, octobre 2018. [hal-01963812](#).
- [386] Isabelle DEBLED-RENESSON, Philippe FÉVOTTE, Monique GRANDBASTIEN, David LANGLOIS et Hélène TANOH. "La formation des professeurs de la spécialité ISN dans l'Académie de Nancy-Metz – Récit et analyse de six ans d'expérience". In : *Didapro 7 – DidASTIC. De 0 à 1 ou l'heure de l'informatique à l'école*. Lausanne, Switzerland, février 2018. [hal-01753067](#).
- [387] Marie-Dominique DEVIGNES, Yohann FRANSOT, Yves LEPAGE, Jean LIEBER, Emmanuel NAUER et Malika SMAÏL-TABBONE. "First steps toward finding relevant pathology-gene pairs using analogy". In : *EvoCBR 2018 : Workshop on Evolutionary Computation and CBR at the International Conference on Case-Based Reasoning (ICCBR 2018)*. Stockholm, Sweden, juillet 2018. [hal-01906547](#).
- [388] Thomas GENET, Tristan GILLARD, Timothée HAUDEBOURG et Sébastien Lê CONG. "Extending Timbuk to Verify Functional Programs". In : *WRLA 2018 - 12th International Worshop on Rewriting Logic and its Applications*. Thessalonique, Greece : IEEE, avril 2018, p. 153-163. DOI : [10.1007/978-3-319-99840-4_9](https://doi.org/10.1007/978-3-319-99840-4_9). [hal-01775190](#).
- [389] Paul GRANJON, Alain DUTECH et Patrick HENAFF. "Guido and Am I Robot ?, case study of two robotic artworks operating in public spaces". In : *ICLI 2018 - International Conference on Live Interfaces*. Porto, Portugal, juin 2018. [hal-01843041](#).

- [390] Enrico Mingo HOFFMAN, Brice CLÉMENT, Chengxu ZHOU, Nikos G TSAGARAKIS, Jean-Baptiste MOURET et Serena IVALDI. "Whole-Body Compliant Control of iCub : first results with OpenSoT". In : *IEEE/RAS ICRA Workshop on Dynamic Legged Locomotion in Realistic Terrains*. Brisbane, Australia, mai 2018. [hal-01790597](#).
- [391] Laura INFANTE-BLANCO, Azim ROUSSANALY et Anne BOYER. "METALRS : towards effective Learning Analytics through a hybrid data collection approach for the french lower secondary education system". In : *2nd Annual Learning & Student Analytics Conference*. Amsterdam, France, octobre 2018. [hal-02469611](#).
- [392] Wissem INOUBLI, Sabeur ARIDHI, Haithem MEZNI, Mondher MADDOURI et Engelbert Mephu NGUIFO. "A Comparative Study on Streaming Frameworks for Big Data". In : *VLDB 2018 - 44th International Conference on Very Large Data Bases : Workshop LADaS - Latin American Data Science*. Rio de Janeiro, Brazil, août 2018, p. 1-8. [hal-01835437](#).
- [393] Wissem INOUBLI, Sabeur ARIDHI, Haithem MEZNI, Mondher MADDOURI et Engelbert Mephu NGUIFO. "An experimental survey on big data frameworks (Highlight paper)". In : *BDA 2018 - 34ème Conférence sur la Gestion de Données – Principes, Technologies et Applications*. Bucarest, Romania, octobre 2018. [hal-02014797](#).
- [394] Melanie JOUAITI et Patrick HENAFF. "CPG-based Controllers can Trigger the Emergence of Social Synchrony in Human-Robot Interactions". In : *ARSO 2018 - IEEE International Workshop on Advanced Robotics and its Social Impacts*. Genoa, Italy, septembre 2018. [hal-01825464](#).
- [395] Melanie JOUAITI et Patrick HENAFF. "Plastic CPG-based Robot Controllers for Human-Robot Rhythmic Interactions". In : *JNRH 2018 - Journées Nationales de la Robotique Humanoïde*. Nancy, France, juin 2018. [hal-02024599](#).
- [396] Iman KAMEHKHOSH, Dietmar JANNACH et Geoffray BONNIN. "How Automated Recommendations Affect the Playlist Creation Behavior of Users". In : *ACM IUI 2018 - Workshops*. Tokyo, Japan, 2018. [hal-02476919](#).
- [397] Lyes KHACEF, Bernard GIRAU, Nicolas P. ROUGIER, Andres UPEGUI et Benoit MIRAMOND. "Neuromorphic hardware as a self-organizing computing system". In : *WCCI 2018 - IEEE World Congress on Computational Intelligence, Workshop NHPU : Neuromorphic Hardware In Practice and Use*. arXiv : [1810.12640](#). Rio de Janeiro, Brazil : IEEE, juillet 2018, p. 1-4. [hal-01790776](#).
- [398] Audrey KNAUF. "Intégration des TICE dans l'enseignement supérieur : prise en compte des spécificités culturelles, administratives et politiques. Le cas du projet BASAR". In : *TICEMED*. Marrakech, Morocco, mars 2018. [hal-02308599](#).
- [399] Audrey KNAUF. "Support for the deployment of hybrid devices in the higher education according to the diversity of each university. The example of the BASAR project". In : *Colloque international Ticemed 11 : sous la dir. d'Emilie REMOND, Luc MASSOU et Philippe BONFILS*. T. 42. Questions de communication, série actes. ISBN : 9782814305465. Pédagogie et numérique : L'enseignement supérieur au défi de la mondialisation ? Marrakech, Morocco : Presses universitaires de Nancy - Éditions universitaires de Lorraine, mars 2018, p. 101-122. [hal-02533400](#).
- [400] Kalliopi KONTIZA, Olga LOBODA, Louis DELADIENNE, Sylvain CASTAGNOS et Yannick NAUDET. "A Museum App to Trigger Users' Reflection". In : *International Workshop on Mobile Access to Cultural Heritage (MobileCH2018)*. Barcelona, Spain, septembre 2018. [hal-02471994](#).

- [401] Joffrey LEBLAY, Mourad RABAH, Ronan CHAMPAGNAT et Samuel NOWAKOWSKI. "Process-based Assistance Method for Learner Academic Achievement". In : *E-Learning*. Proceedings of 12th Multi Conference on Computer Science and Information Systems (MCCSIS'2018). Madrid, Spain, juillet 2018, p. 89-96. [hal-01834096](#).
- [402] Adrien MALAISÉ, Pauline MAURICE, Francis COLAS et Serena IVALDI. "Online Human Activity Recognition for Ergonomics Assessment". In : *JNRH 2018 - Journées Nationales de la Robotique Humanoïde*. Nancy, France, juin 2018. [hal-02348724](#).
- [403] Adrien MALAISÉ, Pauline MAURICE, Francis COLAS et Serena IVALDI. "Online Human Activity Recognition for Ergonomics Assessment". In : *SIAS 2018 - 9ème conférence internationale sur la sécurité des systèmes industriels automatisés*. Nancy, France, octobre 2018. [hal-01808832](#).
- [404] Pauline MAURICE, Ludivine ALLIENNE, Adrien MALAISÉ et Serena IVALDI. "Ethical and Social Considerations for the Introduction of Human-Centered Technologies at Work". In : *IEEE Workshop on Advanced Robotics and its Social Impacts (ARSO)*. Genova, Italy, 2018. [hal-01826487](#).
- [405] Pauline MAURICE, Jernej CAMERNIK, Dasa GORJAN, Benjamin SCHIRRMEISTER, Jonas BORNMANN, Luca TAGLIAPIETRA, Daniele PUCCI, Serena IVALDI et Jan BABIČ. "Objective and Subjective Effects of Passive Exoskeleton on Overhead Work". In : *9th International Conference on Safety of Industrial Automated Systems*. Nancy, France, octobre 2018. [hal-02348487](#).
- [406] Pauline MAURICE, Jernej CAMERNIK, Dasa GORJAN, Benjamin SCHIRRMEISTER, Jonas BORNMANN, Luca TAGLIAPIETRA, Daniele PUCCI, Serena IVALDI et Jan BABIČ. "Objective and Subjective Effects of Passive Exoskeleton on Overhead Work". In : *Journées Nationales de la Robotique Humanoïde (JNRH 2018)*. Nancy, France, juin 2018. [hal-02348717](#).
- [407] Pauline MAURICE, Serena IVALDI, Lars FRITZSCHE, Jan BABIČ, Freek STULP, Michael DAMSGAARD, Bernhard GRAIMANN, Giovanni BELLUSCI, Daniele PUCCI et Francesco NORI. "Advancing Anticipatory Behaviors in Dyadic Human-Robot Collaboration : The AnDy project". In : *SIAS 2018 - 9th International Conference on Safety of Industrial Automated Systems*. Nancy, France, octobre 2018. [hal-02348525](#).
- [408] Pauline MAURICE, Vincent PADOIS, Yvan MEASSON et Philippe BIDAUD. "Assessing and improving human movements using sensitivity analysis and digital human simulation". In : *8th World Congress of Biomechanics*. Dublin, Ireland, juillet 2018. [hal-02348629](#).
- [409] Baptiste MENGES, Michaël SARREY et Patrick HENAFF. "Implementation, risk assessment and safety human/robot interaction of collaborative robot UR10". In : *SIAS 2018 - 9th International Conference on Safety of Industrial Automated Systems*. Nancy, France, octobre 2018. [hal-01842999](#).
- [410] Bishnu SARKER, David W RITCHIE et Sabeur ARIDHI. "Exploiting Complex Protein Domain Networks for Protein Function Annotation". In : *Complex Networks 2018 - 7th International Conference on Complex Networks and Their Applications*. Cambridge, United Kingdom, décembre 2018. [hal-01920595](#).
- [411] Andrii Dmytryovych SHACHYKOV, Patrick HENAFF et Alexander SHULYAK. "Modeling of human gait control using CPGs". In : *JNRH 2018 - Journées Nationales de la Robotique Humanoïde*. Nancy, France, juin 2018. [hal-02006019](#).

