Mickael Randour
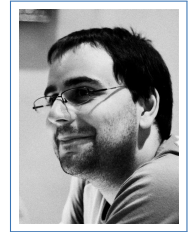
PhD in Computer Science

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Academic CV – updated on July 9, 2025

Positions

Oct. 2019–present	**Professor**, *Mathematics Department & Complexys Institute, Faculty of Sciences, UMONS – Université de Mons*, Belgium. Head of the Mathematics Department since October 2021.
Starting Oct. 2025	**Senior Research Associate**, *Mathematics Department & Complexys Institute, Faculty of Sciences, UMONS – Université de Mons*, Belgium. **F.R.S.-FNRS** tenured researcher position.
Oct. 2017–Sept. 2025	**Research Associate**, *Mathematics Department & Complexys Institute, Faculty of Sciences, UMONS – Université de Mons*, Belgium. **F.R.S.-FNRS** tenured researcher position.
Oct. 2015–Sept. 2017	**Postdoctoral researcher**, *Formal Methods and Verification Group, Computer Science Department, Faculty of Sciences, ULB – Université libre de Bruxelles*, Belgium, team of Jean-François Raskin. **F.R.S.-FNRS** postdoctoral grant.
Oct. 2014–Sept. 2015	**Postdoctoral researcher**, *Laboratoire Spécification et Vérification – CNRS & ENS Cachan*, France, team of Patricia Bouyer-Decitre and Nicolas Markey. European research project **CASSTING** (FP7-ICT-601148).

Education

2010–2014	**PhD in Computer Science**, *UMONS – Université de Mons*, Belgium. **F.R.S.-FNRS** research fellow.
2008–2010	**Master's Degree in Computer Science**, *UMONS*, Belgium. Specialized in Research. With highest honors.
2005–2008	**Bachelor's Degree in Computer Science**, *UMONS*, Belgium. With highest honors.

Main Research Interests

General	Formal methods, AI and machine learning, verification, optimization, complex systems, computer science and mathematics.
Focus	Automated controller synthesis for reactive systems, model checking, game theory, quantitative specifications, stochastic models, multi-criteria objectives, logic.

Honors

2020   **Nomination for best paper award at CONCUR 2020**

The 31th International Conference on Concurrency Theory, Vienna. For *Games Where You Can Play Optimally with Arena-Independent Finite Memory*.

2019   **Best paper award at CONCUR 2019**

The 30th International Conference on Concurrency Theory, Amsterdam. For *Life is Random, Time is Not: Markov Decision Processes with Window Objectives*.

2019   **Invited Professor at Ecole Normale Supérieure Paris-Saclay, France**

One month.

2016   **Best presentation award at Highlights 2016**

Highlights of Logic, Games and Automata conference, Brussels (~ 80 talks).

2015   **Ackermann Award**

Outstanding PhD Dissertation Award for Logic in Computer Science, worldwide selection by the EACSL – European Association for Computer Science Logic.

2014   **2nd Heidelberg Laureate Forum**

Invited participant (worldwide selection, acceptance rate $< 10\%$).

2010   **Award of the "Fondation Emile Cornez"**

For an outstanding academic background, awarded to the most deserving student graduated in 2010 from UMONS - Université de Mons.

Major research grants

2023–2026   **ControlleRS – Controllers in Many-sided Reactive Synthesis: a Strategic Perspective**

F.R.S.-FNRS Research Project, project leader, budget of 272.000 euros.

Ongoing. Publications: 11 (IJCAI×2, ICALP×2, STACS, CONCUR, FSTTCS, GandALF, LMCS, Information and Computation, Cambridge University Press), including two invited papers (IJCAI 2023, FSTTCS 2023). Preprints: 2.

2018–2019   **ManySynth – Many-sided Synthesis of Reactive Systems: Foundations, Algorithms, and Tools**

F.R.S.-FNRS Incentive Grant for Scientific Research, project leader, budget of 245.000 euros.

