Simon Carrignon

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Education

Universitat Pompeu Fabra **Barcelona, Spain**
PhD Student in Biomedicine *since Jan. 2015*
Co-evolution of trade and culture : theoretical study of the evolution of a decentralized economy driven by cultural dynamics. Focus on the Roman Empire case study. Co-direction between Barcelona Supercomputing Center and Univ. Pompeu Fabra Complex System Lab.

Université Denis Diderot Paris 7 **Paris, France**
Master Student in Logic, Philosophy, History and Sociology of Science *2011–2013*
Classes in Hist., Philo. & Socio. of Sciences. Topic of interest: Evolutionary Theory and the epistemic link btw. Evolutionary Robotics & Evolutionary Biology.

École Pratique des Hautes Études **Paris, France**
Master Student in Natural & Artificial Cognition *2009–2011*
Classes in Cognitive Sciences with courses of Neurosciences, Cognitive Psychology & Artificial Intelligence.

Université de Montréal **Montréal, Canada**
Exchange Student *2008–2009*
One year to finish the bachelor with courses in Neurosciences, Artificial Intelligence & Bioinformatics.

Université Claude Bernard Lyon 1 **Lyon, France**
License Student in Computer Science, sp. MIV *2007–2009*
License with classes in Biology, Computer Science & Bioinformatics.

Université Joseph Fourrier **Grenoble, France**
License Student in Computer Science & Biology. *2005–2007*
Two years to learn the fundamentals in Computer Science & Biology.

Master Thesis

Supervisor: N. Bredèche **LRI-INRIA-Paris Sud**
Master "Natural & Artificial Cognition", École Pratiques des Hautes Études (Paris,Fr) *Mars – Aug. 2011*

Title: Self-organization in swarm of autonomous agents: evolution of specialized behaviors.
Abstract: The goal was to investigate the emergence of speciation during environment-driven evolutionary adaptation in a population of autonomous robotic units. We address the case of sympatric speciation (occurrence of speciation without geographical isolation). We show that such speciation is possible in a robotic setup under very specific constraints with respect to mating opportunities and resources distribution.

Supervisor: F. Bouchard **CIRST-UdeM (Canada)**
Master "Logic Philosophy History & Sociology of Sciences", Univ. Paris 7 (Fr) *Apr. – Sept. 2013*

Title: Evolutionary Robotics as a model to study Biology of Evolution.
Abstract: To justify the use of Evolutionary Robotics as a model to study evolution, we first explain the general principles and history of darwinian evolution and present current approaches. After, we underline the pertinance of the application of models (as in the semantic view), and simulations of those models, to study life. To finally introduce ER and to show that, as an embodied artificial life experiment, it combines numerous advantages that make it an ideal model to study evolution.

Experience

Professional

LUTIN-Université Paris 8 **Paris, France**
Research engineer *Jan. 2010–Mar. 2012*
1 week to 3 months short contracts during which I help researchers in data processing & statistical analysis and that allow me to develop or complete:

- ACACIA Coop: a Netlogo program used to explore the worth of altruistic behaviors in swarm of autonomous agent (@git)
- Pedestrian: a Netlogo program which allow user to test agent based pedestrian models in real map (@git).

Université Paris Dauphine **Paris, France**
Junior Lecturer (Chargé de cours) *Sept. 2011–Jan. 2012*
Course for 2nd yr. university students. Total amount of teaching: 36hr.
Elementary notions of algorithmic and databases manipulation (w/ Foxpro).

Université Paris 8 **Paris, France**
Junior Lecturer (Chargé de cours) *Sept. 2010–Jan. 2012*
Course for undergraduate students (License Students). Total amount of teaching: 144hr.
C2I classes– gives the fundamentals to use the office tools and to understand computers.

Internship

Supervisor: E. Zibetti (CHArt-Univ. P8) **Paris, France**
Human Heuristic & Autonomous Robot *Sept. 2009–Jan. 2011*
Development of a Java API to control a Khepera III robot via bluetooth linked with autonomous controller build from Human Heuristics found after the analysis of real experiments.

Supervisor: A. Green (Dept. de Physio.-UdeM) **Montréal, Canada**
Controler for physiological experiments *May 2009–Aug. 2009*
Graphical interface and communication's tools to control and synchronize an experimental setup designed to make physiological experiments on the monkey.

Supervisor: V. Daubin (LBBE-UCBL) **Lyon, France**
Phylogenetic, Bacteries & LGT *May 2008–Aug. 2008*
C++ implementation of an algorithm used to adjust the species tree with the genetic tree including duplication and LGT.

Summer School & Workshop

1st DACAS International Workshop **Manchester, England**
Data And Cities As Complex Adaptive Systems *Feb 2016*
Development of an innovative and cross-disciplinary set of tools to study cities as Complex Adaptive Systems by taking into account wide range of data sources and by integrating the interactions between 'hard' infrastructure with economic, ecological and social systems. Laureate of one of the bursary offered by the Manchester Metropolitan University.

Scientific World Conception Summer School **Vienna, Austria**
The Computational turn: Simulation in Science. *July 2015*
Reflexions and lectures about the epistemological consequences of the introduction of computational methods and simulation in science and their relation with traditional experiment ; how it has greatly expanding the scope of what can be studied in micro-economic systems, high energy physics as well as the challenge such methods face in natural and social sciences.

Languages

French: Mother Tongue
English: Good *Good experience in academic written & spoken English*
Spanish: Intermediate *Daily practice*

Computer skills

OS: Linux (Ubuntu/Debian end & admin user), Windows XP, Seven, Vista.

Publishing: LaTeX/ LuaTeX,Open Office & Microsoft Office Writers.
Programming: C/C++, R, Java, Bash, Python/Perl,Php.
Statistical analysis/Visualing: R (very good skills),Excel,Matlab.

Interests

Among other things, I used to have a lot of associative activities. Mostly activities which go around music but also a bunch of works about sciences communication. I like reading, travel around the world and from time to time, dive into the Linux CLI.