Benjamin Monmege
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Birth date: 09/21/1985
French citizen

Positions

sept. 2015 **Associate Professor** at Aix-Marseille Université (AMU), in the team Modelisation and Verification of the Laboratoire d'Informatique et Systèmes (LIS)
- 2020-2021 **CNRS delegation**
- since 2023 **head of the MOVE team**

2013 **Post doctoral researcher** in the Formal Methods and Verification group, at Université libre de Bruxelles (ULB)

Education

2022 **Habilitation to direct researches** Aix-Marseille University , *Game Theory for Real-Time Synthesis: Decision, Approximation, and Randomness*
> Defended on April 29, 2022, at Marseille. Jury members:
> Eugène Asarin (Examiner), Béatrice Bérard (President), Véronique Bruyère (Reviewer), Marcin Jurdziński (Reviewer), Nicolas Markey (Reviewer), Pierre-Alain Reynier (Examiner), Yann Vaxès (Examiner)

2010-2013 **PhD in Computer Science** *mention Very Honorable*, Laboratoire Spécification et Vérification (LSV), École Normale Supérieure de Cachan (ENS de Cachan) under the supervision of Benedikt Bollig and Paul Gastin, *Specification and Verification of Quantitative Properties: Expressions, Logics, and Automata*
> Defended on October 24, 2013, at Cachan. Jury members:
> Benedikt Bollig (Co-advisor), Olivier Carton (Examiner), Manfred Droste (Reviewer), Paul Gastin (Co-advisor), Sylvain Lombardy (Reviewer), Jean-Marc Talbot (Examiner), Jacques Sakarovitch (President)

2006-2010 **Student at ENS de Cachan**
- 2009-2010 **Master's degree (M2) in Computer Science** *with high distinction*, Parisian Master for Research in Computer Science (MPRI)
- 2008-2009 **Agrégation in Mathematics - Computer Science** *Rank: 45 (over 252)*

Awards

2020 Prime d'Encadrement Doctoral et de Recherche – French grant for outstanding research, awarded for four years
2024 Prime RIPEC C3 – French grant for outstanding research, awarded for three years

Teaching

Methodology (L1) tutorials, since 2024
Logics (L3) lectures/tutorials/practical sessions, since 2024
Automata (M2) lectures/tutorials, since 2022
Discovery of research (L2) lectures/tutorials, 2022-2024
Introduction to Computer Science (L1) lectures/tutorials, since 2018
Python programming (L1) lectures/tutorials/practical sessions, since 2022
Introduction to research in Computer Sciences (L2) lectures/tutorials, 2015-2017
Theory and applications of verification (L3) lectures/tutorials/practical sessions, 2019
Computability and Semantics (L3) lectures/tutorials/practical sessions, 2018 and 2019
Advanced algorithms (L3) lectures, 2018
Networks and communication (L3) lectures/tutorials/practical sessions, 2015-2017
Probabilistic Aspects for Computer Science (M1) lectures/tutorials/practical sessions, 2018 and 2019
Option Computer Science for future maths teachers (M1) lectures/tutorials/practical sessions, since 2017

Verification and synthesis (M2) lectures, 2018 and 2019
Diploma to teach computer science in secondary schools lectures/tutorials/practical sessions, 2019 and 2020

Supervision

PhD students Julie Parreaux (2020-2023, now associate professor at Université Rennes), Théodore Lopez (2018-2023), Damien Busatto-Gaston (2016-2019, now associate professor at Université Parie-Est Créteil)
Post-doctoral fellows Louis-Marie Dando (2020-2021)
Master students Samuel Graepler (2023), Julie Parreaux (2019, 2020), Théodore Lopez (2017), Gabriel Shako Ekanga (2015), Samuel Dehouck (2014-2015), Ondřej Svoboda (2014-2015)
Other students Thomas Galland (2019, L3 internship), Madhur Gupta (2016, Bachelor internship from Thapar University, India), Peter Gjøl Jensen (2013, Erasmus students in Master 1), Jakob Haahr Taankvist (2013, Erasmus students in Master 1)