Publications: 18 (CAV, TACAS, CONCUR×5, ATVA×2, LMCS×2, FSTTCS×2, ICTAC, GandALF×2, Information and Computation, Cambridge University Press), including 2 best paper awards (CONCUR 2019, ICTAC 2019).

PhD and postdoc grants obtained as supervisor

F.R.S.-FNRS fellowships   J. C. A. Main (2021–2025), P. Vandenhove (2019–2023).

Professional Responsibilities

PC chair	MoRe 2019, MoRe 2018.
PC member	CONCUR 2025, MOVEP 2024, EUMAS 2023, EMSOFT 2022 (WiP track), SETTA 2022, SETTA 2021, FORMATS 2021, SETTA 2020, GandALF 2020, MFCS 2020, SETTA 2019, RP 2019, ICALP 2019, GandALF 2018, V2CPS 2017, GandALF 2017.
Reviewing	LICS, ICALP, STACS, CONCUR, TACAS, FoSSaCS, MFCS, ATVA, GandALF, QEST, FORMATS, TIME, SETTA, RP, Petri Nets, EMSOFT, EUMAS, ESA, Information and Computation, Acta Informatica, Theoretical Computer Science, Information Processing Letters, Formal Methods in System Design, Mathematical Methods of Operations Research, etc. Also contributor to Mathematical Reviews (American Mathematical Society).
Thesis jury	Louise Sadoine, UMONS, 2025; Soumyajit Paul, Université de Bordeaux, 2023; Tim Quatmann, RWTH Aachen, 2023; Pierre Carlier, UMONS & ENS Cachan, 2017; Noémie Meunier, UMONS, 2016.
Award jury	Antonella Karlson Prize 2023, CONCUR 2022 Test of Time Award.
Expertise for funding agencies	ANR – Agence Nationale de la Recherche, France.
Working groups	President of the (French-speaking) Belgian working group on formal methods, CFV, since 2021. Belgian representative for the French working groups GT Vérif (formal verification) and GT DAAL (Data, Automata, Algebra, and Logic) since 2019.
Organization	Young researchers (UMONS, 2014) and research group (ULB 2015–2017, UMONS 2018–present) seminars, CFV seminars (2021-present), MoRe workshops (2018, 2019), GAMENET workshop on Theory and Algorithms in Graph and Stochastic Games (2019).
University	Head of the Mathematics Department (2021–present). VP of the faculty's scientists assembly board (2019–2022). Member of the F.R.S.-FNRS representative council (OCN, 2018–2022). Active member of university councils: faculty council and department council. Past member of the ICT council, research council, scientists assembly board, and the F.R.S.-FNRS local committee. Founding member and ex-president of a student society.

Main collaborations (group leaders)

- Aalborg University: team of K.G. Larsen and M. Zimmermann.
- IRIF - Université Paris Diderot: team of A. Sangnier.
- IRISA - INRIA Rennes: teams of N. Bertrand, N. Markey and O. Sankur.
- IST Austria: team of K. Chatterjee.
- LaBRI: teams of H. Gimbert and N. Fijalkow.
- LACL - UPEC: team of Y. Oualhadj.
- LMF - ENS Paris-Saclay: teams of P. Bouyer, L. Doyen and S. Le Roux.
- Masaryk University: team of P. Novotný.
- RWTH Aachen: team of J.-P. Katoen.

- Swansea University: team of A. Pauly.
- ULB: teams of E. Filiot, G. Geeraerts and J.-F. Raskin.
- UMONS: teams of T. Brihaye and V. Bruyère.
- Université de Sherbrooke: team of M. Blondin.
- University of Turin: team of J. Sproston.
- UT Austin: team of U. Topcu.

National / international projects I have been part of: ARIAC - Applications et Recherche pour une Intelligence Artificielle de Confiance, COST GAMENET, ManySynth - Many-sided Synthesis of Reactive Systems: Foundations, Algorithms, and Tools; CASSTING - Collective Adaptative Systems Synthesis with Non-Zero-Sum Games; CFV - Centre Fédéré en Vérification; GASICS - Games for Analysis and Synthesis of Interactive Computational Systems; ERC inVEST; ERC EQualIS.

