

Nathalie Bertrand

Inria Researcher

Inria, Campus Universitaire de Beaulieu

35042 Rennes Cedex, France

☎ +33 2 99 84 22 81

✉ nathalie.bertrand@inria.fr

📄 people.rennes.inria.fr/Nathalie.Bertrand

Work Experience and Education

since 2019 **Head of SUMO team.**

since 2007 **Inria researcher**, *Inria Rennes.*

nov. 2015 Habilitation

nov. 2020 Promoted senior researcher (*Directrice de recherche*)

2006-2007 **Post-doc**, *TU Dresden.*

supervised by Christel Baier

2003–2006 **PhD in Computer Science**, *Laboratoire Spécification et Vérification*, ENS Cachan.

supervised by Philippe Schnoebelen

2003 **Agrégation in Mathematics.**

2002 **Masters in Computer Science**, *Université Paris 7*, Algorithmics.

Teaching

At University Rennes 1 and ENS Rennes

since 2021 **Agreg info**, *ENS Rennes*, Cours, leçons et oraux blancs.

2009-2021 **Agreg maths option info**, *ENS Rennes*, Leçons et oraux blancs.

2014-2020 **L3**, *ENS Rennes*, Algorithmique 2.

2010-2013 **Agreg maths option info**, *ENS Rennes*, Cours sur les Langages formels.

2009-2014 **M2**, *University Rennes 1*, Advanced verification techniques, with Sophie Pinchinat.

At Epita Rennes

2018-2019 **2nd year**, *Epita Rennes*, 1-week seminar on Theory of regular languages (THLR).

Young researchers schools

EJCIM 2015 *Contrôle des modèles probabilistes partiellement observables*, Orléans (FR), avec Serge Haddad.

MOVEP 2016 *Control of probabilistic systems under partial observation*, Genova (IT).

Students

PhD students

- Bastien Thomas, co-supervised with Josef Widder, since oct 2019
- Suman Sadhukhan, co-supervised with Nicolas Markey and Ocan Sankur, since oct 2018
- Anirban Majumdar, co-supervised with Patricia Bouyer, since sept 2018
- Engel Lefauchaux, co-supervised with Serge Haddad, sept 2015-sept 2018

- Paulin Fournier, co-supervised with Thierry Jéron, sept 2012-nov 2015
- Amélie Stainer, co-supervised with Thierry Jéron, oct 2010-nov 2013

Masters students

- Lucie Guillou, may-july 2021
- Bastien Thomas, feb-july 2019
- Aina Toky Rasoamanana, co-supervised with Nicolas Markey, feb-july 2017
- Engel Lefauchaux, co-supervised with Serge Haddad, apr-july 2014
- Aminatou Mohamadou, co-supervised with Paulin Fournier, may-july 2014
- Paulin Fournier, feb-july 2012
- Amélie Stainer, co-supervised with Thierry Jéron, feb-july 2010

Undergraduate students

- Hugo Francon, École Normale Supérieure de Rennes, co-supervised with Nicolas Markey, may-july 2021
- A.R. Balasubramanian, Chennai Mathematical Institute, co-supervised with Nicolas Markey, may-july 2017
- Vincent Aubry, École Normale Supérieure, co-supervised with Ocan Sankur, june-july 2016
- Miheer Dewaskar, Chennai Mathematical Institute, co-supervised with Blaise Genest, may-july 2015
- Loïs Vanhée, École Normale Supérieure de Rennes, co-supervised with Sébastien Gambus, july-aug 2010

Visiting students

- Shibashis Guha, IIT Dehli, jan-feb 2013

PhD and Habilitation defense committees

Habilitation (HDR)

- Barbara Fila - july 2021. Rennes.

PhD

- Léo Exibard - september 2021. Université Libre de Bruxelles (BE) and Marseille.
- Zeinab Ganjei - april 2021. Linköping University (SE).
- Ilina Stoilkovska - **reviewer** - march 2021 (online). TU Wien (AT).
- Dimitri Antakly - july 2020 (online). LS2N, Nantes.
- Stephan Plassart - june 2020 (online). LIG & Inria, Grenoble.
- Marion Hallet - may 2020 (online). Université Libre de Bruxelles (BE).
- Damien Busatto-Gaston - dec 2019. LIS, Aix-Marseille Université.
- Philipp Schlehuber-Caissier - dec 2018. ISIR, Sorbonne Université.
- Ľuboš Korenčiak - **reviewer** - apr 2018. Masaryk University (CZ).
- Othmane Rezine - jan 2018. Uppsala University (SE).
- Thomas Geffroy - dec 2017. LaBRI, Bordeaux.
- Nicolas David - oct 2017. LN2S, Nantes.
- Ayman Aljarbouh - sept 2017. IRISA, Rennes.
- Daniel Stan - **reviewer** - march 2017. ENS Cachan.
- Nathanaël Fijalkow - oct 2015. LIAFA, Paris.