- [412] Andres UPEGUI, Bernard GIRAU, Nicolas P. ROUGIER, Fabien VANNEL et Benoit MIRAMOND. "Pruning Self-Organizing Maps for Cellular Hardware Architectures". In : *AHS 2018 - 12th NASA/ESA Conference on Adaptive Hardware and Systems*. Edinburgh, United Kingdom : IEEE, août 2018, p. 272-279. DOI : [10.1109/AHS.2018.8541465](https://doi.org/10.1109/AHS.2018.8541465). hal-01826263.
- [413] Matthieu ZIMMER, Yann BONIFACE et Alain DUTECH. "Developmental Reinforcement Learning through Sensorimotor Space Enlargement". In : *ICDL-EPIROB 2018 - 8th joint IEEE International Conference on Development and Learning and on Epigenetic Robotics*. Tokyo, Japan, septembre 2018, p. 1-6. DOI : [10.1109/DEVLRN.2018.8761021](https://doi.org/10.1109/DEVLRN.2018.8761021). hal-01876995.
- [414] Geoffray BONNIN, Estelle PERRY, Charlotte BARAUDON et Stéphanie FLECK. "Design participatif d'un tableau de bord enseignant". In : *EIAH Workshops*. Paris, France, 2019. hal-02476952.
- [415] Sylvain CASTAGNOS, Florian MARCHAL, Alexandre BERTRAND, Morgane COLLE et Djallila MAHMOUDI. "Inferring Art Preferences from Gaze Exploration in a Museum". In : *10th Workshop on Personalized Access to Cultural Heritage (PATCH 2019)*. UMAP '19 : 27th Conference on User Modeling, Adaptation and Personalization. Larnaca, Cyprus, juin 2019, p. 425-430. DOI : [10.1145/3314183.3323871](https://doi.org/10.1145/3314183.3323871). hal-02472007.
- [416] Charles COLUZZI, Julie LAO, Gérard GUÉDON, Marie-Dominique DEVIGNES, Chloé AMBROSET, Thomas LACROIX, Helene CHIAPELLO, Sophie PAYOT et Nathalie N. LEBLOND-BOURGET. "The ICE/IME Finder approach and its application to ICE/IME annotation in Streptococcus." In : *8th symposium on Antimicrobial Resistance in Animal and Environment*. Tours, France, juillet 2019. hal-02974531.
- [417] Eloïse DALIN, Pierre DESREUMAUX et Jean-Baptiste MOURET. "Learning and adapting quadruped gaits with the "Intelligent Trial & Error" algorithm". In : *IEEE ICRA Workshop on "Learning legged locomotion"*. Montreal, Canada, 2019. hal-02084619.
- [418] Rodrigo DANTAS DA SILVA, José ARILTON PEREIRA FILHO, Philippi SEDIR GRILLO DE MORAIS, Ricardo ALEXSANDRO DE MEDEIROS VALENTIM, Karilany DANTAS COUTINHO, Azim ROUSSANALY, Anne BOYER et Carlos Manta OLIVEIRA. "Data Flow Framework : A persona-based repository to modeling recommender systems". In : *3rd Annual Learning & Student Analytics Conference (LSAC 2019)*. Nancy, France, octobre 2019. hal-02469655.
- [419] Philippe GUERCI, Sébastien RIMBERT, Denis SCHMARTZ, Marie-Reine LOSSER, Laurent BOUGRAIN et Claude MEISTELMAN. "Effet du propofol sur les synchronisations/désynchronisations neuronales corticales motrices analysées par une interface cerveau-machine : rapport préliminaire d'une étude prospective chez le volontaire sain". In : *SFAR 2019 - Congrès Société Française d'Anesthésie et de Réanimation*. Paris, France, septembre 2019. hal-02144809.
- [420] Israel HINSTROZA SÁENZ, Chengfang REN, Thierry LETERTRE et Jérémy FIX. "Analysis of airplane signatures using passive VHF radar for recognition perspectives". In : *2019 International Radar Conference*. Toulon, France, septembre 2019. DOI : [10.1109/RADAR41533.2019.171376](https://doi.org/10.1109/RADAR41533.2019.171376). hal-02492643.
- [421] Melanie JOUAITI et Patrick HENAFF. "Motor Coordination Learning for Rhythmic Movements". In : *Development and Learning and Epigenetic Robotics (ICDL-Epirob), 2019 Joint IEEE International Conferences on*. Oslo, Norway, août 2019. hal-02144957.

- [422] Melanie JOUAITI et Patrick HENAFF. "Real Time Movement Classification in Versatile CPG Control". In : *Workshop on Robust Artificial Intelligence for Neurorobotics*. Edinburgh, United Kingdom, août 2019. [hal-02291647](#).
- [423] Melanie JOUAITI et Patrick HENAFF. "The Sound of Actuators : Disturbance in Human -Robot Interactions ?" In : *Development and Learning and Epigenetic Robotics (ICDL-Epirob), 2019 Joint IEEE International Conferences on*. Accepted to the Development and Learning and Epigenetic Robotics (ICDL-Epirob), Aug 2019, Oslo, Norway conference. Oslo, Norway, août 2019. [hal-02144955](#).
- [424] Chahrazed LABBA, Azim ROUSSANALY et Anne BOYER. "Towards an automated Framework for benchmarking Learning Record Stores : Performance Requirements and Scalability". In : *3rd Annual Learning & Student Analytics Conference (LSAC 2019)*. Nancy, France, octobre 2019. [hal-02469663](#).
- [425] Wided MATHLOUTHI, Chahrazed LABBA, Walid GAALOUL et Narjes BELLAMINE BEN SAOUD. "SoS paradigm benefits SaaS integration : novel approach and first results". In : *WETICE 2019 : 28th International Conference on Enabling Technologies : Infrastructure for Collaborative Enterprises*. Napoli, Italy : IEEE, juin 2019, p. 174-179. DOI : [10.1109/WETICE.2019.900045](#). [hal-02482855](#).
- [426] Pauline MAURICE, Jernej CAMERNIK, Dasa GORJAN, Benjamin SCHIRRMEISTER, Jonas BORNMANN, Luca TAGLIAPIETRA, Claudia LATELLA, Daniele PUCCI, Lars FRITZSCHE, Serena IVALDI et Jan BABIČ. "Evaluation of PAEXO, a novel passive exoskeleton for overhead work". In : *44ème Congrès de la Société de Biomécanique*. Poitiers, France, octobre 2019. [hal-02348588](#).
- [427] Barbara MOISSA, Geoffray BONNIN et Anne BOYER. "Building a student effort dataset : what can we learn from behavioral and physiological data". In : *Learning & Student Analytics Conference*. Nancy, France, 2019. [hal-02476965](#).
- [428] Barbara MOISSA, Geoffray BONNIN, Sylvain CASTAGNOS et Anne BOYER. "Modelling students' effort using behavioral data". In : *Technology-enhanced & Evidence-based Education & Learning Workshop at LAK (TeeL 2019)*. Tempe, United States, mars 2019. [hal-02472013](#).
- [429] Pierre-Edouard OSCHE, Sylvain CASTAGNOS et Anne BOYER. "From Music to Museum : Applications of Multi-Objective Ant Colony Systems to Real World Problems". In : *Adaptive and Learning Agents Workshop at AAMAS (ALA 2019)*. Montréal, Canada, mai 2019. [hal-02472009](#).
- [430] Sébastien RIMBERT, Oleksii AVILOV, Perrine ADAM et Laurent BOUGRAIN. "Can suggestive hypnosis be used to improve Brain-Computer Interface performance ?" In : *8th Graz Brain-Computer Interface Conference 2019*. Graz, Austria, septembre 2019. [hal-02098864](#).
- [431] Maria-Elisa RUIZ-ECHARTEA, Isaure CHAUVOT DE BEAUCHÊNE et David RITCHIE. "EROS-DOCK and EROS-DOCK MULTI-BODY Approach". In : *CAPRI evaluation meeting*. Hinckton, United Kingdom, avril 2019. [hal-02394484](#).
- [432] Maria-Elisa RUIZ-ECHARTEA, Isaure CHAUVOT DE BEAUCHÊNE et David RITCHIE. "EROS-DOCK for Pairwise and Multi-body Protein-Protein Docking". In : *Journée MASIM2019 (Méthodes Algorithmiques pour les Structures et Interactions Macromoléculaires)*. Paris, France, novembre 2019. [hal-02391973](#).