Teaching

2024–present	*Master theses* (UMONS, 4th and 5th year).
	▷ Head of jury for all Master theses in the Mathematics Department.
2018–present	*Formal methods for system design* (UMONS, 4th and 5th year).
	▷ The course material I created is now also used by Michael Blondin in Université de Sherbrooke (Sherbrooke, Canada), Thierry Massart in ULB (Brussels, Belgium), Nicolas Mazzocchi in STU Bratislava (Bratislava, Slovakia) and Guillermo A. Pérez in UAntwerpen (Antwerpen, Belgium).
2015–2018	*Formal verification of computer systems* (ULB, 4th year).
	▷ Substitute professor (full course supervision).
2010–2014	*Software engineering* (UMONS, 2nd and 3rd year).
2009–2010	*Algorithmics and programming* (UMONS, 1st year).

Mentoring

Postdoc students (4)

2025–2026	Sougata Bose on project ControlleRS.
2024–2026	Sanjana Dey on project ControlleRS.
2018–2019	Frantisek Blahoudek on project ManySynth.
2018–2019	Adrien Boiret on project ManySynth.

PhD students (5)

2023–2029	Luca Lani (UMONS, with Xavier Siebert): *Controller Synthesis for Continuous-state-space Models*.
2022–2028	Chloé Capon (UMONS): *Refinement Mechanisms in Many-Sided Reactive Synthesis*.
2021–2025	James C. A. Main (UMONS): *Controllers in Many-sided Reactive Synthesis: a Strategic Perspective*.
2019–2023	Pierre Vandenhove (UMONS and LSV, CNRS & ENS Paris-Saclay, with Patricia Bouyer): *Strategy Complexity of Zero-Sum Games on Graphs*.

2014–2018 Quentin Hautem (UMONS and ULB, with Véronique Bruyère and Jean-François Raskin): *The Complexity of Combining Objectives in Two-Player Games*.

Master students (22)

2024–2025 Maximilien Vanhaverbeke (UMONS, 5th year) on formal methods for epidemic modeling.

2023–2024 Maximilien Vanhaverbeke (UMONS, 5th year) on formal methods for epidemic modeling.

2022–2023 Luca Lani (UMONS, 5th year) on controller synthesis for continuous-state-space models via finite abstractions.

2021–2022 Chloé Capon (UMONS, 5th year) on counter-examples in stochastic models.

Nicolas Lecomte (UMONS, 5th year) on quantifying distance in synthesis.

Dimitri Waelkens (UMONS, 5th year) on multi-objective reinforcement learning.

Luca Lani (UMONS, 4th year) on multi-objective reinforcement learning.

2020–2021 Allan Dubrulle (UMONS, 5th year) on imperfect information games.

James Main (UMONS, 5th year) on alternative strategy models.

Dimitri Waelkens (UMONS, 5th year) on multi-objective reinforcement learning.

Chloé Capon (UMONS, 4th year) on counter-examples in stochastic models.

Nicolas Lecomte (UMONS, 4th year) on window objectives.

2019–2020 James Main (UMONS, 4th year) on efficient algorithms for parity games.

2018–2019 Pierre Vandenhove (UMONS, 5th year) on many-sided synthesis.

Dorian Labeeuw (UMONS, 4th year) on partial solvers for parity games.

Dimitri Waelkens (UMONS, 4th year) on learning for synthesis.

2017–2018 Florent Delgrange (UMONS, 5th year) on multi-objective stochastic systems.

Thomas Carlier (UMONS, 5th year) on reachability problems in stochastic systems.

2016–2017 Florent Delgrange (UMONS, 4th year) on beyond worst-case shortest path problems.

2015–2016 Simon Olbregts (UMONS, 5th year) on developing a tool suite for synthesis in graph games with window objectives.

