CURRICULUM VITAE
Vincenzo G. Fiore

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Education

PhD in Psychobiology and Psychopharmacology, Sapienza - Università di Roma, IT, Jan 2012.

MSc by Res. in Philosophy, major Philosophy of Mind, University of Edinburgh, UK, Nov 2007.

Laurea in Philosophy, major Cognitive Science, Università degli Studi di Siena, IT, Nov 2005.

Research Positions

Sep 2018 – Associate Scientist. Joint position at the department of Psychiatry, Icahn School of Medicine at Mount Sinai, and James J. Peters VA Medical Center, NY, USA.

Neural, reinforcement learning and Bayesian models of healthy and aberrant behaviour in human and non-human animals. Model-based fMRI analysis and dynamic causal modelling (DCM) of brain dynamics in healthy and substance use dependent volunteers.

Jan '16 - Aug '18 – Research Associate. School of Behavioral and Brain Sciences, UTD, TX, USA.

Computational models of healthy and aberrant behaviour in human and non-human animals. Task development and fMRI analysis in healthy and substance use dependent volunteers.

Jan '13 - Nov '15 - Research Associate. Wellcome Trust Centre for Neuroimaging, UCL, UK.

Neural models of decision making and action selection in human and non-human animals. Task development and fMRI analysis in healthy and Parkinson's disease volunteers.

Oct '07 - Oct '12 – PhD student. Institute of Cognitive Sciences and Technologies, CNR, IT.

Neural network programming (Matlab and C++) focusing on learning processes, motivations, stress coping and action selection in bio-inspired systems.

Teaching Experience

2016-18 - Supervision of PhD and undergraduate students, UTD.

2017-18 - Temporary lecturer: “Introduction to Neuroscience” course, UTD.

Jul 2017 - Invited talk: “Computational Psychiatry” course, UCL.

Jul-Dec 2016 - Instructor: “Matlab methods”, weekly lab meetings, UTD.

Jan 2015 - Instructor: “Connectionism: structures to functions”, workshop for MSc students, UCL.

Feb-Mar 2012 - Temporary lecturer: “Computational embodied neuroscience” course, Sapienza - Università di Roma.

Publications

(under review) Yu J-C, **Fiore VG**, Briggs RW, Braud J, Adinoff B, Gu X. Early relapsers with cocaine addiction over-represent prediction errors.

(under review) Ognibene D, **Fiore VG**, Gu X. Addiction beyond pharmacological effects: the role of environment complexity and bounded rationality.

Fiore VG, Ognibene D, Adinoff B, Gu X. 2018. A Multilevel Computational Characterization of Endophenotypes in Addiction. **ENeuro**. 5(4).0151-18.2018; doi:10.1523/ENEURO.0151-18.2018

Fiore VG, Nolte T, Rigoli F, Smittenaar P, Gu X, Dolan RJ. 2018. Value Encoding in the Globus Pallidus: fMRI reveals an interaction effect between reward and dopaminergic drive. **NeuroImage**. 173:249-257. doi:10.1016/j.neuroimage.2018.02.048

Fiore VG, Kottler B, Gu X, Hirth F. 2017. In silico interrogation of insect central complex suggests computational roles for ellipsoid body in spatial navigation. **Front Behav Neurosci.** 11:142. doi: 10.3389/fnbeh.2017.00142

Fiore VG, Rigoli F, Stenner MP, Zaehle T, Hirth F, Heinze HJ, Dolan RJ. 2016. Changing pattern in the basal ganglia: motor switching under reduced dopaminergic drive. **Sci Rep.** 6: 23327. doi: 10.1038/srep23327

Hauser TU, **Fiore VG**, Moutoussis M, Dolan RJ. 2016. Computational psychiatry of ADHD: Neural gain impairments across Marrian levels of analysis. **Trends Neurosci.**, 39(2):63-73. doi: 10.1016/j.tins.2015.12.009

Fiore VG, Dolan RJ, Strausfeld NJ, Hirth F. 2015 Evolutionary conserved mechanisms for the selection and maintenance of behavioural activity. **Philos Trans R Soc Lond B Biol Sci**. 19;370(1684). pii: 20150053. doi: 10.1098/rstb.2015.0053.