- Aaron Bohy - may 2014. Mons University (BE).
- Youssouf Oualhadj - dec 2012. LaBRI, Bordeaux.

Invited talks

- *Concurrent games with arbitrary many players* 45th International Symposium on Mathematical Foundations of Computer Science (MFCS 2020), Aug. 2020, online.
- *Modeling and verifying randomized fault-tolerant distributed algorithms* 15th International Federated Conference on Distributed Computing Techniques (DisCoTec 2020), Jun. 2020, online.
- *When are dense-time stochastic systems tameable?* 17th International Conference on Formal Modeling and Analysis of Timed Systems (Formats'19), August 2019, Amsterdam, NL
- *Controlling a population of identical automata* 20th anniversary of LSV, May 2017, Cachan, FR
- *Controlling probabilistic systems under partial observation: a verification perspective*, Annual meeting of GDR Informatique Mathématique, March 2017, Montpellier, FR
- *Diagnosis in Infinite-State Probabilistic Systems*, Workshop on Verification of Infinite-State Systems (Infinity 2016), Aug. 2016, Singapore
- *Fault diagnosis for Probabilistic Systems: a semantical and algorithmic journey*, Conference on the Mathematical Foundations of Programming Semantics (MFPS 2016), May 2016, Pittsburgh, PA, USA
- *Fault diagnosis for Probabilistic Systems*, Colloque sur la Modélisation des systèmes réactifs (MSR 2015), Nov. 2015, Nancy, FR
- *Parameterized verification of probabilistic selective broadcast networks*, International Symposium on Games, Automata, Logics and Formal Verification (Gandalf 2015), Sept. 2015, Genova, IT
- *Diagnosis of Probabilistic Systems* DIMAP logic day, June 2015, Warwick, UK
- *Probabilistic model checking from finite to parameterized systems* Annual meeting of GT verif, June 2013, Cachan, FR
- *Determinizing timed automata* QuantLA seminar, Dec. 2012, Dresden, DE

Visits and seminars

Long visits abroad

- Simons Institute for Theoretical Computer Science, Berkeley, CA, USA - 1 month stay - oct 2016
- Université de Mons, Belgium - 2 month stay - jan and june 2014
- Liverpool University, England - 9 month stay - nov 2011 to july 2012

Invitation to 1-week seminars

- Open problems in Concurrency Theory - Vienna, june 2017
- Uncertainty in Computation - Simons Institute Berkeley, oct 2016
- Automata logic and games - Singapore, aug 2016
- Trends and Challenges in Quantitative Verification - Mysore, feb 2016
- Non-zero sum games and control - Dagstuhl, feb 2015
- Quantitative models - Dagstuhl jan 2010

Participation to projects

Current projects

- 2020-2022 **QuaSL**, *Participant*, Inria Associated team with University of Napoli.
- 2018-2020 **Equave**, *Participant*, Inria Associated team with IIT Mumbai.

Past projects

- 2016-2018 **QuantProb**, *Principal Investigator*, Inria Associated team with TU Dresden, Quantitative analysis of non-standard properties for probabilistic models.
- 2014-2018 **Stoch-MC**, *Participant*, ANR project, Scalable model checking for stochastic models.
- 2014-2016 **AVerTS**, *Participant*, Indo-French project, Algorithmic Verification of Real-Time Systems.
- 2013-2015 **DISTOL**, *Participant*, Inria Associated team with Chennai Mathematical Institute, DiStributed and StOchastic systems, Logic.
- 2012-2015 **VACSIM**, *Participant*, ANR project, Validation de la commande des systèmes critiques par couplage simulation et méthodes d'analyse formelle.
- 2011-2014 **ImpRO**, *Participant*, ANR project, Implementability and Robustness of Timed Systems.
- 2009-2011 **STP**, *Principal Investigator*, Tournesol bilateral project with Mons University (BE), Probabilistic Timed Systems.
- 2008-2010 **PIPS**, *Principal Investigator*, Procope bilateral project with TU Dresden, Partial Information Probabilistic Systems.
- 2008-2011 **TESTEC**, *Participant*, ANR project, TEst des Systèmes Temps réel Embarqués Critiques.
- 2008-2011 **COMBEST**, *Participant*.
- 2006-2007 **VOSS II**, *Participant*.
- 2003-2006 **ACI Persée**, *Participant*.