Projects

ANR JCJC QuaSy: Quantitative Synthesis. 2023-2027. PI: Karoliina Lehtinen. Consortium: LIS, Reichman University (Israël)
ANR TickTac: Efficient Techniques and Tools for the Verification and Synthesis of Real-Time Systems. 2018-2022. Local coordinator, responsible of task (new approaches for analysis of timed systems). Consortium : IRISA (Rennes), LaBRI (Bordeaux), LIS, LSV (Cachan), ISIR (Paris), LRDE (Paris)
ANR DeLTA: ***Dé**fis pour la **L**ogique, les **T**ransducteurs et les **A**utomates.* Responsible of task (tools). 2016-2020. Consortium: LaBRI (Bordeaux), IRIF (Paris), LIF, CRIStAL (Lille)
Project PEPS INS2I JCJC SensAS: ***Sens**itivity **A**nalysis of Timed **S**ystems*, 2017, with Ocan Sankur (IRISA, Rennes)
Project PEPS INS2I SoSI: ***S**ecurity **o**f Timed **S**ystems with Partial **I**nformation: Vulnerability and Robustness.* 2016. Consortium: LIF, LSIS (Marseille), IRISA (Rennes)
Project PHC Tournesol VAST: ***V**erification **A**nd **S**ynthesis of **T**ransformations.* 2016. Consortium: LIF, ULB (Belgique)
European project Cassting: *Collective Adaptive Systems Synthesis with Non-Zero-Sum Games.* 2013-2015. Consortium: LSV (ENS Cachan, CNRS), ULB (Belgique), UMONS (Belgique), Aalborg University (Danemark), RWTH Aachen University (Allemagne), Seluxit (Danemark, partenaire industriel), Energi Nord (Danemark, partenaire industriel)
Projet PHC Procope LeMon: ***Le**arning **Mon**itors for Refactoring Legacy Systems.* 2012-2013. Consortium: LIAFA (Paris, CNRS), Lübeck University (Allemagne), LSV (ENS Cachan, CNRS)

Collective tasks

Head of the MOVE team at LIS, since septembre 2023
Programme committees and editorial committees:
- Membre of the Programme Committee of the conference ATVA 2024
- Membre of the Programme Committee of the conference CAI 2022
- **Co-chair of the Programme Committee of the conference STACS 2022**, Marseille (France)
- **Co-chair of the Programme Committee of the conference STACS 2021**, Saarbrücken (Allemagne)
- **Editor of the Special Issue WATA 2020/2021**
- Member of the Programme Committee of the conference STACS 2020, Montpellier (France)
- Member of the Programme Committee of the workshop MoRe 2019, Vancouver (Canada)
- Member of the Programme Committee of the conference CAI 2019, Nis (Serbie)
- Member of the Programme Committee of the conference ICLA 2019, Delhi (Inde)
- Member of the Programme Committee of the conference RP 2018, Marseille (France)
- Member of the Programme Committee of the summer school MOVEP 2016, Genova (Italy)
- Member of the Programme Committee of the workshop CASSTING 2016, Eindhoven (Netherlands)

Organisation of scientific events:
- **President of the organisation committee of the conference STACS 2022**, Marseille (France)
- **Organisation of the workshop WATA 2020/2021**, Marseille (France)
- Member of the organisation committee of the conference RP 2018, Marseille (France)
- Member of the organisation committee of the conference CSL 2016, Marseille (France)
- Member of the organisation committee of the meeting of working group GT-ALGA 2016, Marseille (France)
- Member of the organisation committee of the conferences Petri Nets 2015 and ACSD 2015, Bruxelles (Belgique)

Pedagogical responsibilities:
- Portal Descartes (first year common to Licences Computer Science, Mathematics, Physics, Mechanics), since 2022
- Licence 3 Computer Science (Campus St Charles), 2018-2020
- Option Computer Science of M1 MEEF Second degré parcours Mathématiques, 2017-2019
- Diploma Teaching Computer Science in Secondary Schools, 2018-2020