2013–2014 Alexandre Devaux (UMONS, 5th year) on developing a tool suite for synthesis in graph games and beyond worst-case synthesis.

2012–2013 Alexandre Devaux (UMONS, 4th year) on multi-dimension energy games.

Interns (9)

2024 Baptiste Hilaire (ENS Paris-Saclay).

2023 Jean Abou Samra (ENS Paris-Saclay) on automata minimization.

2022 Maximilien Vanhaverbeke (UMONS) on memory requirements in games.

2021–2022 Nicolas Lecomte (UMONS) on window objectives.

2021 Luca Lani (UMONS) on memory requirements in games.

2020–2021 James Main (UMONS) on window timed games.

2019 James Main (UMONS) on parity games.

2016–2017 Raphaël Berthon (ENS Rennes) on beyond worst-case synthesis.

2015–2016 Jean-Baptiste Courtois (ENS Cachan) on beyond worst-case synthesis.

Bachelor students (3)

2016–2017 Rémy Detobel (ULB) on studying Monopoly through Markov chains.

2016–2017 Thomas Herman (ULB) on simple graph games.

2016–2017 Loan Sens (ULB) on stochastic shortest path problems.

Prizes obtained by students under my supervision (5)

2023 Luca Lani (Master student), Maurice Boffa Award, UMONS.

2022 Chloé Capon (Master student), Maurice Boffa Award, UMONS.

2022 Pierre Vandenhove (PhD student), Prix Doctorants STIC 2022 – *accessit*, Labex DigiCosme.

2021 James Main (Master student), Maurice Boffa Award, UMONS.

2019 Pierre Vandenhove (Master student), Maurice Boffa Award, UMONS.

Miscellaneous

Oral Skills Regular oral contributions in conferences (63 oral contributions since 2011).

Events Attended 76 research events and conferences since 2010.

Pop. Science Organizer of popular science workshops on game theory. Organizer of *Pint of Science* Mons in 2019.

Students' coaching Coach for students' team CPUMONS for ACM ICPC programming contests from 2016 to 2018. Our team won a bronze medal (rank 12/114) during NWERC 2016, 5th place during BAPC 2017, 3rd place during BAPC 2018.

Mentoring Mentor for the "Team Mentorat" program toward PhD students from various fields.

PhD Thesis

Title *Synthesis in Multi-Criteria Quantitative Games*.

UMONS - Université de Mons, 330 pages, 2014.

Description Shift from single-criterion quantitative models for synthesis to multi-criteria ones: multi-dimension specifications, new quantitative frameworks, rich behavioral models combining games and Markov decision processes.

Supervisors Véronique Bruyère (UMONS) & Jean-François Raskin (ULB).

Jury Véronique Bruyère (UMONS), Jean-François Raskin (ULB), Patricia Bouyer-Decitre (LSV – ENS Cachan, France), Joost-Pieter Katoen (RWTH Aachen, Germany), Thomas A. Henzinger (IST Austria, Austria), Thomas Brihaye (UMONS) and Hadrien Mélot (UMONS).

Graduation April 24, 2014.

Publications

Author names are usually ordered alphabetically. **Total: 46** (45 published, 1 preprint). All papers are available in full versions on my website and on arXiv.

Preprints (1)

[MR25] James C. A. Main, Mickael Randour. Mixing Any Cocktail with Limited Ingredients: On the Structure of Payoff Sets in Multi-Objective MDPs and its Impact on Randomised Strategies. *CoRR*, 2025.

Books (1)

[FBB+25] Nathanaël Fijalkow, C. Aiswarya, Guy Avni, Nathalie Bertrand, Patricia Bouyer, Romain Brenguier, Arnaud Carayol, Antonio Casares, John Fearnley, Paul Gastin, Hugo Gimbert, Thomas A. Henzinger, Florian Horn, Rasmus Ibsen-Jensen, Nicolas Markey, Benjamin Monmege, Petr Novotný, Pierre Ohlmann, Mickael Randour, Ocan Sankur, Sylvain Schmitz, Olivier Serre, Mateusz Skomra, Nathalie Sznajder, Pierre Vandenhove. *Games on Graphs*, Cambridge University Press, *in press*, 2025.