Scientific event committees

Steering committees

- Steering committee member of the young researcher school MOVEP (2017-)
- Steering committee member of the international conference QEST (2012-2015)
- Steering committee member of the French working group on verification (2014-2017)

Program committees

Program committee co-chair of **Formats'20**, Syncop'20, **QEST'17**, QAPL'15 and QAPL'14.

Program committee member of the international events

2022 Concur'22

2021 FoSSaCS'21, ICALP'21, GandALF'21

2020 FORTE'20, Highlights'20;

2019 MFCS'19, RP'19, TIME'19;

2018 FoSSaCS'18, ICALP'18, Highlights'18, RP'18, MoRe'18;

2017 LICS'17, FCT'17, MSR'17;

2016 STACS'16, TACAS'16, Concur'16, QEST'16;

2015 TACAS'15, Formats'15, QEST'15, ICLA'15, QAPL'15;

2014 TACAS'14, Infinity'14, QEST'14, QAPL'14;

2013 MFCS'13, QEST'13, QAPL'13, MSR'13;

2012 QEST'12, SYNT'12, QAPL'12;

2011 QAPL'11;
2010 QUEST'10, QAPL'10, EXPRESS'10.

Award committees

- Jury member for CONCUR Test-of-Time award 2021

Editorial board

- Member of JLAMP editorial board since July 2021

Academic Duties

since 2019 **Head of the Inria project-team SUMO.**

since 2017 **Co-head of the French working group on verification.**

2016-2019 **Nominated member of CNU27 (*Conseil National des Universités, section 27 Informatique*).**

2012-2015 **Member and scientific secretary of Gilles Kahn PhD award committee.**

Hiring committees Member of the following committees

- ENS Rennes in 2011 (MCF), 2019 (AGPR), 2021 (PR)
- University Rennes 1 in 2021 (PR)
- University Nancy Lorraine in 2021 (MCF)
- University Paris XII in 2015 (MCF); University Paris Est Créteil in 2018 (MCF) and 2020 (MCF)
- University Paris in 2020 (MCF)
- Inria Rennes (CRCN) in 2013, 2016, 2018 and 2021

Evaluation HCERES expert for Verimag lab in Jan. 2020

Publications

My publications are available at the following address:

<http://people.rennes.inria.fr/Nathalie.Bertrand/publis.html>

Note: in my research area, authors are usually listed in alphabetical order.

Edited proceedings

- Nathalie Bertrand and Luca Bortolussi. *Proceedings of the 14th International Conference on Quantitative Evaluation of Systems (QEST 2017)*, volume 10503 of Lecture Notes in Computer Science, Springer, 2017.
- Nathalie Bertrand and Mirco Tribastone. *Proceedings of the 13th International Workshop on Quantitative Aspects of Programming Languages and Systems (QAPL 2015)*, volume 194 of Electronic Proceedings in Theoretical Computer Science, 2015.

- Nathalie Bertrand and Luca Bortolussi. *Proceedings of the 12th International Workshop on Quantitative Aspects of Programming Languages and Systems (QAPL 2014)*, volume 154 of Electronic Proceedings in Theoretical Computer Science, 2014.

Chapters in books

- Nathalie Bertrand and Serge Haddad. *Contrôle des modèles probabilistes partiellement observables*, in Informatique Mathématique : Une photographie en 2015, CNRS Éditions, 2015.

