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Birth date: 17/05/1991
French citizen

## Current Position

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| Since sept. 2015 | **PHD student under the co-supervision of Nathalie Bertrand at IRISA Rennes (Team SUMO)** and of **Serge Haddad at ENS Cachan, LSV (team MExICo)**, on *Controlling information in probabilistic systems.* |

## Education

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| 2011-2015 | **Student at ENS of Cachan** | |
| | 2014-2015 | **ARPE (Year long internship)** 6 months under the supervision of Gilles Geeraerts on Priced Timed Games and 4 months with Nathalie Bertrand and Serge Haddad on Diagnosis of Infinite State Probabilistic Systems |
| | 2013-2014 | **Master's degree (M2) in Computer Science** *with high distinction*, Parisian Master for Research in Computer Science (MPRI) |
| | | **Master internship supervised by Nathalie Bertrand and Serge Haddad** IRISA, Rennes *Diagnosis and Predictability of Probabilistic Systems* |
| | 2012-2013 | **Master 1 in Computer Science** MPRI |
| | | **Master internship supervised by Nir Piterman** University of Leicester *Algorithm on p-Automata* |
| | 2011-2012 | **B.Sc (L3) in Computer Science** *with high Distinction* |
| | | **Summer internship supervised by Hugo Gimbert** Team Méthodes Formelles in LaBRI, Bordeau *The Emptiness Problem of Probabilistic Automata* |
| 2009-2011 | **Preparation for the competitive entrance examinations to French Engineering Schools** *Intensive two-year university-level programme*, Lycée Saint-Louis in Paris | |
| 2009 | **Baccalaureat with Scientific orientation** | |

## Teaching

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| 2017-2018 | **Practical Sessions for Initiation to Programming in Java (part 1) (36h)** UFR of Computer science in Paris Diderot |
| 2017-2018 | **Tutorials for the "Languages and Automata" class (24h)** UFR of Computer science in Paris Diderot |
| 2016-2017 | **Tutorials and Pratical Sessions for Algorithmic lessons using Python (48h)** UFR of Computer science in Paris Diderot |
| 2015-2016 | **Tutorials and Practical Sessions for Initiation to Programming in Java (part 2) (48h)** UFR of Computer science in Paris Diderot |
| 2015-2017 | **Practical Sessions for Java programming (28h)** UFR of Computer science in Paris Diderot |

## PhD Study Activities

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| Aug-Sep. 2017 | **Real-Time School (ETR)** Télécom ParisTech |
| May-June 2016 | **Organisation of the Paris-Montagne festival (science festival for middle school students)** ENS Paris |
| May 2016 | **Digicosme Spring school on Hybrid Systems** ENSTA Paristech |
| October 2015 | **Formation on public speaking** University Rennes 1 |
| September 2015 | **Cycle of lectures on scientific assessment** University Rennes 1 |
| August 2016 | **Real-Time School (ETR)** INRIA Rennes |

## Conference and Journal refeering

FoSSaCS 2018, WODES 2018, LICS 2018, CDC 2018
Transactions on Automatic Control (TAC)
Journal of Critical Computer-Based Systems (IJCCBS)
Discrete Event Dynamic Systems (DEDS)

## Computer skills

OCaml, Java, Pascal, Scheme, Prolog, LaTeX

## Languages

French: mother tongue    –    English: advanced, written and spoken    –    Chinese: beginner

## Award

Best Young Researcher Paper Award, MSR'17

## Publications

### Articles in international journals with reading committee

[1]   N. Bertrand, S. Haddad, and E. Lefaucheux. A Tale of Two Diagnoses in Probabilistic Systems. *Information and Computation*, 2018. To appear.

[2]   E. Fabre, L. Hélouët, E. Lefaucheux, and H. Marchand. Diagnosability of repairable faults. *Discrete Event Dynamic Systems*, 28(2):183–213, 2018.

### International conferences with selection committee

[3]   E. Lefaucheux, A. Giua, and C. Seatzu. Basis coverability graph for partially observable Petri nets with application to diagnosability analysis. In *Proceedings of PETRI NETS'18*. Volume 10877. In LNCS. Springer, 2018, pages 164–183.

[4]   B. Bérard, S. Haddad, and E. Lefaucheux. Probabilistic Disclosure: Maximisation vs. Minimisation. In *Proceedings of FSTTCS'17*. Volume 93. In LIPIcs. Leibniz-Zentrum für Informatik, 2017, 13:1–13:14.

[5]   N. Bertrand, S. Haddad, and E. Lefaucheux. Diagnostic et contrôle de la dégradation des systèmes probabilistes. In *Proceedings of MSR'17*. HAL, 2017.

[6]   N. Bertrand, S. Haddad, and E. Lefaucheux. Accurate approximate diagnosability of stochastic systems. In *Proceedings of LATA'16*. Volume 9618. In LNCS. Springer, 2016, pages 549–561.

[7]   E. Fabre, L. Hélouët, E. Lefaucheux, and H. Marchand. Diagnosability of repairable faults. In *Proceedings of WODES'16*. IEEE, 2016, pages 230–236.

[8]   N. Bertrand, S. Haddad, and E. Lefaucheux. Diagnosis in infinite-state probabilistic systems. In *Proceedings of CONCUR'16*. Volume 59. In LIPIcs. Leibniz-Zentrum für Informatik, 2016, 37:1–37:14.

[9]   T. Brihaye, G. Geeraerts, A. Haddad, E. Lefaucheux, and B. Monmege. Simple Priced Timed Games Are Not That Simple. In *Proceedings of the 35th Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'15)*. Volume 45. In LIPIcs. Leibniz-Zentrum für Informatik, 2015, pages 278–292.

[10]   N. Bertrand, S. Haddad, and E. Lefaucheux. Foundation of diagnosis and predictability in probabilistic systems. In *Proceedings of FSTTCS'14*. Volume 29. In LIPIcs. Leibniz-Zentrum für Informatik, 2014, pages 417–429.

### Internship reports

[11]   E. Lefaucheux. Détection de fautes dans les systèmes probabilistes. Rapport de Master. Master Parisien de Recherche en Informatique, Paris, France, 2014.

[12]   E. Lefaucheux. Emptiness Problem for p-Automata. Master 1 Internship Report. Master Parisien de Recherche en Informatique, Paris, France, 2013.

[13]   E. Lefaucheux. Problèmes décidables et indécidables pour les automates probabilistes. Licence 3 Internship Report. ENS de Cachan, 2012.

# Given talks

[1] PN'18 (Bratislava). Basis coverability graph for partially observable Petri nets with application to diagnosability analysis. June 2017.

[2] FSTTCS'17 (Kanpur). Probabilistic disclosure: maximisation vs. minimisation. December 2017.

[3] MSR'17 (Marseilles). Diagnostic et contrôle de la dégradation des systèmes probabilistes. November 2017.

[4] Highlights Conference (Brussels). Simple priced timed games are not that simple. September 2016.

[5] Concur'16 (Quebec City). Diagnosis in infinite-state probabilistic systems. August 2016.

[6] GT Vérif (Paris). Diagnosis in infinite-state probabilistic systems. June 2016.

[7] MeFoSyLoMa (Paris). Accurate approximate diagnosability of stochastic systems. March 2016.

[8] Lata'16 (Prague). Accurate approximate diagnosability of stochastic systems. March 2016.

[9] Fifth Cassting Meeting (Brussels). Negatively-priced timed games. May 2015.

[10] GT Vérif (Paris). Specification and verification of diagnosis and predictability in probabilistic systems. June 2014.