Jurys of recruitment contests:
- Second contest for ENS Paris-Saclay and ENS Rennes, 2017-2024
- CAPES Computer Science, 2020-2023

Recruitment committees:
- Associate professor Aix-Marseille Université, LIS and Faculté des Sciences, 2023
- Associate professor Université de Nantes, LS2N and UFR Sciences et techniques, 2021
- Associate professor Université Paris-Est Créteil, LACL and Faculté de droit, 2020
- Associate professor Université Paris-Est Créteil, LACL and FST, 2020
- Associate professor Aix-Marseille Université, LIS and ESPE, 2018
- Associate professor Aix-Marseille Université, LIS and IUT Arles, 2019
- ATER Aix-Marseille Université, LIS and Faculté des Sciences, 2019

Elected as a member of the Council of Department Computer Science and Interactions at AMU since 2017
Member of the council of Pôle Calcul since september 2023
Member of the IRES working group about the teaching of computer science since 2021
Organization of the weekly Seminar MOVE from 2015 to 2021
Member of the ad-hoc commission MCF CNU5 for the evaluation of promotions at Aix-Marseille Université in 2023

Reviewing and jurys

Reviewing for many computer science conferences (between 5 and 10 per year): ICALP, CAV, STACS, LICS, CONCUR, FSTTCS, FoSSaCS, MFCS, CSL, DLT...

Reviewing for many international journals (between 2 and 3 per year): Journal of Logic and Algebraic Programming, Formal Methods in System Design, ACM Transactions on Computational Logic, Theoretical Computer Science, Soft Computing, Information and Processing Letters, Journal of Systems and Software, Discrete Mathematics and Theoretical Computer Science, Information and Computation, Theoretics...

Participation to PhD committees: Pierre Vandenhove (Mons University, examiner, 2023), Benjamin Bordais (ENS Paris-Saclay, reviewer, 2023), Didier Villevalois (AMU, examiner, 2019)

Popularisation of science

2023 Article on the website Interstices: Les jeux à la rescousse de la vérification
2023 Talk at Treize minutes Marseille: *Bonnie and Clyde, hackeurs perdus*
2022 Talk at MathsEnJeans Marseille: Les jeux à la rescousse de la vérification

Publications

Articles in international journals with reading committee

[1] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Playing Stochastically in Weighted Timed Games to Emulate Memory. *Logical Methods in Computer Science*, 21(1), 2025. DOI: 10.46298/lmcs-21(1:19)2025.

[2] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Decidability of One-Clock Weighted Timed Games with Arbitrary Weights. *Logical Methods in Computer Science*, 21(1), 2025. DOI: 10.46298/lmcs-21(1:8)2025.

[3] Théodore Lopez, Benjamin Monmege, and Jean-Marc Talbot. Regular D-length: A tool for improved prefix-stable forward Ramsey factorisations. *Information Processing Letters*, 187, 2024. DOI: 10.1016/j.ipl.2024.106497.

[4] Thomas Brihaye, Gilles Geeraerts, Axel Haddad, Engel Lefaucheux, and Benjamin Monmege. One-Clock Priced Timed Games with Negative Weights. *Logical Methods in Computer Science*, 18(3), August 2022. DOI: 10.46298/lmcs-18(3:17)2022.

[5] Damien Busatto-Gaston, Benjamin Monmege, and Pierre-Alain Reynier. Optimal Controller Synthesis for Timed Systems. *Logical Methods in Computer Science*, 19(1):20:1–20:77, 2023.

[6] Thomas Brihaye, Gilles Geeraerts, Axel Haddad, and Benjamin Monmege. Pseudopolynomial Iterative Algorithm to Solve Total-Payoff Games and Min-Cost Reachability Games. *Acta Informatica*, 54(1):85–125, February 2017. DOI: 10.1007/s00236-016-0276-z.

[7] Serge Haddad and Benjamin Monmege. Interval Iteration Algorithm for MDPs and IMDPs. *Theoretical Computer Science*, 735:111–131, July 2018. DOI: 10.1016/j.tcs.2016.12.003.