International journals

- Nathalie Bertrand. *Model checking randomized distributed algorithms*. SIGLOG News 7(1), pages 35-45, 2020.
- Nathalie Bertrand, Serge Haddad and Engel Lefauchaux. *A Tale of Two Diagnoses in Probabilistic Systems*. Information and Computation 269, 2019.
- Nathalie Bertrand, Miheer Dewaskar, Blaise Genest, Hugo Gimbert and Adwait Amit Godbole. *Controlling a population*. Logical Methods in Computer Science 15(3), 2019.
- Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Pierre Carlier. *When are stochastic transition systems tameable?* Journal of Logic and Algebraic Methods in Programming 99, pages 41-96, 2018.
- Nathalie Bertrand, Blaise Genest and Hugo Gimbert. *Qualitative Determinacy and Decidability of Stochastic Games with Signals*. Journal of the ACM 64(5), pages 33:1-33:48, 2017.
- Aaron Bohy, Véronique Bruyère, Jean-François Raskin, and Nathalie Bertrand. *Symblicit algorithms for mean-payoff and shortest path in monotonic Markov decision processes*. Acta Informatica, 54(6), pages 545-587, 2017.
- Nathalie Bertrand, Amélie Stainer, Thierry Jéron and Moez Krichen, *A game approach to determinize timed automata*. Formal Methods in System Design 46(1), pages 42-80, 2015.
- Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye, Quentin Menet, Christel Baier, Marcus Gröber and Marcin Jurdzinski, *Stochastic Timed Automata*. Logical Methods in Computer Science 10(4), 72 pages, 2014.
- Nathalie Bertrand and Philippe Schnoebelen. *Computable fixpoints in well-structured symbolic model checking*. Formal Methods in System Design 43(2), pages 233-267, 2013.
- Nathalie Bertrand, Thierry Jéron, Amélie Stainer and Moez Krichen. *Off-line test selection with test purposes for non-deterministic timed automata*. Logical methods in Computer Science 8(4), 2012.
- Christel Baier, Nathalie Bertrand and Marcus Gröber. *Probabilistic ω -automata*. Journal of the ACM 59(1), 2012.
- Nathalie Bertrand, Axel Legay, Sophie Pinchinat and Jean-Baptiste Raclet. *Modal event-clock specifications for timed component-based design*. Science of Computer Programming 77(12), pages 1212–1234, 2012.

- Christel Baier, Nathalie Bertrand and Philippe Schnoebelen. *Verifying Nondeterministic Probabilistic Channel Systems against ω -Regular Linear-Time Properties*. ACM Transactions on Computational Logic 9(1), 2007.
- Christel Baier, Nathalie Bertrand and Philippe Schnoebelen. *A Note on the Attractor-Property of Infinite-State Markov Chains*. Information Processing Letters 97(2), pages 58–63, 2006.
- Parosh Abdulla, Nathalie Bertrand, Alexander Rabinovich and Philippe Schnoebelen. *Verification of Probabilistic Systems with Faulty Communication*. Information and Computation 202(2), pages 141–165, 2005.
- Nathalie Bertrand, Irène Charon, Olivier Hudry and Antoine Lobstein. *1-Identifying Codes on Trees*. Australasian Journal of Combinatorics 31, pages 21–35, 2005.
- Nathalie Bertrand, Irène Charon, Olivier Hudry and Antoine Lobstein. *Identifying and Locating-Dominating Codes on Chains and Cycles*. European Journal of Combinatorics 27(7), pages 969–987, 2004.

International conferences

- Nathalie Bertrand, Patricia Bouyer and Anirban Majumdar. *Synthesizing safe coalition strategies*. In *Proceedings of FSTTCS'20*, to appear.
- Nathalie Bertrand, Nicolas Markey, Suman Sadhukhan and Ocan Sankur. *Dynamic Network Congestion Games*. In *Proceedings of FSTTCS'20*, to appear.
- Nathalie Bertrand. *Concurrent Games with Arbitrarily Many Players (Invited Talk)*. In *Proceedings of MFCS'20*, volume 170 of LIPIcs, pages 1:1-1:8.
- Nathalie Bertrand, Patricia Bouyer and Anirban Majumdar. *Concurrent Parameterized Games*. In *Proceedings of FSTTCS'19*, volume 150 of LIPIcs, pages 31:1-31:15.
- Nathalie Bertrand, Igor Konnov, Marijana Lazic and Josef Widder. *Verification of Randomized Consensus Algorithms Under Round-Rigid Adversaries*. In *Proceedings of CONCUR'19*, volume 140 of LIPIcs, pages 33:1-33:15.
- Nathalie Bertrand, Patricia Bouyer and Anirban Majumdar. *Reconfiguration and Message Losses in Parameterized Broadcast Networks*. In *Proceedings of CONCUR'19*, volume 140 of LIPIcs, pages 32:1-32:15.
- Christel Baier, Nathalie Bertrand, Jakob Piribauer and Ocan Sankur. *Long-run Satisfaction of Path Properties*. In *Proceedings of LICS'19*, ACM, pages 1-14.
- Nathalie Bertrand, Benjamin Bordais, Loïc Hélouët, Thomas Mari, Julie Parreaux and Ocan Sankur. *Performance Evaluation of Metro Regulations Using Probabilistic Model-Checking*. In *Proceedings of RSSRail'19*, volume 11495 of LNCS, pages 59-76.
- Christel Baier, Nathalie Bertrand, Clemens Dubslaff, Daniel Gburek and Ocan Sankur. *Stochastic Shortest Paths and Weight-Bounded Properties in Markov Decision Processes*. In *Proceedings of LICS'18*, ACM, pages 86-94.