- [433] Maria Rodalyn V. SANCHEZ, Satoru MISHIMA, Masayuki FUJIWARA, Guangyi AI, Melanie JOUAITI, Yuliia KOBRYN, Sébastien RIMBERT, Laurent BOUGRAIN, Patrick HÉNAFF et Hiroaki WAGATSUMA. "Methodological Design for Integration of Human EEG Data with Behavioral Analyses into Human-Human/Robot Interactions in a Real-World Context". In : *ICICIC2019 - The 14th International Conference on Innovative Computing, Information and Control*. T. 7. Seoul, South Korea, août 2019, p. 8. [hal-02437374](https://hal.archives-ouvertes.fr/hal-02437374).
- [434] BIshnu SARKER, David W. RITCHIE et Sabeur ARIDHI. "Functional Annotation of Proteins using Domain Embedding based Sequence Classification". In : *KDIR 2019 - 11th International Conference on Knowledge Discovery and Information Retrieval*. Vienna, Austria : SCITEPRESS - Science and Technology Publications, septembre 2019, p. 163-170. DOI : [10.5220/0008353401630170](https://doi.org/10.5220/0008353401630170). [hal-02283430](https://hal.archives-ouvertes.fr/hal-02283430).
- [435] Vincent THOMAS, Géremy HUTIN et Olivier BUFFET. "Planification Monte Carlo orientée information". In : *JFPDA 2019 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Toulouse, France, juillet 2019. [hal-02350573](https://hal.archives-ouvertes.fr/hal-02350573).
- [436] Manel ZOGHLAMI, Sabeur ARIDHI, Mondher MADDOURI et Engelbert Mephu NGUIFO. "A Structure Based Multiple Instance Learning Approach for Bacterial Ionizing Radiation Resistance Prediction". In : *KES 2019 - 23rd International Conference on Knowledge-Based and Intelligent Information & Engineering Systems*. Budapest, Hungary, septembre 2019. [hal-02307048](https://hal.archives-ouvertes.fr/hal-02307048).
- [437] Oleksii AVILOV, Sébastien RIMBERT, Anton POPOV et Laurent BOUGRAIN. "Deep Learning Techniques to Improve Intraoperative Awareness Detection from Electroencephalographic Signals". In : *IEEE Engineering in Medicine and Biology Society 2020*. Montreal, Canada, juillet 2020. [hal-02920320](https://hal.archives-ouvertes.fr/hal-02920320).
- [438] Yann BERNARD, Nicolas HUEBER et Bernard GIRAU. "A fast algorithm to find Best Matching Units in Self-Organizing Maps". In : *ICANN 2020, 29th International Conference on Artificial Neural Networks*. Bratislava, Slovakia, septembre 2020. [hal-02984424](https://hal.archives-ouvertes.fr/hal-02984424).
- [439] Rodrigo DANTAS DA SILVA, Jean Jar PEREIRA DE ARAÚJO, Álvaro FERREIRA, Pires DE PAIVA, Ricardo ALEXSANDRO, Medeiros VALENTIM, Dantas KARILANY, Jailton CARLOS DE PAIVA, Azim ROUSSANALY et Anne BOYER. "A Big Data Architecture to a Multiple Purpose in Healthcare Surveillance : The Brazilian Syphilis Case". In : *Euro American Conference on Telematics and Information Systems (EATIS 2020)*. Aveiro, Portugal, novembre 2020. DOI : [10.1145/nnnnnnn.nnnnnnnn](https://doi.org/10.1145/nnnnnnn.nnnnnnnn). [hal-02470392](https://hal.archives-ouvertes.fr/hal-02470392).
- [440] benjamin gras benjamin, Armelle BRUN et Anne BOYER. "For and by Student Dashboards Design to Address Dropout". In : *Companion Proceedings 10th International Conference on Learning Analytics & Knowledge (LAK20), Workshop on Addressing Drop-Out Rates in Higher Education (ADORE'20)*. Frankfurt, Germany, mars 2020. [hal-02974682](https://hal.archives-ouvertes.fr/hal-02974682).
- [441] Wissem INOUBLI, Sabeur ARIDHI, Haithem MEZNI, Mondher MADDOURI et Engelbert Mephu NGUIFO. "Un algorithme distribué pour le clustering de grands graphes". In : *20ème édition de la conférence francophone "Extraction et gestion des connaissances"*. Bruxelles, Belgium, janvier 2020. [hal-02540571](https://hal.archives-ouvertes.fr/hal-02540571).
- [442] Melanie JOUAITI. "Improving Motor Coordination in HRI with Bio-Inspired Controllers". In : *HRI Pioneers Workshop 2020 - 15th annual Human-Robot Interaction Pioneers Workshop*. Cambridge, United Kingdom, mars 2020. DOI : [10.1145/3371382.3377439](https://doi.org/10.1145/3371382.3377439). [hal-02435758](https://hal.archives-ouvertes.fr/hal-02435758).

- [443] Nabil KHEMIRI et Sahbi SIDHOM. "From manual indexing to automatic indexing in the era of Big Data and Open Data : a state of the art". In : *Multi-Conference OCTA '2019 on : Organization of Knowledge and Advanced Technologies*. T. 2. ISKO-Maghreb Proceedings 1. Université de Tunis and ISKO-Maghreb Chapter. Tunis, Tunisia, février 2020, p. 171-175. [hal-02933709](https://hal.archives-ouvertes.fr/hal-02933709).
- [444] Chahrazed LABBA, Azim ROUSSANALY et Anne BOYER. "An Operational Framework for Evaluating the Performance of Learning Record Stores". In : *European Conference on Technology Enhanced Learning*. Heidelberg, Germany, septembre 2020, p. 45-59. DOI : [10.1007/978-3-030-57717-9_4](https://doi.org/10.1007/978-3-030-57717-9_4). [hal-02985541](https://hal.archives-ouvertes.fr/hal-02985541).
- [445] Pierre MONNIN, Emmanuel BRESSO, Miguel COUCEIRO, Malika SMAÏL-TABBONE, Amedeo NAPOLI et Adrien COULET. "Tackling scalability issues in mining path patterns from knowledge graphs : a preliminary study". In : *ALGOS 2020 - 1st International Conference on Algebras, Graphs and Ordered Sets*. Proceedings of the 1st International Conference on Algebras, Graphs and Ordered Sets (ALGOS 2020). arXiv : [2007.08821](https://arxiv.org/abs/2007.08821). Nancy, France, août 2020. [hal-02913224](https://hal.archives-ouvertes.fr/hal-02913224).
- [446] Azim ROUSSANALY, Marharyta ALEKSANDROVA et Anne BOYER. "BacAnalytics : A Tool to Support Secondary School Examination in France". In : *25th International Symposium on Methodologies for Intelligent Systems (ISMIS 2020)*. Online Event, Germany, septembre 2020. [hal-03020852](https://hal.archives-ouvertes.fr/hal-03020852).
- [447] Bishnu SARKER, Navya KHARE, Marie-Dominique DEVIGNES et Sabeur ARIDHI. "Graph Based Automatic Protein Function Annotation Improved by Semantic Similarity". In : *IWBBIO 2020 - 8th International Work-Conference on Bioinformatics and Biomedical Engineering*. T. 12108. Bioinformatics and Biomedical Engineering : 8th International Work-Conference, IWBBIO 2020, Granada, Spain, May 6-8, 2020, Proceedings. GRANADA, Spain, mai 2020, p. 261-272. DOI : [10.1007/978-3-030-45385-5_24](https://doi.org/10.1007/978-3-030-45385-5_24). [hal-03025827](https://hal.archives-ouvertes.fr/hal-03025827).
- [448] Amélie AUSSSEL, Laure BUHRY et Radu RANTA. "Design of experiments and Sobol' sensitivity analysis of a hippocampus computational model". In : *43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2021*. Guadalajara/Virtual, Mexico, octobre 2021. [hal-03464025](https://hal.archives-ouvertes.fr/hal-03464025).
- [449] Alexandre BAZIN, Miguel COUCEIRO, Marie-Dominique DEVIGNES et Amedeo NAPOLI. "A Hybrid Approach to Identifying the Most Predictive and Discriminant Features in Supervised Classification Problems". In : *ICCS 2021 - 26th International Conference on Conceptual Structures*. Virtual, France, septembre 2021. DOI : [10.1007/978-3-030-86982-3_4](https://doi.org/10.1007/978-3-030-86982-3_4). [hal-03173406](https://hal.archives-ouvertes.fr/hal-03173406).
- [450] Amal BEN SOUSSIA, Azim ROUSSANALY et Anne BOYER. "An in-depth methodology to predict at-risk learners". In : *Sixteenth European Conference on Technology Enhanced Learning Technology-Enhanced Learning for a Free, Safe, and Sustainable World (ECTEL 21)*. T. 12884. Technology-Enhanced Learning for a Free, Safe, and Sustainable World. EC-TEL 2021. Bolazano (on-line), Italy : Springer Cham, septembre 2021, p. 193-206. DOI : [10.1007/978-3-030-86436-1_15](https://doi.org/10.1007/978-3-030-86436-1_15). [hal-03561271](https://hal.archives-ouvertes.fr/hal-03561271).
- [451] Yann BONIFACE et Nicolas P. ROUGIER. "Une lampe interactive ? Automatisation d'un comportement autonome interactif". In : *Drôles d'objets : un nouvel art de faire*. La Rochelle, France, octobre 2021. DOI : [10.5281/zenodo.6059093](https://doi.org/10.5281/zenodo.6059093). [hal-03597281](https://hal.archives-ouvertes.fr/hal-03597281).