[8] Paul Gastin and Benjamin Monmege. A Unifying Survey on Weighted Logics and Weighted Automata. *Soft Computing*, 22(4):1047–1065, February 2018. DOI: 10.1007/s00500-015-1952-6.

[9] Benedikt Bollig, Peter Habermehl, Martin Leucker, and Benjamin Monmege. A Robust Class of Data Languages and an Application to Learning. *Logical Methods in Computer Science*, 10(4:19), December 2014. DOI: 10.2168/LMCS-10(4:19)2014.

[10] Paul Gastin and Benjamin Monmege. Adding Pebbles to Weighted Automata: Easy Specification and Efficient Evaluation. *Theoretical Computer Science*, 534:24–44, May 2014. DOI: 10.1016/j.tcs.2014.02.034.

[11] Benedikt Bollig, Paul Gastin, Benjamin Monmege, and Marc Zeitoun. Pebble Weighted Automata and Weighted Logics. *ACM Transactions on Computational Logic*, 15(2:15), April 2014. DOI: 10.1145/2579819.

[12] Pierre Ganty, Rupak Majumdar, and Benjamin Monmege. Bounded Underapproximations. *Formal Methods in System Design*, 40(2):206–231, April 2012. DOI: 10.1007/s10703-011-0136-y.

International conferences with selection committee

[13] Aline Goeminne and Benjamin Monmege. Permissive Equilibria in Multiplayer Reachability Games. In *Proceedings of the 33rd EACSL Annual Conference on Computer Science Logic (CSL 2025)*. Jörg Endrullis and Sylvain Schmitz, editors. Volume 326. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2025, 23:1–23:17. DOI: 10.4230/LIPIcs.CSL.2025.23.

[14] Gelareh Hasel Mehri, Benjamin Monmege, Clara Bertolissi, and Nicola Zannone. A Bargaining-Game Framework for Multi-Party Access Control. In *Proceedings of the 29th ACM Symposium on Access Control Models and Technologies (SACMAT'24)*. Jianwei Niu and Jaideep Vaidya, editors. ACM, 2024. DOI: 10.1145/3649158.3657033.

[15] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Synthesis of Robust Optimal Real-Time Systems. In *Proceedings of the 49th International Symposium on Mathematical Foundations of Computer Science (MFCS'24)*. Rastislav Královic and Antonín Kucera, editors. Volume 306. In LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2024, 74:1–74:15. DOI: 10.4230/LIPICS.MFCS.2024.74.

[16] Nevatia Dhruv and Benjamin Monmege. An Automata Theoretic Characterization of Weighted First-Order Logic. In *Proceedings of the 21st International Symposium on Automated Technology for Verification and Analysis (ATVA'23)*. Étienne André and Jun Sun, editors. Volume 14215. In Lecture Notes in Computer Science. Springer, Cham, October 2023. DOI: https://doi.org/10.1007/978-3-031-45329-8_6.

[17] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Decidability of One-Clock Weighted Timed Games with Arbitrary Weights. In *Proceedings of the 33rd International Conference on Concurrency Theory (CONCUR 2022)*. Bartek Klin, Sławomir Lasota, and Anca Muscholl, editors. Volume 243. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2022. DOI: 10.4230/LIPIcs.CONCUR.2022.15.

[18] Nicolas Baudru, Louis-Marie Dando, Nathan Lhote, Benjamin Monmege, Pierre-Alain Reynier, and Jean-Marc Talbot. Weighted Automata and Expressions over Pre-Rational Monoids. In *30th EACSL Annual Conference on Computer Science Logic (CSL 2022)*. Florin Manea and Alex Simpson, editors. Volume 216. (6) in Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl - Leibniz-Zentrum für Informatik, February 2022, pages 1–16. DOI: 10.4230/LIPIcs.CSL.2022.6.

[19] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Playing Stochastically in Weighted Timed Games to Emulate Memory. In *48th International Colloquium on Automata, Languages, and Programming (ICALP 2021)*. Nikhil Bansal, Emanuela Merelli, and James Worrell, editors. Volume 198. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl–Leibniz-Zentrum für Informatik, 2021, 137:1–137:17. DOI: 10.4230/LIPIcs.ICALP.2021.137.