- A. R. Balasubramanian, Nathalie Bertrand and Nicolas Markey. *Parameterized Verification of Synchronization in Constrained Reconfigurable Broadcast Networks*. In *Proceedings of TACAS'18*, volume 10806 of LNCS, pages 38-54, Springer.
- Nathalie Bertrand, Miheer Dewaskar, Blaise Genest and Hugo Gimbert. *Controlling a population*, In *Proceedings of Concur'17*, volume 85 of LIPIcs, pages 12:1-12:16, Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- Nathalie Bertrand, Serge Haddad and Engel Lefaucheux. *Diagnosis in Infinite-State Probabilistic Systems* In *Proceedings of Concur'16*, volume 59 of LIPIcs, pages 37:1-37:15, Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Pierre Carlier, *Analysing decisive stochastic processes* In *Proceedings of ICALP'16*, volume 43 of LIPIcs, pages 101:1-101:14, Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- Nathalie Bertrand, Serge Haddad and Engel Lefaucheux. *Accurate Approximate Diagnosability of Stochastic Systems* In *Proceedings of LATA'16*, volume 9618 of LNCS, pages 549-561. Springer.
- Nathalie Bertrand, Paulin Fournier and Arnaud Sangnier. *Distributed Local Strategies in Broadcast Networks* In *Proceedings of Concur'15*, volume 42 of LIPIcs, pages 44-57. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- Nathalie Bertrand, Serge Haddad and Engel Lefaucheux. *Foundation of Diagnosis and Predictability in Probabilistic Systems* In *Proceedings of FSTTCS'14*, volume 29 of LIPIcs, pages 417-429. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- Nathalie Bertrand, Thomas Brihaye and Blaise Genest. *Deciding the value 1 problem for reachability in 1-clock decision stochastic timed automata*. In *Proceedings of QEST'14*, volume 8657 of LNCS, pages 313-328. Springer.
- Nathalie Bertrand, Éric Fabre, Stefan Haar, Serge Haddad and Loïc Hélouët. *Active diagnosis for probabilistic systems*. In *Proceedings of FoSSaCS'14*, volume 8412 of LNCS, pages 134-148. Springer.
- Nathalie Bertrand, Paulin Fournier and Arnaud Sangnier. *Playing with probabilities in reconfigurable broadcast networks*. In *Proceedings of FoSSaCS'14*, volume 8412 of LNCS, pages 29-42. Springer.
- Nathalie Bertrand and Paulin Fournier. *Parameterized verification of many identical probabilistic timed processes*. In *Proceedings of FSTTCS'13*, volume 24 of LIPIcs, pages 501-513. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik.
- S. Akshay, Nathalie Bertrand, Serge Haddad and Loïc Hélouët. *The steady-state control problem for Markov decision processes*. In *Proceedings of QEST'13*, volume 8054 of LNCS, pages 390-304. Springer.
- Paolo Ballarini, Nathalie Bertrand, Andras Horváth, Marco Paolieri, and Enrico Vicario. *Transient Analysis of Networks of Stochastic Timed Automata using Stochastic State Classes*. In *Proceedings of QEST'13* volume 8054 of LNCS, pages 355-371. Springer.

