Mehdi Khamassi

Short CV

Tenured Research Scientist (CRCN CNRS)
Institute of Intelligent Systems and Robotics (ISIR)
Sorbonne Université (SU) / ex Université Pierre et Marie Curie (UPMC)
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Webpage & full CV	http://people.isir.upmc.fr/khamassi
Researcher IDs	Scholar Page, Orcid 0000-0002-2515-1046, Scopus 6508136456
Date/place of birth	18 Jan. 1980 in Paris, France
Current position	Permanent Researcher (CRCN) at Centre National de la Recherche Scientifique (CNRS), section 7 "Information Sciences" and interdisciplinary comity 51 "Modeling and Analysis of Biological Data and Systems"
Affiliation	Institute of Intelligent Systems and Robotics CNRS / Sorbonne Université BC173, 4 place Jussieu, 75005 Paris
Other current positions	Director of Studies, Cogmaster program at Ecole Normale Supérieure (ENS), Paris Co-animator of the "Robotics&Neuroscience" national working group (CNRS GDR) Visiting Researcher at National Polytechnical University of Athens, Greece Visiting Academic at Department of Experimental Psychology, Univ. Oxford, UK Associate Editor for Frontiers in Neurorobotics and Intellectica
Education	2014 HDR (Habilitation to Direct Researches), UPMC, Paris, France 2007 PhD in Cognitive Neuroscience, UPMC, Paris, France 2003 MSc in Cognitive Sciences, UPMC/ENS/Polytechnique/EHESS, Paris, France 2003 MEng in Computer Science, CNAM/ENSIIE, Evry, France
Research Experience	2014-2017 CR1 CNRS Permanent Researcher, ISIR, UPMC, Paris, France 2013-2015 Visiting Researcher, Center for Mind/Brain Sciences**,** U Trento, Italy 2010-2014 CR2 CNRS Permanent Researcher, ISIR, UPMC, Paris, France 2008-2010 Post-doc, Stem-cell & Brain Research Institute, INSERM, Lyon, France 2008 (3m.) Guest Researcher, Okinawa Institute of Science & Technology, Japan 2007-2008 Post-doc, Laboratory of Computer Science, UPMC, Paris, France 2003-2007 PhD student, Collège de France, Paris, France
Invited talks	45 invited talks (including 16 at international conf/symp/colloq, 2 keynotes)
Project experience	PI of CNRS "Osez l'Interdisciplinarité" ROBAUTISTE Project (2017-2019), Sorbonne Universités Robot-Parallearning Project (2015-2016); Co-PI of several national (ANR, CNRS) and international (ANR-NSF, Royal Society-CNRS) projects; Participant to 5 EU projects and numerous national ones.
Event organization	Co-organizer of 8 international top-level meetings on decision-making, including yearly Symp. on Biology of Decision-Making (200 participants, 80 posters, 30 talks), 14 one-day national symposia on Robotics & Neuroscience (40 participants).
Student supervision	Supervised 6 completed PhDs; 2 ongoing ones; 2 postdocs; 27 Master/Eng students.
Publication record	34 journal articles, 2 edited journal special issues, 19 peer-reviewed international conference papers, 4 book chapters incl. MIT Press, Oxford Univ Press, 72 other pub.
Awards	2 best paper awards (International SAB Conf 2012; La Recherche Prize 2010).
Teaching	2 created courses (Robotics at Cogmaster program at ENS; Critical thinking at UPMC); Annual invited courses at Polytechnique, ENS, UPMC, U Orsay, U Lyon 1.
Other responsibilities	Member of the executive committee of the SMART Labex, 8 years / 5M€ transverse laboratory gathering 8 UPMC research institutes, including ISIR (since 2012); Evaluation comity member for 3 assistant professor recruitments at UPMC, Univ. Cergy-Pontoise and Univ. Lorraine; Examiner/Reviewer for 18 PhD theses evaluation committees (incl. 1 as president of the jury), 2 Habilitation to Direct Research committees, and 11 mid-term PhD theses committees.

10 selected publications *(PhD supervisors [Sidney I. Wiener, Agnès Guillot] in italic letters):*

Velentzas, G., Tsitsimis, T., Rano, I., Tzafestas, C. and Khamassi, M. (2018). Adaptive reinforcement learning with active state-specific exploration for engagement maximization during simulated child-robot interaction. **Paladyn Journal of Behavioral Robotics**. To appear.

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Khamassi, M., Velentzas, G., Tsitsimis, T. and Tzafestas, C. (2018). Robot fast adaptation to changes in human engagement during simulated dynamic social interaction with active exploration in parameterized reinforcement learning. **IEEE Transactions on Cognitive and Developmental Systems**.