[20] Benjamin Monmege, Julie Parreaux, and Pierre-Alain Reynier. Reaching Your Goal Optimally by Playing at Random with No Memory. In *Proceedings of the 31st International Conference on Concurrency Theory (CONCUR 2020)*. Igor Konnov and Laura Kovács, editors. Volume 171. In LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, September 2020, 26:1–26:21. DOI: 10.4230/LIPIcs.CONCUR.2020.26.

[21] Thomas Brihaye, Gilles Geeraerts, Marion Hallet, Benjamin Monmege, and Bruno Quoitin. Dynamics on Games: Simulation-Based Techniques and Applications to Routing. In *Proceedings of the 39th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'19)*. Arkadev Chattopadhyay and Paul Gastin, editors. Volume 150. In LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, December 2019, 35:1–35:14. DOI: 10.4230/LIPIcs.FSTTCS.2019.35.

[22] Damien Busatto-Gaston, Benjamin Monmege, Pierre-Alain Reynier, and Ocan Sankur. Robust Controller Synthesis in Timed Büchi Automata: A Symbolic Approach. In *31st International Conference on Computer Aided Verification (CAV 2019)*. Isil Dillig and Serdar Tasiran, editors. Volume 11561. In Lecture Notes in Computer Science. Springer, July 2019, pages 572–590. DOI: 10.1007/978-3-030-25540-4_33.

[23] Théodore Lopez, Benjamin Monmege, and Jean-Marc Talbot. Determinisation of Finitely-Ambiguous Copyless Cost Register Automata. In *44th International Symposium on Mathematical Foundations of Computer Science (MFCS 2019)*. Peter Rossmanith, Pinar Heggernes, and Joost-Pieter Katoen, editors. Volume 138. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, September 2019, 75:1–75:15. DOI: 10.4230/LIPIcs.MFCS.2019.75.

[24] Damien Busatto-Gaston, Benjamin Monmege, and Pierre-Alain Reynier. Symbolic Approximation of Weighted Timed Games. In *Proceedings of the 38th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'18)*. Sumit Ganguly and Paritosh Pandya, editors. Volume 122. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl–Leibniz-Zentrum für Informatik, December 2018, 28:1–28:16. DOI: 10.4230/LIPIcs.FSTTCS.2018.28.

[25] Thomas Brihaye, Arthur Milchior, Gilles Geeraerts, Hsi-Ming Ho, and Benjamin Monmege. Efficient algorithms and tools for MITL model-checking and synthesis. In *Proceedings of the 23rd International Conference on Engineering of Complex Computer Systems (ICECCS'18)*. CPS, December 2018, pages 180–184. DOI: 10.1109/ICECCS2018.2018.00027.

[26] Thomas Brihaye, Gilles Geeraerts, Hsi-Ming Ho, and Benjamin Monmege. Timed-Automata-Based Verification of MITL over Signals. In *Proceedings of the 24th International Symposium on Temporal Representation and Reasoning (TIME'17)*. Sven Schewe, Thomas Schneider, and Jef Wijsen, editors. Volume 90. In LIPIcs. Schloss Dagstuhl–Leibniz-Zentrum für Informatik, Dagstuhl, Germany, October 2017, 7:1–7:19. DOI: 10.4230/LIPIcs.TIME.2017.7.

[27] Thomas Brihaye, Gilles Geeraerts, Hsi-Ming Ho, and Benjamin Monmege. MightyL: A Compositional Translation from MITL to Timed Automata. In *Proceedings of the 29th International Conference on Computer Aided Verification, Part I (CAV'17)*. Rupak Majumdar and Viktor Kunčak, editors. Volume 10426. In Lecture Notes in Computer Science. Springer, Heidelberg, Germany, July 2017, pages 421–440. DOI: 10.1007/978-3-319-63387-9_21.