- Nathalie Bertrand and Sven Schewe. *Playing Optimally on Timed Automata with Random Delays*. In *Proceedings of Formats'12*, volume 7595 of LNCS, pages 43–58. Springer.
- Nathalie Bertrand, John Fearnley and Sven Schewe. *Bounded Satisfiability for PCTL*. In *Proceedings of CSL'12*, volume 16 of LIPIcs, pages 92–106. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2012.
- Nathalie Bertrand, Giorgio Delzanno, Barbara König, Arnaud Sangnier and Jan Stückrath. *On the Decidability Status of Reachability and Coverability in Graph Transformation Systems*. In *Proceedings of RTA'12*, volume 15 of LIPIcs, pages 101–116. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2012.
- Nathalie Bertrand and Blaise Genest. *Minimal Disclosure in Partially Observable Markov Decision Processes*. In *Proceedings of FSTTCS'11, LIPIcs*. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2011.
- Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Amélie Stainer. *Emptiness and Universality Problems in Timed Automata with Positive Frequency*. In *Proceedings of ICALP'11*, volume 6756 of LNCS, pages 246–257. Springer, 2011.
- Nathalie Bertrand, Thierry Jéron, Amélie Stainer and Moez Krichen. *Off-line Test Selection with Test Purposes for Non-Deterministic Timed Automata*. In *Proceedings of TACAS'11*, volume 6605 of LNCS, pages 96–111. Springer, 2011.
- Nathalie Bertrand, Amélie Stainer, Thierry Jéron and Moez Krichen. *A Game Approach to Determinize Timed Automata*. In *Proceedings of FoSSaCS'11*, volume 6604 of LNCS, pages 245–259. Springer, 2011.
- Nathalie Bertrand, Axel Legay, Sophie Pinchinat and Jean-Baptiste Raclet. *A Compositional Approach on Modal Specifications for Timed Systems*. In *Proceedings of ICFEM'09*, volume 5585 of LNCS, pages 679–697. Springer, 2009.
- Christel Baier, Nathalie Bertrand, Patricia Bouyer, and Thomas Brihaye. *When are timed automata determinizable?* In *Proceedings of ICALP'09*, volume 5556 of LNCS, pages 43–54. Springer, 2009.
- Nathalie Bertrand, Blaise Genest and Hugo Gimbert. *Qualitative Determinacy and Decidability of Stochastic Games with Signals*. In *Proceedings of LICS'09*, pages 319–328. IEEE Computer Society Press, 2009.
- Nathalie Bertrand, Sophie Pinchinat and Jean-Baptiste Raclet. *Refinement and Consistency of Timed Modal Specifications*. In *Proceedings of LATA'09*, volume 5457 of LNCS, pages 152–163. Springer, 2009.
- Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Nicolas Markey. *Quantitative Model-Checking of One-Clock Timed Automata under Probabilistic Semantics*. In *Proceedings of QEST'08*, pages 55–64. IEEE Computer Society Press, 2008.
- Christel Baier, Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Marcus Gröber. *Almost-Sure Model Checking of Infinite Paths in One-Clock Timed Automata*. In *Proceedings of LICS'08*, pages 217–226. IEEE Computer Society Press, 2008.

- Christel Baier, Nathalie Bertrand and Marcus Größer. *On Decision Problems for Probabilistic Büchi Automata*. In *Proceedings of FoSSaCS'08*, volume 4962 of *LNCS*, pages 287–301. Springer, 2008.

Awarded EATCS best theory paper at ETAPS

- Christel Baier, Nathalie Bertrand, Patricia Bouyer, Thomas Brihaye and Marcus Größer. *Probabilistic and Topological Semantics for Timed Automata*. In *Proceedings of FSTTCS'07*, volume 4855 of *LNCS*, pages 179–191. Springer, 2007.
- Christel Baier, Nathalie Bertrand and Philippe Schnoebelen. *On Computing Fixpoints in Well-Structured Regular Model Checking, with Applications to Lossy Channel Systems*. In *Proceedings of LPAR'06*, volume 4246 of *LNAI*, pages 347–361. Springer, 2006.
- Christel Baier, Nathalie Bertrand and Philippe Schnoebelen. *Symbolic Verification of Communicating Systems with Probabilistic Message Losses: Liveness and Fairness*. In *Proceedings of FORTE'06*, volume 4229 of *LNCS*, pages 212–227. Springer, 2006.
- Nathalie Bertrand and Philippe Schnoebelen. *Model Checking Lossy Channels Systems is Probably Decidable*. In *Proceedings of FoSSaCS'03*, volume 2620 of *LNCS*, pages 120–135. Springer, 2003.

Theses

- *Contributions to the verification and control of timed and probabilistic models*, Habilitation, IRISA, Université Rennes 1 , France, November 2015.
- *Modèles stochastiques pour les pertes de messages dans les protocoles asynchrones et techniques de vérification automatique*, PhD Thesis, Laboratoire Spécification et Vérification, ENS Cachan, France, October 2006.