- [452] Laurent BOUGRAIN, Sébastien RIMBERT, Pedro Luiz Coelho RODRIGUES, Geoffrey CANRON et Fabien LOTTE. "Guidelines to use Transfer Learning for Motor Imagery Detection : an experimental study". In : *NER 2021 - 10th International IEEE/EMBS Conference on Neural Engineering*. Virtual, United States, mai 2021. [hal-03147055](#).
- [453] Amine BOUMAZA. "Promoting Reproductive Isolation Through Diversity in On-line Collective Robotics". In : *GECCO 2021 - Genetic and Evolutionary Computation Conference Companion*. Lille/Virtual, France, juillet 2021, p. 85. [hal-03198552](#).
- [454] Antonin CALBA, Alain DUTECH et Jérémie FIX. "Density Independent Self-organized Support for Q-Value Function Interpolation in Reinforcement Learning". In : *29th European Symposium on Artificial Neural Networks*. Bruges/Online, Belgium, octobre 2021. DOI : [10.14428/esann/2021.es2021-62](https://doi.org/10.14428/esann/2021.es2021-62). [hal-03550442](#).
- [455] Eloïse DALIN, Ivan BERGONZANI, Timothée ANNE, Serena IVALDI et Jean-Baptiste MOURET. "Whole-body teleoperation of the Talos humanoid robot : preliminary results". In : *ICRA 2021 - 5th Workshop on Teleoperation of Dynamic Legged Robots in Real Scenarios*. Xi'an / Virtual, China, mai 2021. [hal-03245005](#).
- [456] Alix DELANNOY, Antoine MONIOT, Yann GUERMEUR et Isaure CHAUVOT DE BEAUCHÈNE. "Feature extraction for the clustering of small 3D structures : application to RNA fragments". In : *JOBIM 2021 - Journées Ouvertes en Biologie, Informatique et Mathématiques*. Paris/Virtual, France, juillet 2021, p. 1-6. [hal-03540927](#).
- [457] Jérôme DINET. "Le bien-être de l'élève : apports de la psychologie". In : *Educatec-Educatice 2021 - Le salon professionnel de l'innovation éducative*. Paris, France, novembre 2021. [hal-03463983](#).
- [458] Jérôme DINET, Hirokazu KUMAZAKI, Aurore MEGNY, Hanna VERDEL, Kazunori TERADA, Sylvie VITEL, François CHARPILLETT, Stéphanie CLAUDEL-VALENTIN, Eloïse ZEHNDER, Justine SIMON et Sarah LAGRUE. "Faciliter la communication inter-personnelle des enfants avec TSA par la robotique". In : *PRUNE II 2021 - Colloque Perspectives de Recherches sur les Usages du Numérique dans l'Éducation*. Poitiers, France, mai 2021. [hal-03216645](#).
- [459] Jérôme DINET, Hanna VERDEL, Hirokazu KUMAZAKI, Kazunori TERADA, Sylvie VITEL et Eloise ZEHNDER. "A Hybrid Robotics System for Children with Autism : A longitudinal Study of Social Interaction inside the Classroom". In : *Scientific seminar at Larsen team (INRIA Grand Est)*. Nancy, France, novembre 2021. [hal-03463980](#).
- [460] Jonathan FERRER-MESTRES, Thomas G. DIETTERICH, Olivier BUFFET et Iadine CHADÈS. "K-N-MOMDPs : Towards Interpretable Solutions for Adaptive Management". In : *AAAI 2021 - 35th AAAI Conference on Artificial Intelligence*. Virtual, United States, février 2021. [hal-03523504](#).
- [461] Lars FRITZSCHE, Christian GÄRTNER, Michael SPITZHIRN, Pavel E GALIBAROV, Michael DAMSGAARD, Pauline MAURICE et Jan BABIČ. "Assessing the efficiency of industrial exoskeletons with biomechanical modelling -Comparison of experimental and simulation results". In : *IEA 2021 - 21st Triennial Congress of the International Ergonomics Association*. Sous la dir. de SPRINGER. Congress of the International Ergonomics Association. Vancouver, Canada : Springer, juin 2021, p. 353. DOI : [10.1007/978-3-030-74614-8_43](https://doi.org/10.1007/978-3-030-74614-8_43). [hal-03261786](#).

- [462] Waldez GOMES, Pauline MAURICE, Eloïse DALIN, Jean-Baptiste MOURET et Serena IVALDI. "Improving Ergonomics at Work with Personalized Multi-Objective Optimization of Human Movements". In : *AHFE 2021 - 12th International Conference on Applied Human Factors and Ergonomics*. New York, United States, juillet 2021. [hal-03115203](#).
- [463] Waldez GOMES, Pauline MAURICE, Eloïse DALIN, Jean-Baptiste MOURET et Serena IVALDI. "Multi-objective Trajectory Optimization to Improve Ergonomics in Human Work Activities". In : *JNRH 2021 - Journées Nationales de la Robotique Humanoïde*. Angers, France, juin 2021. [hal-03261878](#).
- [464] Waldez GOMES, Pauline MAURICE, N SETTEMBRE, J THEUREL, L WIOLAND, J J ATAIN-KOUADIO, L CLAUDON, B CHENUEL, H HANI, A KIMMOUN, B LEVY, J M SELLAL, J PAYSANT, S MALIKOV et Serena IVALDI. "Biomechanical effects of using a passive back support exoskeleton during prone-positioning maneuver : A pilot study". In : *SB 2021 - 46th Congress of the Society of Biomechanics*. Saint-Etienne, France, octobre 2021. [hal-03285178](#).
- [465] Noémie GONNIER, Yann BONIFACE et Hervé FREZZA-BUET. "Input Prediction Using Consensus Driven SOMs". In : *ISCFMI 2021:8th Intl. Conference on Soft Computing & Machine Intelligence*. Cairo, Egypt, novembre 2021. DOI : [10.1109/ISCFMI53840.2021.9654851](https://doi.org/10.1109/ISCFMI53840.2021.9654851). [hal-03375134](#).
- [466] Philippe GUERCI, Laurent BOUGRAIN, Denis SCHMARTZ, Marie-Reine LOSSER, Claude MEISTELMAN et Sébastien RIMBERT. "Effet d'une sédation légère au propofol sur les oscillations cérébrales du cortex moteur : étude randomisée, contrôlée chez le volontaire sain". In : *SFAR 2021 - Congrès nationale de la Société Française d'Anesthésie et de Réanimation*. Paris, France, septembre 2021. [hal-03265548](#).
- [467] Md Kamrul ISLAM, Sabeur ARIDHI et Malika SMAÏL-TABBONE. "Appraisal Study of Similarity-Based and Embedding-Based Link Prediction Methods on Graphs". In : *CDKP 2021 - 10th International Conference on Data Mining & Knowledge Management Process*. London, United Kingdom : AIRCC Publishing Corporation, juillet 2021, p. 81-92. DOI : [10.5121/csit.2021.111106](https://doi.org/10.5121/csit.2021.111106). [hal-03540371](#).
- [468] Anuyan ITHAYAKUMAR, Aurélien OSSWALD, Vincent THOMAS et Pauline MAURICE. "Reducing work-related physical fatigue with a collaborative robot : A decision-making approach". In : *JNRH 2021 - Journées Nationales de la Robotique Humanoïde*. Angers, France, juin 2021. [hal-03254968](#).
- [469] Serena IVALDI, Pauline MAURICE, Waldez GOMES, Jean THEUREL, Lién WIOLAND, Jean-Jacques ATAIN-KOUADIO, Laurent CLAUDON, Hind HANI, Antoine KIMMOUN, Jean-Marc SELLAL, Bruno LEVY, Jean PAYSANT, Sergueï MALIKOV, Bruno CHENUEL et Ni-cla SETTEMBRE. "Using exoskeletons to assist medical staff during prone positioning of mechanically ventilated COVID-19 patients : a pilot study". In : *AHFE 2021 - 12th International Conference on Applied Human Factors and Ergonomics*. T. 263. Advances in Human Factors and Ergonomics in Healthcare and Medical Devices : Proceedings of the AHFE 2021 Virtual Conference on Human Factors and Ergonomics in Healthcare and Medical Devices, July 25-29, 2021, USA. New York, United States : Springer, juillet 2021, p. 88. DOI : [10.1007/978-3-030-80744-3_12](https://doi.org/10.1007/978-3-030-80744-3_12). [hal-03137133](#).
- [470] Baptiste MENGES, Adrien GUENARD et Patrick HENAFF. "Dynamic Oscillators to Compensate Master Devices Imperfections in Robots Teleoperation Tasks Requiring Dynamic Movements". In : *CASE 2021 - IEEE 17th International Conference on Automation Science and Engineering*. Lyon, France, août 2021. [hal-03336509](#).