[28] Damien Busatto-Gaston, Benjamin Monmege, and Pierre-Alain Reynier. Optimal Reachability in Divergent Weighted Timed Games. In *Proceedings of the 20th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS'17)*. Javier Esparza and Andrzej S. Murawski, editors. Volume 10203. In Lecture Notes in Computer Science. Springer, Uppsala, Sweden, April 2017, pages 162–178. DOI: 10.1007/978-3-662-54458-7_10.

[29] Thomas Brihaye, Morgane Estiévenart, Gilles Geeraerts, Hsi-Ming Ho, Benjamin Monmege, and Nathalie Sznajder. Real-Time Synthesis is Hard! In *Proceedings of the 14th International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS'16)*. Martin Fränzle and Nicolas Markey, editors. Volume 9884. In Lecture Notes in Computer Science. Springer, Quebec city, Canada, August 2016, pages 105–120. DOI: 10.1007/978-3-319-44878-7_7.

[30] Thomas Brihaye, Amit Kumar Dhar, Gilles Geeraerts, Axel Haddad, and Benjamin Monmege. Efficient Energy Distribution in a Smart Grid Using Multi-Player Games. In *Proceedings of the Cassting Workshop on Games for the Synthesis of Complex Systems (Cassting'16) and the 3rd International Workshop on Synthesis of Complex Parameters (SynCoP'16)*. Thomas Brihaye, Benoît Delahaye, Nicolas Markey, and Jiří Srba, editors. Volume 220. EPTCS, Eindhoven, Netherlands, April 2016, pages 1–12. DOI: 10.4204/EPTCS.220.1.

[31] Thomas Brihaye, Gilles Geeraerts, Axel Haddad, Benjamin Monmege, Guillermo A. Pérez, and Gabriel Renault. Quantitative Games under Failures. In *Proceedings of the 35th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'15)*. Prahladh Harsha and G. Ramalingam, editors. Volume 45. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl–Leibniz-Zentrum für Informatik, Bangalore, India, December 2015, pages 293–306. DOI: 10.4230/LIPIcs.FSTTCS.2015.293.

[32] Thomas Brihaye, Gilles Geeraerts, Axel Haddad, Engel Lefaucheux, and Benjamin Monmege. Simple Priced Timed Games Are Not That Simple. In *Proceedings of the 35th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'15)*. Prahladh Harsha and G. Ramalingam, editors. Volume 45. In Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl–Leibniz-Zentrum für Informatik, Bangalore, India, December 2015, pages 278–292. DOI: 10.4230/LIPIcs.FSTTCS.2015.278.

[33] Thomas Brihaye, Gilles Geeraerts, Axel Haddad, and Benjamin Monmege. To Reach or not to Reach? Efficient Algorithms for Total-Payoff Games. In *Proceedings of the 26th International Conference on Concurrency Theory (CONCUR'15)*. Luca Aceto and David de Frutos Escrig, editors. Volume 42. In LIPIcs. Schloss Dagstuhl–Leibniz-Zentrum für Informatik, Madrid, Spain, September 2015, pages 297–310. DOI: 10.4230/LIPIcs.CONCUR.2015.297.

[34] Thomas Brihaye, Gilles Geeraerts, Shankara Narayanan Krishna, Lakshmi Manasa, Benjamin Monmege, and Ashutosh Trivedi. Adding Negative Prices to Priced Timed Games. In *Proceedings of the 25th International Conference on Concurrency Theory (CONCUR'14)*. Paolo Baldan and Daniele Gorla, editors. Volume 8704. In Lecture Notes in Computer Science. Springer, Roma, Italy, September 2014, pages 560–575. DOI: 10.1007/978-3-662-44584-6_38.

[35] Serge Haddad and Benjamin Monmege. Reachability in MDPs: Refining Convergence of Value Iteration. In *Proceedings of the 8th International Workshop on Reachability Problems (RP'14)*. Joël Ouaknine, Igor Potapov, and James Worrell, editors. Volume 8762. In Lecture Notes in Computer Science. Springer, Oxford, United Kingdom, September 2014, pages 125–137. DOI: 10.1007/978-3-319-11439-2_10.