Dollé, L., Chavarriaga, R., *Guillot, A.** and Khamassi, M.* (2018). Interactions between spatial strategies producing generalization gradient and blocking: a computational approach. **PLoS Computational Biology**, 14(4):e1006092. (* equally contributing authors)

Palminteri, S., Khamassi, M., Joffily, M. and Coricelli, G. (2015). The neural computation of value contextualization in reward and punishment learning. **Nature Communications**, 6:8096.

Khamassi, M., Quilodran, R., Enel, P., Dominey, P.F. and Procyk, E. (2015). Behavioral regulation and the modulation of information coding in the lateral prefrontal and cingulate cortex. **Cerebral Cortex**.

Lesaint, F., Sigaud, O., Flagel, S.B., Robinson, T.E. and Khamassi, M. (2014). Modelling individual differences observed in Pavlovian autoshaping in rats using a dual learning systems approach and factored representations. **PLoS Computational Biology**, 10(2):e1003466.

Caluwaerts, K., Staffa, M., N'Guyen, S., Grand, C., Dollé, L., Favre-Félix, A., Girard, B. and Khamassi, M. (2012). A biologically inspired meta-control navigation system for the Psikharpax rat robot. **Bioinspiration & Biomimetics**, 7(2):025009.

Khamassi, M., Lallée, S., Enel, P., Procyk, E. and Dominey P.F. (2011). Robot cognitive control with a neurophysiologically inspired reinforcement learning model. **Frontiers in Neurorobotics**, 5:1.

Benchenane, K., Peyrache, A., Khamassi, M., *Wiener, S.I.* and Battaglia, F.P. (2010). Coherent theta oscillations and reorganization of spike timing in the hippocampal-prefrontal network upon learning. **Neuron**, 66(6):921-936.

Peyrache, A., Khamassi, M., Benchenane, K., *Wiener, S.I.* and Battaglia, F.P. (2009). Replay of rule-learning related neural patterns in the prefrontal cortex during sleep. **Nature Neuroscience**, 12(7):919-926.

10 selected invited talks:

2018: Computational Psychiatry Workshop, Cambridge University, **Cambridge, UK**
2018: 6th Intern. Meeting on Comp. Properties of Prefrontal Cortex, **Vanderbilt Univ., USA**
2017: Panel at the 50th Winter Conference on Brain Research, **Big Sky, USA**
2016: "Addiction, in theory" meeting, Gatsby Unit, University College London, **London, UK**
2016: 6th International Symposium on Motivational and Cognitive Control (Plenary), **St Andrews, UK**
2016: 6th International Symposium on Biology of Decision-Making (Plenary), **Paris, France**
2015: 3rd International Conference on Cognition, Brain & Computation (Plenary), **Ahmedabad, India**
2014: Symposium at International Cognitive Neuroscience Conference, **Brisbane, Australia**
2013: Harvard Summer Program in Trento, Center for Mind/Brain Sciences, **Trento, Italy**
2012: Neuromorphic Engineering Summerschool/Workshop, **Telluride, USA**

5 selected collaborative research projects:

2017-2019 **CNRS "Osez l'Interdisciplinarité"** – "ROBAUTISTE: Learning and joint attention in autism" (role: PI with Mohamed Chetouani, Ouriel Grynszpan, Matthew Rushworth, Jérôme Sallet, Olivier Sigaud) – Total: 150 K€ (for the team)

2016-2019 **ANR-NSF Collaborative Research in Computational Neuroscience** – "Neurobehavioral assessment of a computational model of reward learning" (role: co-PI with Matt R. Roesch (PI), Alain Marchand) – Total: 670 K$ (123 K$ for the team)

2015-2018 **European Union H2020-ICT-2014** – "DREAM: Deferred Restructuring of Experience in Autonomous Machines" (role: participant with Stéphane Doncieux (PI) et al.) – Total: 2784 K€ (758 K€ for the team)

2015-2016 **Sorbonne-Universités** ANR-11-IDEX-0004-02 Idex SUPER SU-15-R-PERSU-14 PERSU – "ROBOT PARALLEARNING, Neuro-inspired coordination of parallel learning processes in robots" (role: PI) – Total direct costs: 70 K€ (for the team)

2013-2016 **Agence Nationale de la Recherche** ANR-12-CORD-0030 (CONTINT) – "ROBOERGOSUM, Robot Self-Awareness" (role: co-PI with Rachid Alami, Benoît Girard, Raja Chatila (PI)) – Total direct costs: 422 K€ (258 K€ for the team)