- [471] Baptiste MENGES, Adrien GUENARD et Patrick HENAFF. "Improving Control of a Teleoperated Robot Using an Adaptive Oscillator to Perform a Rhythmic Task for Foundry Applications". In : *ISR 2021 - IEEE International Conference on Intelligence and Safety for Robotics*. Nagoya/ Virtual, Japan, mars 2021. DOI : [10.1109/ISR50024.2021.9419530](https://doi.org/10.1109/ISR50024.2021.9419530). [hal-03164389](#).
- [472] Barbara MOISSA, Geoffray BONNIN et Anne BOYER. "Measuring and Predicting Students' Effort : A Study on the Feasibility of Cognitive Load Measures to Real-Life Scenarios". In : *European Conference on Technology Enhanced Learning*. T. 12884. Lecture Notes in Computer Science. Bozen-Bolzano, Italy : Springer International Publishing, 2021, p. 363-367. DOI : [10.1007/978-3-030-86436-1_36](https://doi.org/10.1007/978-3-030-86436-1_36). [hal-02476958](#).
- [473] Patrick OWUSU, Armelle BRUN et Shengrui WANG. "Towards Dynamic Structure Changes Detection in Financial Series via Causal Analysis". In : *2nd Workshop on Large-scale Industrial Time Series Analysis, at International Conference on Data Mining Workshops (ICDMW) 2021*. 2021 International Conference on Data Mining Workshops (ICDMW). Auckland/ Online, New Zealand, décembre 2021. DOI : [10.1109/icdmw53433.2021.00073](https://doi.org/10.1109/icdmw53433.2021.00073). [hal-03543760](#).
- [474] halima ramdani halima, Davy MONTICOLO, Armelle BRUN et Eric BONJOUR. "Decision Support System for Online Recruitment". In : *ICIKS 2021 - Information and Knowledge Systems. Digital Technologies, Artificial intelligence and Decision Making*. T. 425. LN-BIP : Information and Knowledge Systems. Digital Technologies, Artificial Intelligence and Decision Making 5th International Conference, ICIKS 2021, Virtual Event, June 22–23, 2021, Proceedings. Virtual, France, juin 2021, p. 43-51. [hal-03546770](#).
- [475] Bishnu SARKER, Marie-Dominique DEVIGNES, Guy WOLF et Sabeur ARIDHI. "Prot-A-GAN : Automatic Protein Function Annotation using GAN-inspired Knowledge Graph Embedding". In : *ICML 2021 - Workshop on Computational Biology*. Virtual, United States, juillet 2021. [hal-03541255](#).
- [476] Celina TREUILLER et Anne BOYER. "Identification of class-representative learner personas". In : *LA4SLE 2021 - Learning Analytics for Smart Learning Environments*. T. 3024. CEUR Workshop Proceedings. Bolzano, Italy, septembre 2021, p. 38-45. [hal-03549915](#).
- [477] Athénaïs VAGINAY, Taha BOUKHOBZA et Malika SMAÏL-TABBONE. "Automatic synthesis of boolean networks from biological knowledge and data". In : *International Conference of Optimization and Learning, OLA 2021*. Catane, Italy, juin 2021. [hal-03256693](#).
- [478] Athénaïs VAGINAY, Taha BOUKHOBZA et Malika SMAÏL-TABBONE. "From quantitative SBML models to boolean networks". In : *10th International Conference on Complex Networks and their Applications, CNA 2021*. Madrid, Spain, novembre 2021. [hal-03481396](#).
- [479] Athénaïs VAGINAY, Taha BOUKHOBZA et Malika SMAÏL-TABBONE. "From quantitative SBML to boolean networks". In : *19th conference on Computational Methods in Systems Biology, CMSB 2021*. Présentation Poster. Bordeaux, France, septembre 2021. [hal-03481267](#).
- [480] Lorenzo VIANELLO, Jean-Baptiste MOURET, Eloise DALIN, Alexis AUBRY et Serena IVALDI. "Human posture prediction during physical human-robot interaction". In : *International Conference on Humanoid Robots, HUMANOIDS 2020*. Munich (Virtual), Germany, juillet 2021. [hal-03451961](#).

- [481] Lorenzo VIANELLO, Jean-Baptiste MOURET, Eloïse DALIN, Alexis AUBRY et Serena IVALDI. "Probabilistic estimation of postures during human-robot collaboration : an ergonomics perspective". In : *12th International Conference on Applied Human Factors and Ergonomics, AHFE 2021*. New York, United States, juillet 2021. [hal-03115202](#).
- [482] Yang YOU, Vincent THOMAS, Francis COLAS et Olivier BUFFET. "Solving infinite-horizon Dec-POMDPs using Finite State Controllers within JESP". In : *ICTAI 2021 - IEEE 33rd International Conference on Tools with Artificial Intelligence*. Washington/virtual, United States : IEEE, novembre 2021, p. 427-434. DOI : [10.1109/ICTAI52525.2021.00069](https://doi.org/10.1109/ICTAI52525.2021.00069). [hal-03523449](#).
- [483] Eloïse ZEHNDER, Jérôme DINET et François CHARPILLET. "Social virtual agents and loneliness : Impact of virtual agent anthropomorphism on users' feedbacks". In : *AHFE 2021 - 12th International Conference on Applied Human Factors and Ergonomics*. New York, United States, juillet 2021. DOI : [10.1007/978-3-030-80091-8_33](https://doi.org/10.1007/978-3-030-80091-8_33). [hal-03216603](#).

Journaux nationaux

- [484] Maxime AMBLARD et Amine BOUMAZA. "Human Robots, Are You Real Then ?" In : *Iride XXIX.2* (2016), p. 287-298. DOI : [10.1414/84251](https://doi.org/10.1414/84251). [hal-01391754](#).
- [485] Laurent BOUGRAIN et Benjamin le GOLVAN. "Les neuroprothèses". In : *L'Évolution Psychiatrique* (mars 2016). DOI : [10.1016/j.evopsy.2016.01.010](https://doi.org/10.1016/j.evopsy.2016.01.010). [hal-01287646](#).
- [486] Amaury L'HUILLIER, Sylvain CASTAGNOS et Anne BOYER. "Modéliser la diversité au cours du temps pour détecter le contexte dans un service de musique en ligne". In : *Revue des Sciences et Technologies de l'Information - Série TSI : Technique et Science Informatiques* (2016). [hal-01300419](#).
- [487] Mohamed TLIG, Olivier BUFFET et Olivier SIMONIN. "Intersections intelligentes pour le contrôle de véhicules sans pilote : coordination locale et optimisation globale". In : *Revue des Sciences et Technologies de l'Information - Série RIA : Revue d'Intelligence Artificielle* 30.3 (2016), p. 353-382. DOI : [10.3166/ria.30.353-382](https://doi.org/10.3166/ria.30.353-382). [hal-01330354](#).

Conférences nationales

- [488] Clémence CHAMARD-JOVENIN, Amand CHESNEL, Chloé MOREL, Marie-Dominique DEVIGNES, Malika SMAÏL-TABBONE, Taha BOUKHOBZA et Hélène DUMOND. "Long chain alkyl-phenol mixture promotes breast cancer initiation and progression through an ER α 36-mediated mechanism". In : *2nd French Workshop on Endocrine disruption in wildlife and human health*. Présentation Poster. Paris, France, janvier 2016. [hal-01320688](#).
- [489] Ronan CHAMPAGNAT, Joffrey LEBLAY, Samuel NOWAKOWSKI et Mourad RABAH. "Aide à l'analyse des parcours d'apprentissage en IUT par reconnaissance de procédés et recommandations à base de traces". In : *Congrès National de la Recherche des IUT*. Nantes, France, juin 2016. [hal-01346459](#).

- [490] Gabin PERSONENI, Marie-Dominique DEVIGNES, Michel DUMONTIER, Malika SMAÏL-TABBONE et Adrien COULET. "Extraction d'association d'EIM à partir de dossiers patients : expérimentation avec les structures de patrons et les ontologies". In : *Deuxième Atelier sur l'Intelligence Artificielle et la Santé*. Atelier IA & Santé. Montpellier, France, juin 2016. [hal-01391172](#).
- [491] Matthieu ZIMMER, Yann BONIFACE et Alain DUTECH. "Vers des architectures acteur-critique neuronales efficaces en données". In : *Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Grenoble, France, juillet 2016. [hal-01344905](#).
- [492] Olivier BUFFET, Vincent THOMAS et Jilles Steeve DIBANGOYE. "MDP s-lipschitziens et ρ -POMDP non-convexes". In : *Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes (JFPDA 2017)*. Actes des Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes (JFPDA 2017). Caen, France, juillet 2017. [hal-01576353](#).
- [493] Clémence CHAMARD-JOVENIN, Charlène THIÉBAUT, Amand CHESNEL, Emmanuel BRESSO, Chloé MOREL, Malika SMAÏL-TABBONE, Marie-Dominique DEVIGNES, Taha BOUKHOBZA et Hélène DUMOND. "Validation de ER α 36 comme marqueur prédictif de susceptibilité aux nonylphénols in vivo et in vitro". In : *Journée PNR-EST de l'ANSES*. Paris, France, octobre 2017. [hal-02994505](#).
- [494] Yelen PER, Kevin DALLEAU et Malika SMAÏL-TABBONE. "Multi-class classification for Prediction of tree diseases". In : *EGC 2017 - Extraction et Gestion des Connaissances*. T. RNTI-E-33. Revue des Nouvelles Technologies de l'Information. Grenoble, France, janvier 2017, p. 237-248. [hal-01611504](#).
- [495] Olivier BUFFET, Jilles S DIBANGOYE, Abdallah SAFFIDINE et Vincent THOMAS. "Recherche heuristique pour jeux stochastiques (à somme nulle)". In : *JFPDA 2018 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Nancy, France, juillet 2018, p. 1-8. [hal-01840591](#).
- [496] Jilles S DIBANGOYE et Olivier BUFFET. "Learning to Act in Continuous Dec-POMDPs". In : *JFPDA 2018 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Nancy, France, juillet 2018, p. 1-10. [hal-01840602](#).
- [497] Alain DUTECH, Jérémie FIX et Hervé FREZZA-BUET. "Reconstruction d'état caché avec cartes auto-organisatrices récurrentes". In : *JFPDA 2018 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Nancy, France, juillet 2018, p. 1-3. [hal-01840627](#).
- [498] Manel ZOGHLAMI, Sabeur ARIDHI, Mondher MADDOURI et Engelbert Mephù NGUIFO. "ABCClass : Une approche d'apprentissage multi-instances pour les séquences". In : *RJCIA 2018 - 16èmes Rencontres des Jeunes Chercheurs en Intelligence Artificielle*. Nancy, France, juillet 2018, p. 1-9. [hal-01835432](#).
- [499] Kevin DALLEAU, Miguel COUCEIRO et Malika SMAÏL-TABBONE. "Les forêts d'arbres extrêmement aléatoires : utilisation dans un cadre non supervisé". In : *EGC 2019 - 19ème Conférence Francophone sur l'Extraction et Gestion des connaissances*. T. RNTI E-35. Metz, France : Hermann-Éditions, janvier 2019, p. 395-400. [hal-02099532](#).
- [500] Nicolas GAUVILLE et François CHARPILLET. "Exploration et couverture par stigmergie d'un environnement inconnu avec une flotte de robots autonomes réactifs". In : *JFSMA 2019 - 27èmes Journées Francophones sur les Systèmes Multi-Agents*. Toulouse, France : Cépaduès 2019, ISBN 9782364937192, juillet 2019. [hal-02195812](#).

