Vincent NOËL
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Birth date : 08/12/1983

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PhD in Applied Mathematics at Rennes 1 University

Formation

2008-2012	**PhD in Applied Mathematics** Topic : Reduced and hybrid models of biochemical reactions networks - Application to cell cycle modelization. PhD Advisor : Pr. Ovidiu Radulescu.
2006-2008	**Master degree in Computational Biology (Valedictorian, Université de Rennes 1)**
2004-2006	**1^{st} year of Master degree in Computer Science (Université de Rennes 1)**
2003-2004	**Bachelor degree in Computer Science (Université de Rennes 1)**
2001-2003	**Bachelor of technology degree, speciality in Embedded Systems (Université de La Rochelle)**
2000-2001	**Scientific Baccalaureate, speciality in Physics and Chemistry (Institution Notre Dame, Le Mans)**

Research fields

Computational biology, system biology, model design, model reduction, hybrid models

Experience

2009 (3 months) International PhD mobility program	**National Centre for Biological Science, Bangalore** Modelling TGFβ-dependent NF-κB response in cervical cancer cell lines.
2008 (6 months) Master Internship	**Symbiose Team, IRISA, Rennes** Development of a reduction algorithm for biological models, applied to the signalisation module of NF-κB.
2007 (3 months) Master Internship	**CNRS UMR 6026, Rennes** Development of a software for predicting transcription factors binding sites, using phylogenetic footprinting.
2003 (3 months) B-Tech Internship	**EIGSI, La Rochelle** Development of a numerical regulation system.

Publications

V. Noël, S. Vakulenko, O. Radulescu, A hybrid mammalian cell cycle model, *Electronic Proceedings in Theoretical Computer Science 125 : 68-83, HSB 2013, Taormina, doi :10.4204/EPTCS.125.5*

O. Radulescu, D. Grigoriev, V. Noël, S. Vakulenko, Tropicalization and Tropical equilibration for chemical kinetics *In Press, AMS Contemporary Mathematics, Tropical 2012, Moscow*

O. Radulescu, A. N. Gorban, A. Zinovyev, V. Noël, Reduction of dynamical biochemical reaction networks in computational biology. *Frontiers in Bioinformatics and Computational Biology 3, 00131, doi :10.3389/fgene.2012.00131*

V. Noël, D. Grigoriev, S. Vakulenko, O. Radulescu, Hybrid models of the cell cycle molecular machinery. *Electronic Proceedings in Theoretical Computer Science 92 : 88-105, HSB 2012, Newcastle*

V. Noël, D. Grigoriev, S. Vakulenko, O. Radulescu, Tropical geometries and dynamics of biochemical networks. Application to hybrid cell cycle models. *Electronic Notes in Theoretical Computer Science 284, pp. 75-91, doi :10.1016/j.entcs.2012.05.016, SASB 2011, Venezia*

V. Noël, S. Vakulenko, O. Radulescu, Algorithm for Identification of Piecewise Smooth Hybrid Systems : Application to Eukaryotic Cell Cycle Regulation, *Lecture Notes in Computer Science 6833, pp. 225-236, doi :10.1007/978-3-642-23038-7 20, WABI 2011, Saakbrücken*

V. Noël, S. Vakulenko, O. Radulescu, Piecewise smooth hybrid systems as models for networks in molecular biology, *Proceedings of JOBIM 2010, Montpellier*

Conferences and Seminars

September 2013	**Taormina, Workshop Hybrid Systems and Biology** A hybrid mammalian cell cycle model (Talk).
July 2012	**Centre Européen de Calcul Atomique et Moléculaire, Lausanne, Workshop Towards in silico biological cell : Bridging experiments and simulations** Piecewise smooth hybrid systems as models for networks in molecular biology (Poster).
September 2011	**Max Planck - Institute für Informatics, Saarbrücken, Workshop on Algorithm in Bioinformatics** Piecewise smooth hybrid systems as models for networks in molecular biology (Talk).
March 2011	**Cold Spring Harbour Laboratory, Computational Cell Biology Meeting** Piecewise smooth hybrid systems as models for networks in molecular biology (Poster).
September 2010	**Montpellier, Journées ouvertes en Biologie, Informatique et Mathématiques** Piecewise smooth hybrid systems as models for biochemical reaction networks (Talk).

Conferences and Seminars

May 2010	**Evry, Modélisation des systèmes biologiques complexes dans le contexte de la génomique, Thematic research school** Modelling TGFβ-dependent NF-κB response in cervical cancer cell lines. (Poster).
July 2009	**Max Plank - Institute for Genetics - Berlin, MPI-CNRS Meeting - Robustness by dynamical transitions** Modelling TGFβ-dependent NF-κB response in cervical cancer cell lines. (Talk).

Skills

Computer Science	Programming (C/C++, Java, Python, Assembly, ...) Algorithmic, Data structure, Parallelization, Systems
Biology	System Biology (Modelization of signalling pathways and cell cycle) Computational biology (Sequences Algorithmics, Phylogenetics) Cell Biology
Mathematics	Mathematical modelling of biological systems Differential and hybrid dynamical systems, Tropical analysis Nonlinear Optimisation Statistics (Classification and Machine learning) Game theory

Languages

- **French :** Mother tongue
- **English :** Fluent
- **Spanish :** Basics

Interests

- Music (Piano, Guitar)
- Sports (Cyclism, Tennis)
- Games (Poker, Backgammon, Chess)