[36] Benedikt Bollig, Paul Gastin, Benjamin Monmege, and Marc Zeitoun. Logical Characterization of Weighted Pebble Walking Automata. In *Proceedings of the joint meeting of the 23rd EACSL Annual Conference on Computer Science Logic (CSL) and the 29th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS)*. Thomas A. Henzinger and Dale Miller, editors. ACM, Vienna, Austria, July 2014. DOI: 10.1145/2603088.2603118.

[37] Benedikt Bollig, Peter Habermehl, Martin Leucker, and Benjamin Monmege. A Fresh Approach to Learning Register Automata. In *Proceedings of the 17th International Conference on Developments in Language Theory (DLT'13)*. Marie-Pierre Béal and Olivier Carton, editors. Volume 7907. In Lecture Notes in Computer Science. Springer, Marne-la-Vallée, France, June 2013, pages 118–130. DOI: 10.1007/978-3-642-38771-5_12.

[38] Benedikt Bollig, Paul Gastin, and Benjamin Monmege. Weighted Specifications over Nested Words. In *Proceedings of the 16th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS'13)*. Frank Pfenning, editor. Volume 7794. In Lecture Notes in Computer Science. Springer, Roma, Italy, March 2013, pages 385–400. DOI: 10.1007/978-3-642-37075-5_25.

[39] Benedikt Bollig, Paul Gastin, Benjamin Monmege, and Marc Zeitoun. A Probabilistic Kleene Theorem. In *Proceedings of the 10th International Symposium on Automated Technology for Verification and Analysis (ATVA'12)*. Madhavan Mukund and Supratik Chakraborty, editors. Volume 7561. In Lecture Notes in Computer Science. Springer, Thiruvananthapuram, India, October 2012, pages 400–415. DOI: 10.1007/978-3-642-33386-6_31.

[40] Paul Gastin and Benjamin Monmege. Adding Pebbles to Weighted Automata. In *Proceedings of the 17th International Conference on Implementation and Application of Automata (CIAA'12)*. Nelma Moreira and Rogério Reis, editors. Volume 7381. In Lecture Notes in Computer Science. Springer, Porto, Portugal, July 2012, pages 28–51. DOI: 10.1007/978-3-642-31606-7_4.

[41] Benedikt Bollig, Paul Gastin, Benjamin Monmege, and Marc Zeitoun. Pebble Weighted Automata and Transitive Closure Logics. In *Proceedings of the 37th International Colloquium on Automata, Languages and Programming (ICALP'10) – Part II*. Samson Abramsky, Friedhelm Meyer auf der Heide, and Paul Spirakis, editors. Volume 6199. In Lecture Notes in Computer Science. Springer, Bordeaux, France, July 2010, pages 587–598. DOI: 10.1007/978-3-642-14162-1_49.

[42] Pierre Ganty, Rupak Majumdar, and Benjamin Monmege. Bounded Underapproximations. In *Proceedings of the 22nd International Conference on Computer Aided Verification (CAV'10)*. Byron Cook, Paul Jackson, and Tayssir Touili, editors. Volume 6174. In Lecture Notes in Computer Science. Springer, Edinburgh, Scotland, UK, July 2010, pages 600–614. DOI: 10.1007/978-3-642-14295-6_52.

Books and book chapters

[43] Markus Bläser and Benjamin Monmege, editors. *Preface of STACS 2021 Special Issue*. Volume 68. Springer, 2024. DOI: 10.1007/S00224-024-10176-W.

[44] Nathanaël Fijalkow, Nathalie Bertrand, Patricia Bouyer-Decitre, Romain Brenguier, Arnaud Carayol, John Fearnley, Hugo Gimbert, Florian Horn, Rasmus Ibsen-Jensen, Nicolas Markey, Benjamin Monmege, Petr Novotný, Mickael Randour, Ocan Sankur, Sylvain Schmitz, Olivier Serre, and Mateusz Skomra. *Games on Graphs*. Volume abs/2305.10546. CoRR, 2023.