- [501] Nicolas GAUVILLE, Nazim FATEΣ et Irène MARCOVICI. “Diagnostic décentralisé à l'aide d'automates cellulaires”. In : *JFSMA 2019 - 27emes Journées Francophones sur les Systèmes Multi-Agents*. ISBN 9782364937192. Institut de Recherche en informatique de Toulouse et l'Association française pour l'Intelligence Artificielle. Toulouse, France : Cépaduès, juillet 2019, p. 96-105. [hal-02195799](#).
- [502] Yassine EL-KHADIRI, Gabriel CORONA, Cédric ROSE et François CHARPILLET. “Une Approche Bayésienne pour la reconnaissance des périodes de sommeil à l'aide de capteurs de mouvement”. In : *Journées d'Etude sur la TéléSanté*. Sorbonne Universités. Paris, France, mai 2019. [hal-02161066](#).
- [503] Athénaïs VAGINAY, Malika SMAIL-TABBONE et Taha BOUKHOBZA. “Towards an automatic conversion from SBML core to SBML qual”. In : *Journées Ouvertes Biologie, Informatique et Mathématiques, JOBIM 2019*. Présentation Poster. Nantes, France, juillet 2019. [hal-02407443](#).
- [504] Olivier BUFFET, Jilles DIBANGOYE, Aurélien DELAGE, Abdallah SAFFIDINE et Vincent THOMAS. “Sur le principe d'optimalité de Bellman pour les zs-POSG”. In : *JFPDA 2020 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Angers (virtuel), France, juin 2020, p. 1-3. [hal-03081320](#).
- [505] Jilles DIBANGOYE, Olivier BUFFET et Akshat KUMAR. “Multiagent Planning and Learning As MILP”. In : *JFPDA 2020 - Journées Francophones sur la Planification, la Décision et l'Apprentissage pour la conduite de systèmes*. Angers (virtuel), France, juin 2020, p. 1-12. [hal-03081548](#).
- [506] H RAMDANI, A BRUN, E BONJOUR et D MONTICOLO. “Définition d'une méthodologie d'indexation de documents textuels par étiquetage de séquences : application aux offres d'emploi”. In : *Conférence Nationale sur les Applications Pratiques de l'Intelligence Artificielle - APIA 2020*. Angers, France, juin 2020. [hal-02974679](#).
- [507] Aurélien DELAGE, Olivier BUFFET et Jilles DIBANGOYE. “HSVI pour zs-POSG usant de propriétés de convexité, concavité, et Lipschitz-continuité”. In : *JFPDA 2021 - Journées Francophones Planification, Décision et Apprentissage*. Bordeaux (virtuel), France, juin 2021, p. 1-14. [hal-03523951](#).
- [508] Athénaïs VAGINAY, Taha BOUKHOBZA et Malika SMAÏL-TABBONE. “Automatic synthesis of boolean networks from biological knowledge and data”. In : *Journées Ouvertes en Biologie, Informatique et Mathématiques, JOBIM 2021*. Paris, France, juillet 2021. [hal-03481253](#).
- [509] Yang YOU, Vincent THOMAS, Francis COLAS et Olivier BUFFET. “Résolution de Dec-POMDP à horizon infini à l'aide de contrôleurs à états finis dans JESP”. In : *JFPDA 2021 - Journées Francophones Planification, Décision et Apprentissage*. Bordeaux (virtuel), France, juin 2021. [hal-03523841](#).

Ouvrages

- [510] Samuel NOWAKOWSKI et Bruno COHEN. *Demain est-il ailleurs ? Odyssée urbaine autour de la transition numérique*. Octobre 2020. [hal-03545299](#).

Ouvrages collectifs ou actes de conférence

- [511] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. *Brain-Computer Interfaces 1 : Foundations and Methods*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. Wiley-ISTE, juillet 2016. [hal-01408991](#).
- [512] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. *Brain-Computer Interfaces 2 : Technology and Applications*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. Wiley-ISTE, juillet 2016. [hal-01408998](#).
- [513] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. *Les interfaces Cerveau-Ordinateur 1 : Fondements et méthodes*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. ISTE, juillet 2016. [hal-01402539](#).
- [514] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. *Les interfaces cerveau-ordinateur 2 : Technologie et applications*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. ISTE, juillet 2016. [hal-01402544](#).
- [515] Samuel NOWAKOWSKI. *The Digital Turn in Higher Education - International Perspectives on Learning and Teaching in a Changing World*. 2017. DOI : [10.1007/978-3-658-19925-8](https://doi.org/10.1007/978-3-658-19925-8). [hal-01660336](#).
- [516] Sahbi SIDHOM, Anass EL HADDADI, Abdelkrim MEZIANE, Mohamed ADDAM et Jaber EL BOUHDIDI, éd. *6th. international symposium ISKO-Maghreb'2017 on Knowledge Organisation in the perspective of Digital Humanities*. T. volume 1. 6th. international symposium ISKO-Maghreb'2017 on Knowledge Organisation in the perspective of Digital Humanities ISSN 2507-7376. Sahbi Sidhom, Anass El Haddadi. Al-Hoceima, Morocco : ENSA Al-Hoceima (Maroc), mai 2017, p. 205. [hal-01714154](#).
- [517] Sahbi SIDHOM, Anass EL HADDADI et Mourad OUBRICH, éd. *7th. Information Systems and Economic Intelligence, SIIE 2017 : Proceedings*. Al-Hoceima, Morocco, 2017. [hal-02167208](#).
- [518] Sandra BRINGAY, Olivier BUFFET, Alain DUTECH, Jérôme EUZENAT, Juliette MATTIOLI, Sylvie RANWEZ, François SCHWARZENTRUBER, Vincent THOMAS, Yves DEMAZEAU et Dominique LONGIN, éd. *Conférence Nationale d'Intelligence Artificielle Année 2018*. Nancy, France : Association Française pour l'Intelligence Artificielle (AFIA), juillet 2018. [hal-02189744](#).
- [519] AMIRA KADDOUR et Sahbi SIDHOM, éd. *CITED'2018 PROCEEDINGS of the International Symposium on "Advanced Technologies, Renewable Energies and Economic Development" : 1st. Edition*. T. 1. CITED'2018 PROCEEDINGS of the International Symposium on "Advanced Technologies, Renewable Energies and Economic Development" : 1st. Edition. ISKO-Maghreb Society (international society for knowledge organization : Maghreb Chapter) and Université de Carthage, Tunisie and ANPR Tunisia (Agence Nationale de la Promotion de la Recherche Scientifique). Gammarth-Tunis, Tunisia, novembre 2018, p. 128. [hal-03048238](#).
- [520] Andrii Dmytryovych SHACHYKOV, Patrick HENAFF et Oleksandr Petrovych SHULYAK. *Simulation of rhythmic movements of the human hip joint at the neuronal and muscular-skeletal level*. National Technical University of Ukraine "Kyiv Polytechnic Institute", mai 2018. [hal-01798555](#).

