

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

## Current Position

Since oct. 2018	<b>Post-doctoral researcher</b> under the supervision of <a href="#">Joël Ouaknine</a> in the l' <a href="#">Max-Planck Institute for Software Systems</a> of Saarbrücken.
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## Education

2015-2018	<b>PHD student</b> under the co-supervision of <a href="#">Nathalie Bertrand</a> at <a href="#">IRISA Rennes (Team SUMO)</a> and of <a href="#">Serge Haddad</a> at ENS Cachan, <a href="#">LSV</a> (team <a href="#">MExICo</a> ), on <i>Controlling information in probabilistic systems</i> .
2011-2015	<b>Student at ENS of Cachan</b>
2014-2015	<b>ARPE (Year long internship)</b> 6 months under the supervision of <a href="#">Gilles Geeraerts</a> on Priced Timed Games and 4 months with <a href="#">Nathalie Bertrand</a> and <a href="#">Serge Haddad</a> on Diagnosis of Infinite State Probabilistic Systems
2013-2014	<b>Master's degree (M2) in Computer Science</b> with high distinction, <a href="#">Parisian Master for Research in Computer Science (MPRI)</a> Master internship supervised by <a href="#">Nathalie Bertrand</a> and <a href="#">Serge Haddad</a> IRISA, Rennes <i>Diagnosis and Predictability of Probabilistic Systems</i>
2012-2013	<b>Master 1 in Computer Science</b> MPRI Master internship supervised by <a href="#">Nir Piterman</a> University of Leicester <i>Algorithm on p-Automata</i>
2011-2012	<b>B.Sc (L3) in Computer Science</b> with high Distinction Summer internship supervised by <a href="#">Hugo Gimbert</a> Team Méthodes Formelles in LaBRI, Bordeaux <i>The Emptiness Problem of Probabilistic Automata</i>
2009-2011	<b>Preparation for the competitive entrance examinations to French Engineering Schools</b> <i>Intensive two-year university-level programme</i> , Lycée Saint-Louis in Paris
2009	<b>Baccalaureat with Scientific orientation</b>

## Teaching

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

## PhD Study Activities

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

## Conference and Journal refereeing

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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

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OCaml, Java, Pascal, Scheme, Prolog, L<sup>A</sup>T<sub>E</sub>X

## Languages

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

## Award

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Best Young Researcher Paper Award, MSR'17

## Publications

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### Articles in international journals with reading committee

- [1] N. Bertrand, S. Haddad, and E. Lefauchaux. A Tale of Two Diagnoses in Probabilistic Systems. *Information and Computation*. To appear.
- [2] E. Fabre, L. Hélouët, E. Lefauchaux, and H. Marchand. Diagnosability of repairable faults. *Discrete Event Dynamic Systems*, 28(2):183–213, 2018.
- [3] N. Bertrand, S. Haddad, and E. Lefauchaux. Diagnosis and Degradation Control for Probabilistic Systems. *Discrete Event Dynamic Systems*. To appear.

### International conferences with selection committee

- [4] J. D'Costa, E. Lefauchaux, 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. Lefauchaux, 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. Lefauchaux, 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. Lefauchaux. 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. Lefauchaux. Diagnostic et contrôle de la dégradation des systèmes probabilistes. In *Proceedings of MSR'17*. HAL, 2017.
- [9] N. Bertrand, S. Haddad, and E. Lefauchaux. 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. Lefauchaux, and H. Marchand. Diagnosability of repairable faults. In *Proceedings of WODES'16*. IEEE, 2016, pages 230–236.
- [11] N. Bertrand, S. Haddad, and E. Lefauchaux. 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. Lefauchaux, 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. Lefauchaux. 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.