Fiore VG, Mannella F, Mirolli M, Latagliata EC, Valzania A, Cabib S, Dolan RJ, Puglisi-Allegra S, Baldassarre G. 2015 Corticolimbic catecholamines in stress: a computational model of the appraisal of controllability. **Brain Struct Func**. 220(3):1339-1353. Epub 2014 Doi: 10.1007/s00429-014-0727-7

Fiore VG, Sperati V, Mannella F, Mirolli M, Gurney K, Friston K, Dolan RJ, Baldassarre G. 2014. Keep focussing: striatal dopamine multiple functions resolved in a single mechanism tested in a simulated humanoid robot. **Front Psychol**. 5:124. doi: 10.3389/fpsyg.2014.00124

Taffoni F, Formica D, Schiavone G, Scorcia M, Tomassetti A, Polizzi di Sorrentino E, Sabbatini G, Truppa V, Mannella F, **Fiore VG**, et al. 2013. The "Mechatronic Board": A Tool to Study Intrinsic Motivations in Humans, Monkeys, and Humanoid Robots. In G. Baldassarre and M. Mirolli (Eds.): **Intrinsically Motivated Learning in Natural and Artificial Systems**, Springer Berlin Heidelberg pages 411-432

Baldassarre G, Mannella F, **Fiore VG**, Redgrave P, Gurney K, Mirolli M. 2013. Intrinsically motivated action-outcome learning and goal-based action recall: a system-level bio-constrained computational model. **Neural Netw.** 41:168-187. doi: 10.1016/j.neunet.2012.09.015

Fiore VG. 2010. Multiple realizations of the mental states - hunting for plausible chimeras. In M. D'Agostino et al. (Eds.): **New Essays in Logic and Philosophy of Science**, Kings College Publications: London, pages 529-538.

Fiore VG, Mannella F, Mirolli M, Gurney K, Baldassarre G. 2008. Instrumental Conditioning Driven by Neutral Stimuli: A Model Tested with a Simulated Robotic Rat. In M. Schlesinger et al. (Eds.), **Proceedings of the 8th conference on Epigenetic Robotics**, in University of Sussex, UK. Lund University Cognitive Studies, 139, pages 13-20.

In Italian

Rizzoni, M. Calvano, R. et al. 2014. Libro Bianco – Università e Ricerca. Guidoni U, **Fiore VG**, et al. (Eds.) Rubbettino editore. ISBN 9788849841237

Conference abstracts and workshops

- FENS forum of Neuroscience 2018. Berlin, DE, July 2018
- SfN, Annual Meeting of the Society for Neuroscience. Washington DC, US, November 2017
- 12th International Basal Ganglia Society Meeting. Mérida, MX, March 2017
- NIPS2016 Workshop: Imperfect Decision Makers. Barcelona, ES, December 2016
- UT Dallas – UC Berkeley Symposium. Dallas, US, April 2016
- Genetics Society Autumn Meeting. London, UK, November 2015
- FENS, Brain Conference. Rungstedgaard, DK, April 2015
- CNS, annual meeting of the Cognitive Neuroscience Society. Boston, US, April 2014.
- Workshop on Intrinsic Motivations and Open-ended Learning, Roma, IT, June 2013.
- ICDL-EPIROB - Joint IEEE International Conference. Frankfurt am Main, DE, August 2011
- SfN, Annual Meeting of the Society for Neuroscience. San Diego, US, November 2010.
- BCCN, Bernstein Conference on Comp. Neuroscience. Frankfurt am Main, DE, October 2009.
- EPIROB 8: Epigenetic Robotics Conference, Sussex Univ., UK, July 2008
- PPNB, Philosophy of Psychology, Neuroscience, and Biology. Bristol, UK, March 2007.

Additional Information

Languages

Italian (mother tongue)
English (excellent)

Computer proficiencies

Matlab (excellent)
SPM12 for fMRI analysis (good)
C++ (fair)
Latex (fair)
Website programming (fair): wordpress, dokuwiki, d-html