

Curriculum Vitae

Fabienne Dupuy



Date of birth: January 18th, 1980

Place of birth: Saint-Gaudens (31) France

Professional address :
University of Cambridge
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Research Interests

Neurobiology, Neuroethology, Sensory system

Expertise

Behavioural Techniques (conditioning procedures)
Optophysiological measurements of neuronal activity (calcium imaging recording in the insect nervous system)
Intra-cellular and extra-cellular electrophysiology
Computing programming in Matlab software
Informatic tools (R, Statistica, Linux)

Current position

Since 2009 Postdoctoral fellowship : neural basis of the steering behaviour in *Gryllus bimaculatus*.
Department of zoology, University of Cambridge, UK. Funded by the BBRSC.
Advisor : Dr. Berthold Hedwig

University education

- 2005 - 2009 PhD thesis (PhD course Santé sciences technologies): Coding of mechanosensory information in the sensorial system of the cricket *Nemobius sylvestris*.
I.R.B.I. CNRS/Univ. Faculté des Sciences et Techniques, Tours, France.
Supported by CILIA European project.
Advisor: Prof Dr. Claudio Lazzari.
- 2004 - 2005 First year of PhD (PhD course CLESCO): Behavioural and neurobiological basis of the olfactory learning in the ant *Camponotus spp.*
C.R.C.A CNRS/Univ. Paul Sabatier, Toulouse, France.
Advisor: Prof Dr. Martin Giurfa.
- 2003 - 2004 MSc degree: Neurosciences (speciality: Neurosciences , Behavior and Cognition) obtained with honours: Olfactory learning and coding in the ants *Camponotus spp.*
C.R.C.A CNRS-Univ. Paul Sabatier, Toulouse, France and University of Buenos Aires, Argentina
Advisors: Prof. Dr. Martin Giurfa and Dr. Roxana Josens.
- 1999 - 2003 BSc degree: Biological Sciences, Université Paul Sabatier, Toulouse, France.

Additional Research Experience

- January to April 2009 *Subject:* Intra and extracellular recordings of giant interneurons in the cricket *Nemobius sylvestris*.
Advisors: Prof John Miller (Center for computational biology, Montana State University, USA).
- August – September 2002 *Subject:* Coding of horizontal and vertical disparity in the monkey: Data processing and electrophysiological recordings in the monkey.
Advisor: Prof Dr. Yves Trotter (CERCO CNRS/Univ. Paul Sabatier, Toulouse, France).
- July – August 2001 *Subject:* Mechanosensory learning in the bee *Apis mellifera*.
Advisor: Prof Dr. Martin Giurfa (C.R.C.A CNRS/Univ. Paul Sabatier, Toulouse, France).

Training courses

Summer school: Mechanosensors: from biological to bionic systems. Sant flui de guixols, Girona, Spain (2008). Some speakers: J.P. Miller, W. Gnatzy, F.G. Barth, J.A.C Humphey

International course for postgraduates: Sensory ecology. Lund university, Sweden (2006).
Some speakers: E. Warrant, R. Wehner, A. Kelber, F. Barth, D. Robert, B. Hansson, G. von der Emde, K. Lohmann, S. Sjölander

Journée Alfred Fessard: Imaging synaptic function. Paris (2006)

Imaging and optical microscopy: Université François Rabelais, France (2006)

Simulation and modelisation: Université François Rabelais (2006)

Publications

Dupuy F., Sandoz J.C., Giurfa M. and Josens R.. (2006) Individual olfactory learning in *Camponotus* ants. *Animal Behaviour* 72 :1081-1091.

Dupuy F., Casas J., Bagnères A.G. and Lazzari C.R. (2009) OpenFluo : A free open-source software for optophysiological data analyses. *Journal of Neurosciences Methods* 183 : 195-201.

Dupuy F., Josens R., Giurfa M. And Sandoz J.C. (2010) Calcium imaging in the ant *Camponotus fellah* reveals a conserved odour-similarity space in insects and mammals. *BMC Neuroscience* 11-28.

Seminars and workshops

Oral communications :

International Conference on Natural and Biomimetic Mechanosensing (2009, Dresden, Germany). How do crickets deal with their noisy environment to perceive attacks of predator: some clues.

XII Invertebrate sound and vibration meeting (2008, Tours, France). How do crickets deal with their noisy environment to perceive attacks of predator: some clues.

Meeting of the CILIA project: 4 oral presentations (2008: Odense, Denmark; 2008: Anvers, Belgium; 2007: Fontevraud, France; 2005: Hyères, France).

European PhD Course in Insect Biotechnology: 2 oral presentations (2007 Erice, Italy; 2006: Naples, Italy).

International course for postgraduates (2006, Lund, Sweden). Coding of mechanosensorial information in the wood cricket.

Poster presentations :

Dupuy F., Lazzari C., Sandoz J.C., Casas J. (2007) A new friendly software for calcium imaging data analysis. 8th congress of the international society for neuroethology. July 22nd to 27th, Vancouver, Canada.

Dupuy F., Josens R., Sandoz J.C., Giurfa M. (2005) Olfactory coding and learning in an invertebrate, the ant *Camponotus fellah*. 7e Colloque de la Société des neurosciences. 17 - 20 mai 2005, Lille, France. (Prize for best poster in sciences cognitives, behavioural sciences, theoretical neurosciences session).

Dupuy F., Josens R., Sandoz J.C., Giurfa M. (2004) Apprentissage olfactif associatif individuel chez la fourmi *Camponotus spp.* Colloque annuel de l'union internationale pour l'étude des insectes sociaux. September 6-9th 2004. Rennes, France.

Dupuy F., Josens R., Sandoz J.C., Giurfa M. (2004) Apprentissage olfactif associatif individuel chez la fourmi *Camponotus spp.* Cinquième Rencontre du club de neurobiologie des invertébrés. May 27-28th 2004. Montpellier, France.

Teaching

2010	Demonstrator in neurobiology practicals (6h) (to BSc students).
2009	Guest lecturer at the Montana State University (to BSc students).
2005-2006	Ethology (20h) (to BSc students).
2006-2007	Ethology (20h) (to BSc students). Animal biology (16h) (to BSc students). Ethology (10h) (to BSc students).
2007-2008	Quantitative ecology (6h) (to master students).

Supervision

2007 – 2008	Master student
2006 – 2007	Master student
2004 – 2005	BSc student
2004 – 2005	Master student

Languages

French	Native speaker
English	Good (reading, writing and speaking)
Spanish	Fluent (reading, writing and speaking)

Additional information

Member of the International society of neuroethology

Referees

Prof. Claudio Lazzari
Prof. Casas Jérôme
Prof. John Miller