Engel Lefaucheux
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Birth date: 17/05/1991
French citizen

Current Position

Since oct. 2018	**Post-doctoral researcher** under the supervision of Joël Ouaknine in the l'Max-Planck Institute for Software Systems of Saarbrücken.

Education

2015-2018	**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.*
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

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

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

CDC 2019, VMCAI 2019, 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)
Innovations in Systems and Software Engineering (ISSE)
Mathematical Reviews (MR)

Computer skills

Python, 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*. 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.

[3] N. Bertrand, S. Haddad, and E. Lefaucheux. Diagnosis and Degradation Control for Probabilistic Systems. *Discrete Event Dynamic Systems*. To appear.

International conferences with selection committee

[4] J. D'Costa, E. Lefaucheux, J. Ouaknine, and J. Worrell. How Fast Can You Escape a Compact Polytope? In *Proceedings of STACS'20*. To appear, 2020.

[5] N. Fijalkow, E. Lefaucheux, P. Ohlmann, J. Ouaknine, A. Pouly, and J. Worrell. On the Monniaux Problem in Abstract Interpretation. In *Proceedings of SAS'19*. To appear, 2019.

[6] 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.

[7] 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.

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

[9] 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.

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

[11] 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.

[12] 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.

[13] 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.