- [521] Sahbi SIDHOM, Davy MONTICOLO et Habib SIDHOM, éd. *SIIE'2019 PROCEEDINGS 8th. Edition of the International Conference on : "Information Systems and Economic Intelligence"*. T. 1. SIIE'2019 e-PROCEEDINGS 8th. Edition of the International Conference on : "Information Systems and Economic Intelligence". University of Tunis and ALECSO Tunis (Arab League Educational, Cultural and Scientific Organization) and ISKO-Maghreb (International Scociety of Knowledge Organization - maghreb Chapter) and ANPR (National Agency for Scientific Research Promotion : Ministry of Higher Education and Scientific Research in Tunisia). Tunis, Tunisia, décembre 2019, p. 208. [hal-03047053](#).
- [522] John Christopher BECK, Olivier BUFFET, Jörg HOFFMANN, Erez KARPAS et Shirin SOHRABI, éd. *Proceedings of the Thirtieth International Conference on Automated Planning and Scheduling, Nancy, France, October 26-30, 2020*. T. 30. Octobre 2020. [hal-03080234](#).
- [523] AMIRA KADDOUR, Sahbi SIDHOM et Xi LU, éd. *CITED'2019 PROCEEDINGS International Symposium on "Advanced Technologies, Renewable Energies and Economic Development" : 2nd Edition*. T. 1. CITED'2019 PROCEEDINGS International Symposium on "Advanced Technologies, Renewable Energies and Economic Development" : 2nd Edition. Université de Tunis and ISKO-Maghreb Society (international society for knowledge organization - Maghreb chapter) and ALECSO (Arab League Educational, Cultural and Scientific Organization) and ANPR Tunisie (Agence Nationale de la Promotion de la Recherche Scientifique en Tunisie). Tunis, Tunisia, janvier 2020, p. 96. [hal-03047198](#).
- [524] Saoussen KRICHEN, Hajar BEN-ROMDHANE et Sahbi SIDHOM, éd. *Proceedings of 2020 International Multi-Conference on : "Organization of Knowledge and Advanced Technologies" (OCTA2020) : Unifying the scientific contributions of the following conferences:SIIE'2019 & ISKO-Maghreb'2019 & CITED'2019 & TBMS'2019*. Université de Tunis and ISKO-Maghreb Society and ALECSO Tunis and ANPR (Agence Nationale de la Promotion de la Recherche Scientifique, Tunisie). Tunis, Tunisia : IEEE, 2020, p. 366. DOI : [10.1109/OCTA49274.2020](#). [hal-03063706](#).
- [525] Sahbi SIDHOM, Anass EL HADDADI et Mohamed ADDAM, éd. *TBMS'2019 PROCEEDINGS on "Big-Data-Analytics Technologies for Strategic Management : innovation and competitiveness." :1st. Edition*. T. 1. TBMS'2019 PROCEEDINGS on "Big-Data-Analytics Technologies for Strategic Management : innovation and competitiveness." :1st. Edition. Université de Tunis and ISKO-Maghreb Society (international society for knowledge organization : Maghreb Chapter). Tunis, Tunisia, décembre 2020, p. 74. [hal-03047235](#).
- [526] Sahbi SIDHOM, Abdelkrim MEZIANE, Anass EL HADDADI et Habib SIDHOM, éd. *ISKO-Maghreb'2019 PROCEEDINGS on "Digital Sciences : impacts and challenges on Knowledge Organization." : 8th. Edition*. T. 1. ISKO-Maghreb'2019 PROCEEDINGS on "Digital Sciences : impacts and challenges on Knowledge Organization." : 8th. Edition. ISKO-Maghreb international Society and University Of Tunis and ALECSO Tunis (Arab League Educational, Cultural and Scientific Organization) and ANPR Tunisie (Agence Nationale de la Promotion de la Recherche Scientifique en Tunisie). Tunis, Tunisia, janvier 2020, 162p. [hal-03047113](#).
- [527] Collectif PSYPHINE COLLECTIF PSYPHINE. *Que prêtons-nous aux machines ? Approches interdisciplinaires des interactions homme-robot*. Sous la dir. de Collectif PSYPHINE : Virginie André ; Joffrey Becker ; Yann Boniface ; Amine Boumaza ; Alain Dutech ; Valeria Giardino ; Fabrice Louis ; Manuel Rebuschi ; Marion Renaud ; Nicolas Rougier

; Frédéric VERHAEGEN. Presses Universitaires de Nancy, septembre 2021, p. 242. [hal-03550469](#).

Chapitres de livres

- [528] Laurent BOUGRAIN. "Applications médicales : neuroprothèses et neuroadaptation". In : *Brain-Computer Interfaces*. Sous la dir. de Maureen CLERC et Laurent BOUGRAIN. T. 2. Technologie et Applications. ISTE, juillet 2016. [hal-01429026](#).
- [529] Laurent BOUGRAIN. "Medical Applications : Neuroprostheses and Neurorehabilitation". In : *Brain-Computer Interfaces*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. T. 2. Technology and Applications. Wiley-ISTE, juillet 2016. [hal-01429029](#).
- [530] Laurent BOUGRAIN et Guillaume SERRIÈRE. "Classification de signaux cérébraux avec OpenViBE". In : *Interfaces cerveau-ordinateur*. Sous la dir. de Maureen CLERC. T. 2. Technologie et Applications. ISTE, juillet 2016. [hal-01429035](#).
- [531] Laurent BOUGRAIN et Guillaume SERRIÈRE. "Classification of Brain Signals with Open-ViBE ". In : *Brain-Computer Interfaces*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. T. 2. Technology and Applications. Wiley-ISTE, juillet 2016. [hal-01429033](#).
- [532] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. "Conclusion and Perspectives". In : *Brain-Computer Interfaces 2*. Wiley-ISTE, juillet 2016. [hal-01409032](#).
- [533] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. "Conclusion et perspectives". In : *Les interfaces cerveau-ordinateur 2*. ISTE, juillet 2016. [hal-01408972](#).
- [534] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. "Introduction". In : *Brain-Computer Interfaces 1*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. Wiley-ISTE, juillet 2016. [hal-01409001](#).
- [535] Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. "Introduction". In : *Les interfaces cerveau-ordinateur 1*. Sous la dir. de Maureen CLERC, Laurent BOUGRAIN et Fabien LOTTE. Fondements et méthodes. ISTE, juillet 2016. [hal-01402594](#).
- [536] Anisah W GHORAH, Marie-Dominique DEVIGNES, Malika SMAÏL-TABBONE et David RITCHIE. "Classification and Exploration of 3D Protein Domain Interactions Using Kb-dock". In : *Data Mining Techniques for the Life Sciences*. Sous la dir. d'O. CARUGO et F. EISENHABER. T. 1415. Methods in Molecular Biology. Springer Science+Business Media New York, 2016, p. 91-105. DOI : [10.1007/978-1-4939-3572-7_5](https://doi.org/10.1007/978-1-4939-3572-7_5). [hal-01317448](#).
- [537] Isabelle HOUOT et Samuel NOWAKOWSKI. "Vers un modèle dynamique expérience-compétences au service du projet professionnel des étudiants". In : *Les portefeuilles d'expériences et de compétences : approche pluridisciplinaire*. Métiers et pratiques de formation. Presses Universitaires du Septentrion, juillet 2016, p. 183-199. [hal-01441860](#).
- [538] Dietmar JANNACH et Geoffray BONNIN. "Music Recommendation". In : *Music Data Analysis : Foundations and Applications*. 2016. [hal-03012539](#).
- [539] Henaff PATRICK et Hayssam SERHAN. "Muscle-like Compliance in Knee Articulations Improves Biped Robot Walkings". In : *Recent Advances in Robotic Systems*. Sous la dir. d'Intech edited by GUANGHUI (RICHARD) WANG. Septembre 2016. [hal-01842424](#).

- [540] Igor VATOLKIN, Geoffray BONNIN et Dietmar JANNACH. "Comparing Audio Features and Playlist Statistics for Music Classification". In : *Analysis of Large and Complex Data*. Août 2016, p. 437-447. DOI : [10.1007/978-3-319-25226-1_37](https://doi.org/10.1007/978-3-319-25226-1_37). hal-03241797.
- [541] Dietmar JANNACH, Lukas LERCHE et Geoffray BONNIN. "Empfehlungssysteme, automatische Erzeugung von Wiedergabelisten und Musikdatenbanken". In : *Handbuch Funktionale Musik*. Springer Fachmedien Wiesbaden, août 2017, p. 121-157. DOI : [10.1007/978-3-658-10219-7_5](https://doi.org/10.1007/978-3-658-10219-7_5). hal-03012489.
- [542] Andrii Dmytrovych SHACHYKOV, Patrick HENAFF et Olexandr Petrovych SHULYAK. "Comparison of measured and modeled movements of the human lower limbs". In : . Décembre 2017. hal-01798594.
- [543] Sahbi SIDHOM et Philippe LAMBERT. "On Knowledge Organization and Management for Innovation : Modeling with the Strategic Observation Approach in Material Science". In : *Collective Intelligence and Digital Archive*. Sous la dir. d'iste EDITIONS. T. 1. Collective Intelligence and Digital Archive 1. ouvrage en cours de publication chez iste Editions. iste Editions, février 2017. DOI : [10.1002/9781119384694.ch7](https://doi.org/10.1002/9781119384694.ch7). hal-01456149.
- [544] Karim BOUYARMANE, Stéphane CARON, Adrien ESCANDE et Abderrahmane KHEDDAR. "Multi-contact Motion Planning and Control". In : *Humanoid Robotics : A Reference*. Sous la dir. d'Ambarish GOSWAMI et Prahlad VADAKKEPAT. Springer Nature, 2018, p. 1763-1804. DOI : [10.1007/978-94-007-6046-2_32](https://doi.org/10.1007/978-94-007-6046-2_32). lirmm-02154697.
- [545] Hoang Nam HO, Mourad RABAH, Samuel NOWAKOWSKI et Pascal ESTRAILLIER. "Trace-Based Multi- Criteria Preselection Approach for Decision Making in Interactive Applications like Video Games". In : *The Digital Turn in Higher Education : International Perspectives on Learning and Teaching in a Changing World*. Springer Fachmedien Wiesbaden, octobre 2018, p. 211-234. DOI : [10.1007/978-3-658-19925-8_15](https://doi.org/10.1007/978-3-658-19925-8_15). hal-02046564.
- [546] Serena IVALDI et Barkan UGURLU. "Chapter 35 : Free Simulation Software and Library". In : *Humanoid Robotics : A Reference*. Springer, juin 2018. hal-01614032.
- [547] Dietmar JANNACH, Iman KAMEHKHOSH et Geoffray BONNIN. "Music Recommendations". In : *Collaborative Recommendations*. 2018. hal-02476928.
- [548] Manel ZOGHLAMI, Sabeur ARIDHI, Mondher MADDOURI et Engelbert MEFHU NGUIFO. "An Overview of in Silico Methods for the Prediction of Ionizing Radiation Resistance in Bacteria". In : *Ionizing Radiation : Advances in Research and Applications*. Sous la dir. de Tamar REEVE. Physics Research and Technology Series. Nova science publishers, mai 2018, p. 241-256. hal-01807944.
- [549] Pauline MAURICE, Vincent PADOIS, Yvan MEASSON et Philippe BIDAUD. "Digital Human Modeling for Collaborative Robotics". In : *DHM and Posturography*. Août 2019. hal-02389726.
- [550] Armelle BRUN, benjamin gras benjamin et Agathe MERCERON. "Building Confidence in Learning Analytics Solutions : Two Complementary Pilot Studies". In : *Adoption of Data Analytics in Higher Education Learning and Teaching*. Adoption of Data Analytics in Higher Education Learning and Teaching. Septembre 2020, p. 285-303. DOI : [10.1007/978-3-030-47392-1_15](https://doi.org/10.1007/978-3-030-47392-1_15). hal-02974681.
- [551] Olivier BUFFET, Olivier PIETQUIN et Paul WENG. "Reinforcement Learning". In : *A Guided Tour of Artificial Intelligence Research - Volume 1*. Springer International Publishing, mai 2020, p. 389-414. DOI : [10.1007/978-3-030-06164-7_12](https://doi.org/10.1007/978-3-030-06164-7_12). hal-03323382.

