Maxime Folschette

3rd Year PhD Student in Bioinformatics

Position: IRCCyN (Nantes, France)
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EDUCATION

Since Oct. 2011 — **PhD student in bioinformatics**, MENRT (ministry grant)

- *Team:* **MeForBio** (Formal Methods for Bioinformatics)
- *Supervisors:* **Olivier Roux** (advisor) & **Morgan Magnin** (co-supervisor)
- *Subject:* **Algebraic modeling of multi-scale evolution and dynamics of biological regulatory networks**
- *Keywords:* Formal Methods, Biological Regulatory Networks, Parameters Inference
- *Expected defense date:* End of September 2014

École Centrale de Nantes (Nantes, France) — Laboratory: IRCCyN — Team: MeForBio

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2011 — Double diploma at the **École Centrale de Nantes** engineering school:

2008–2011
- **Master thesis** in Automatics, Production Systems and Real Time
  Subject: **Applying the Hoare logic to gene regulatory networks**

2010–2011
- **Engineering diploma** *Options:* **Computer Science** and **Research & Development**

École Centrale de Nantes (Nantes, France)

2006–2008 — **Classes Préparatoires aux Grandes Écoles** (MPSI/MP), intensive courses in maths and sciences

June 2006 — **Baccalauréat S**, equiv. A levels — *Lycée Jacques Amyot (Melun, France)*

PEER-REVIEWED PUBLICATIONS

CONFERENCES AND WORKSHOPS

- **M. Folschette**, L. Paulevé, M. Magnin and O. Roux: **Under-approximation of reachability in multivalued asynchronous networks**, in: *Proceedings of the fourth International Workshop on Interactions between Computer Science and Biology*, editors: E. Merelli and A. Troina, *Electronic Notes in Theoretical Computer Science*, Vol. 299, 33–51, Springer Berlin Heidelberg, June 2013, DOI 10.1016/j.entcs.2013.11.004.

- **M. Folschette**, L. Paulevé, K. Inoue, M. Magnin and O. Roux: **Concretizing the process hitting into biological regulatory networks**, in: *Computational Methods in Systems Biology*, editors: D. Gilbert and M. Heiner, 166–186, Springer Berlin Heidelberg, October 2012, DOI 10.1007/978-3-642-33636-2_11. Acceptance rate: 37%.

- **M. Folschette**, L. Paulevé, K. Inoue, M. Magnin and O. Roux: **Abducing Biological Regulatory Networks from Process Hitting models**, in: *ECML-PKDD 2012 Workshop on Learning and Discovery in Symbolic Systems Biology*, editors: O. Ray and K. Inoue, 24–35, September 2012.

THEMATIC SCHOOLS

- **M. Folschette**: **Introduction to the Process Hitting and inference of its underlying Biological Regulatory Network**, *Advances in Systems and Synthetic Biology*, student session, 43–52, March 2013.

- **M. Folschette**: **Inferring Biological Regulatory Networks from Process Hitting models**, *Modeling and Verifying Parallel Processes*, student session, 91–97, December 2012.

PREVIOUS RESEARCH AREA: NUCLEAR FUSION

- A. Murari, D. Mazon, M. Gelfusa, **M. Folschette**, T. Quilichini and EFDA-JET contributors: **Residual analysis of the equilibrium reconstruction quality on JET**, *Nuclear Fusion*, Vol. 51, No. 5, April 2011, DOI 10.1088/0029-5515/51/5/053012.

TEACHING & MENTORING

Since 2013 **Co-supervision of Master 2 student** Emna Ben Abdallah (50% with Olivier Roux)
- *Subject:* **Implementation of biological networks analysis tools with logic programming**

Since 2011 Teaching and supervision of engineering students:
- **Teaching for L3 and M1 engineering students** (180h of lessons and practicals) in Algorithmics (C language), Object-oriented programming (Java) and Databases (SQL)
- **Co-supervision** (33~50%) **of M2 engineering student projects** in computer science (21h)

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WORK & RESEARCH EXPERIENCE

March–May 2012 **PhD internship** at the **National Institute of Informatics** of Tokyo, in the **Inoue Laboratory**
Subject: Inferring a biological regulatory network from a process hitting model using ASP
National Institute of Informatics (Tokyo, Japan) — Team: Inoue Laboraoty

April–Sept. 2011 **Master internship** in the **MeForBio** team at the **IRCCyN**
Application of the Master subject in Coq, OCaml and Prolog *IRCCyN (Nantes, France)*

May–August 2010 **Mid-term studies internship** in the **Diagnostics** team at **EFDA-JET** (nuclear fusion research)
Subject: Statistical processing on magnetic coils measurements to bring out modeling flaws
EFDA-JET: Joint European Torus — Culham Science Centre (Abingdon, UK)

PERSONAL SKILLS

Computing **Languages:** OCaml, ASP, Coq, C, C++, Java, Maple, Matlab, SQL, Python, QBasic
Other skills: Latex, Linux command line

Languages **French:** Native speaker
English: Fairly fluent, TOEIC with 870 points in 2009