[45] Petra Berenbrink and Benjamin Monmege, editors. *Proceedings of the 39th International Symposium on Theoretical Aspects of Computer Science (STACS'22)*. Volume 219. In Leibniz International Proceedings in Informatics (LIPIcs). Leibniz-Zentrum für Informatik, Saarbrücken, Germany, March 2022.

[46] Markus Bläser and Benjamin Monmege, editors. *Proceedings of the 38th International Symposium on Theoretical Aspects of Computer Science (STACS'21)*. Volume 187. In Leibniz International Proceedings in Informatics (LIPIcs). Leibniz-Zentrum für Informatik, Saarbrücken, Germany, March 2021.

Thesis and internship reports

[47] Benjamin Monmege. Specification and Verification of Quantitative Properties: Expressions, Logics, and Automata. Thèse de doctorat. Laboratoire Spécification et Vérification, ENS Cachan, France, October 2013. URL: http://www.lsv.ens-cachan.fr/~monmege/download/thesis.pdf.

[48] Benjamin Monmege. Propriétés quantitatives des mots et des arbres – Applications aux langages XML. Rapport de Master. Master Parisien de Recherche en Informatique, Paris, France, September 2010.

[49] Benjamin Monmege. Parikh-equivalent bounded languages for software verification. Master 1 Internship Report at UCLA (USA). ENS de Cachan, 2008.

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Technical reports

[51] Axel Haddad and Benjamin Monmege. Why Value Iteration Runs in Pseudo-Polynomial Time for Discounted-Payoff Games. Technical note. Université libre de Bruxelles, June 2015.

[52] Benedikt Bollig, Paul Gastin, Benjamin Monmege, and Marc Zeitoun. Weighted Expressions and DFS Tree Automata. Research Report (LSV-11-08). 32 pages. Laboratoire Spécification et Vérification, ENS Cachan, France, April 2011. URL: http://www.lsv.ens-cachan.fr/Publis/RAPPORTS_LSV/PDF/rr-lsv-2011-08.pdf.

Selection of invited talks

[53] Workshop ATLAS 2024. Reasoning about Quality in Hyperproperties. April 2024.

[54] Workshop on Automata, Concurrency and Timed Systems. Weighted First-Order Logic and Weighted Automata. May 2023.

[55] Conference FORMATS 2021 (online). Robust Controller Synthesis in Timed Büchi Automata: A Symbolic Approach. August 2021.

[56] FSTTCS Workshop GALA. Logics for Weighted Automata. December 2019.

[57] FSTTCS Workshop Trends in Transformations. Copyless Cost Register Automata: Bounded Ambiguity vs Determinism. December 2019.

[58] Seminar ENS Rennes. Quantitative Games on Graphs. October 2019.

[59] Seminar of the Centre Fédéré en Vérification (Bruxelles). Robust Controller Synthesis in Timed Büchi Automata: A Symbolic Approach. May 2019.

[60] 1st International Workshop on Multi-objective Reasoning in Verification and Synthesis MoRe (Oxford). A journey through negatively-weighted timed games: undecidability, decidability, approximability. Exposé invité. July 2018.

[61] 9th International Workshop on Weighted Automata, Theory and Applications WATA (Leipzig). A journey through negatively-weighted timed games: undecidability, decidability, approximability. Exposé invité. May 2018.

[62] GT SDA^2 (Marseille). Quantitative Evaluation of Systems via Weighted Logics and Weighted Automata. July 2017.

[63] Seminar of the Centre Fédéré en Vérification (Bruxelles). Optimal Reachability in Divergent Weighted Timed Games. May 2017.

[64] Seminar LACL (Créteil). To Reach or not to Reach? Efficient Algorithms for Total-Payoff Games. May 2016.

[65] Workshop AVeRTS (Bangalore). Efficient Reactive Synthesis of MITL Properties. December 2015.

[66] Workshop Infinity (Bangalore). Logics for Weighted Automata and Transducers. December 2015.

[67] Workshop Non-Zero-Sum Games and Control (Dagstuhl). Why Negatively-Priced Timed Games are Hard? February 2015.

[68] National meeting of the Research Group Computer Science Mathematics (Paris). Spécification et vérification de propriétés quantitatives. January 2014.