- [552] Jessica COLOMBEL, David DANEY, Vincent BONNET et François CHARPILLET. “Markerless 3D Human Pose Tracking in the Wild with fusion of Multiple Depth Cameras : Comparative Experimental Study with Kinect 2 and 3”. In : *Activity and Behavior Computing, Smart Innovation, Systems and Technologies*. Sous la dir. de M. A. R. Ahad et AL. Springer, 2020. [hal-03034044](#).
- [553] Jérémie FIX et Hervé FREZZA-BUET. “Look and Feel What and How Recurrent Self-Organizing Maps Learn”. In : *Advances in Self-Organizing Maps, Learning Vector Quantization, Clustering and Data Visualization, WSOM 19*. T. 976. Advances in Intelligent Systems and Computing. Avril 2020, p. 3-12. DOI : [10.1007/978-3-030-19642-4_1](https://doi.org/10.1007/978-3-030-19642-4_1). [hal-02120117](#).
- [554] Noémie GONNIER, Yann BONIFACE et Hervé FREZZA-BUET. “Consensus Driven Self-Organization : Towards Non Hierarchical Multi-Map Architectures”. In : *Communications in Computer and Information Science, Neural Information Processing, ICONIP 2020*. Novembre 2020, p. 526-534. DOI : [10.1007/978-3-030-63823-8_60](https://doi.org/10.1007/978-3-030-63823-8_60). [hal-03030518](#).
- [555] Jonathan LIMA, Bernard MAIGRET, Diana FERNANDEZ, Jennifer DECLOQUEMENT, Da-nilo PINHO, Erika V.S. ALBUQUERQUE, Marcelo RODRIGUES et Natalia MARTINS. “Searching in Silico Novel Targets for Specific Coffee Rust Disease Control”. In : *Lecture Notes in Computer Science, vol 11347*. Springer. Avril 2020, p. 109-115. DOI : [10.1007/978-3-030-46417-2_10](https://doi.org/10.1007/978-3-030-46417-2_10). [hal-03029852](#).
- [556] Samuel NOWAKOWSKI et Anne-Marie COTTON. “Students’ Engagement and the ISP as a Micro-World and a Window on the educational world”. In : *Diplomacy, organisations and citizens. A European communication perspective*. Septembre 2021. DOI : [10.1007/978-3-030-81877-7_17](https://doi.org/10.1007/978-3-030-81877-7_17). [hal-03542759](#).

Médiation scientifique

- [489] Ronan CHAMPAGNAT, Joffrey LEBLAY, Samuel NOWAKOWSKI et Mourad RABAH. “Aide à l’analyse des parcours d’apprentissage en IUT par reconnaissance de procédés et recommandations à base de traces”. In : *Congrès National de la Recherche des IUT*. Nantes, France, juin 2016. [hal-01346459](#).
- [557] Marie-Dominique DEVIGNES, Malika SMAÏL-TABBONE et David RITCHIE. “Kbdock - Searching and organising the structural space of protein-protein interactions”. In : *ERCIM News* 104 (janvier 2016), p. 24-25. [hal-01258117](#).
- [558] Serena IVALDI et Joanna JONGWANE. “Des robots au service des hommes”. In : *Interstices* (mars 2016). [hal-01350455](#).
- [559] Jean-Baptiste MOURET et Antoine CULLY. “Des robots qui s’adaptent aux dommages en seulement quelques minutes”. In : *Interstices* (octobre 2016). [hal-01412441](#).
- [351] Sébastien RIMBERT, Stéphanie FLECK, Jimmy NEX et Laurent BOUGRAIN. “Nécessité d’un protocole d’apprentissage progressif pour la maîtrise d’une imagination motrice après un AVC”. In : *28ième conférence francophone sur l’Interaction Homme-Machine*. Atelier sur les Nouvelles technologies pour les Ainées, défis et perspectives. Fribourg, Switzerland, octobre 2016, p. 10-12. [hal-01386665](#).

- [226] Thomas DURAND, Laurent PETIT, Samuel NOWAKOWSKI et Sandrine PHILIPPE. “Apprendre aujourd’hui à l’heure des nouveaux médias : l’exemple de Youtube”. In : *Conférence Canopé Apprendre aujourd’hui à l’heure des nouveaux médias : l’exemple de YouTube*. Canopé and Science&You and Université de Lorraine and Maison pour la science en Lorraine. Epinal, France, février 2019. [hal-02006088](#).
- [560] Marion CRÉHANGE. “Ma randonnée informatique”. In : *Interstices* (octobre 2021). [hal-03463467](#).

Autres publications

- [561] Sabeur ARIDHI, Seyed Ziaeddin ALBORZI, Malika SMAÏL-TABBONE, Marie-Dominique DEVIGNES et David RITCHIE. *Neighborhood-Based Label Propagation in Large Protein Graphs*. Function SIG @ ISMB/ECCB 2017. Poster. Juillet 2017. [hal-01573381](#).
- [562] Laure BUHRY, Clément LANGLET et Francesco GIOVANNINI. *Modelling the effects of propofol on neuronal synchronization in network of interneurons*. CNS 2017 - The Twenty Sixth Annual Computational Neuroscience Meeting. Poster. Juillet 2017. [hal-01646069](#).
- [563] Isaure CHAUVOT DE BEAUCHÈNE, Sergey A SAMSONOV et Martin ZACHARIAS. *Fragment based modeling of protein-GAG complexes*. GGMM 2017 - 20e congrès du Groupe de Graphisme et Modélisation Moléculaire. Poster. Mai 2017. [hal-01927283](#).
- [564] Emmanuel BRESSO, Claire LACOMBLEZ, Anne PIZARD, Patrick ROSSIGNOL, Faiez ZANNAD, Malika SMAÏL-TABBONE et Marie-Dominique DEVIGNES. *A data science approach for exploring differential expression profiles of genes in transcriptomic studies-Application to the understanding of ageing in obese and lean rats in the FIGHT-HF project*. JOBIM 2018 - Journées Ouvertes Biologie, Informatique et Mathématiques. Poster. Juillet 2018. [hal-01928421](#).
- [565] Laure BUHRY et Francesco GIOVANNINI. *Tonic inhibition mediates a synchronisation enhancement during propofol anaesthesia in a network of hippocampal interneurons : a modelling study*. Research Report RR-9320. loria, juin 2018. [hal-02447006](#).
- [566] Chinmay SINGHAL, Yann PONTY et Isaure CHAUVOT DE BEAUCHÈNE. *A hybrid combinatorial method for docking single stranded RNA on proteins at the thermodynamic equilibrium*. RECOMB 2018 - 22nd Annual International Conference on Research in Computational Molecular Biology. Poster. Avril 2018. [hal-01925083](#).
- [567] Maria-Elisa RUIZ-ECHARTEA, Isaure CHAUVOT DE BEAUCHÈNE et David RITCHIE. *EROS : A Protein Docking Algorithm Using a Quaternion pi- Ball Representation for Exhaustive and Accelerated Exploration of 3D Rotational Space*. GGMM (groupe de graphisme et modélisation moléculaire). Poster. Avril 2019. [hal-02392106](#).
- [568] Olivier BUFFET, Jilles DIBANGOYE, Aurélien DELAGE, Abdallah SAFFIDINE et Vincent THOMAS. “On Bellman’s Optimality Principle for zs-POSGs”. arXiv : [2006.16395v1](#) - working paper or preprint. Décembre 2020. [hal-03080287](#).
- [569] Nathalie AZEVEDO CARVALHO, Laure BUHRY, Sylvain CONTASSOT-VIVIER, Jérôme BAUFRETON et Dominique MARTINEZ. *A computational model of GPe prototypic and arkypallidal neurons with automated parameter fitting*. NeuroFrance 2021. Poster. Mai 2021. [hal-03437767](#).

- [570] Nathalie AZEVEDO CARVALHO, Laure BUHRY, Sylvain CONTASSOT-VIVIER, Jérôme BAUFRETON et Dominique MARTINEZ. *A physiologically realistic computational model of the basal ganglia network*. CNS 2021 30th Annual Computational Neuroscience Meeting. Poster. Juillet 2021. [hal-03437778](#).
- [571] Antoine MONIOT, Isaure CHAUVOT DE BEAUCHÈNE et Yann GUERMEUR. *New clustering method to infer prototypes covering the 3D structures of nucleic acid fragments*. RECOMB 2021 - 25th International conference on research in computational molecular biology. Poster. Août 2021. [hal-03432671](#).

Report integrators : Laurent Andrey (Team Resist), Philippe Dosch (Department 4), and Sylvain Pogodalla (Team Sémagramme). Report designed under Linux using Emacs, and formated thanks to Lua^{AT}EX.