Invited papers in international peer-reviewed conferences (5)

[BGMR23] Thomas Brihaye, Aline Goeminne, James C. A. Main, Mickael Randour. Reachability Games and Friends: A Journey through the Lens of Memory and Complexity. *Keynote lecture at FSTTCS'23*, LIPIcs 284, pages 1:1-1-26, Schloss Dagstuhl, 2023.

[BCRV23] Patricia Bouyer, Antonio Casares, Mickael Randour, Pierre Vandenhove. Half-Positional Objectives Recognized by Deterministic Büchi Automata (Extended Abstract). *IJCAI'23 — Sister Conferences Best Papers Track*, pages 6420-6425, 2023.

[BRV22b] Patricia Bouyer, Mickael Randour, Pierre Vandenhove. The True Colors of Memory: A Tour of Chromatic-Memory Strategies in Zero-Sum Games on Graphs. *Keynote lecture at FSTTCS'22*, LIPIcs 250, pages 3:1-3:18, Schloss Dagstuhl, 2022.

[BCH+16] Romain Brenguier, Lorenzo Clemente, Paul Hunter, Guillermo A. Pérez, Mickael Randour, Jean-François Raskin, Ocan Sankur, Mathieu Sassolas. Non-Zero Sum Games for Reactive Synthesis. *Keynote lecture at LATA'16*, LNCS 9618, pages 3-23, Springer, 2016.

[RRS15a] Mickael Randour, Jean-François Raskin, Ocan Sankur. Variations on the Stochastic Shortest Path Problem. *Keynote lecture at VMCAI'15*, LNCS 8931, pages 1-18, Springer, 2015.

Peer-reviewed journals (12)

[MR24] James C. A. Main, Mickael Randour. Different Strokes in Randomised Strategies: Revisiting Kuhn's Theorem Under Finite-memory Assumptions. *Information and Computation*, volume 301, Elsevier, 2024.

[BCRV24] Patricia Bouyer, Antonio Casares, Mickael Randour, Pierre Vandenhove. Half-Positional Objectives Recognized by Deterministic Büchi Automata. *Logical Methods in Computer Science*, volume 20, issue 3, pages 19:1-19:42, 2024.

[BORV23] Patricia Bouyer, Youssouf Oualhadj, Mickael Randour, Pierre Vandenhove. Arena-Independent Finite-Memory Determinacy in Stochastic Games. *Logical Methods in Computer Science*, volume 19, issue 4, pages 18:1-18:51, 2023.

[BRV23] Patricia Bouyer, Mickael Randour, Pierre Vandenhove. Characterizing Omega-Regularity through Finite-Memory Determinacy of Games on Infinite Graphs. *TheoretiCS*, volume 2, 2023.

[BBR+22] Patricia Bouyer, Thomas Brihaye, Mickael Randour, Cédric Rivière, Pierre Vandenhove. Decisiveness of Stochastic Systems and its Application to Hybrid Models. *Information and Computation*, volume 289, Elsevier, 2022.

[BLO+22] Patricia Bouyer, Stéphane Le Roux, Youssouf Oualhadj, Mickael Randour, Pierre Vandenhove. Games Where You Can Play Optimally with Arena-Independent Finite Memory. *Logical Methods in Computer Science*, volume 18, issue 1, pages 11:1-11:44, 2022.

[BDOR20] Thomas Brihaye, Florent Delgrange, Youssouf Oualhadj, Mickael Randour. Life is Random, Time is Not: Markov Decision Processes with Window Objectives. *Logical Methods in Computer Science*, volume 16, issue 4, pages 13:1-13:30, 2020.

[BMR+18] Patricia Bouyer, Nicolas Markey, Mickael Randour, Kim G. Larsen, Simon Laursen. Average-energy games. *Acta Informatica*, volume 55, issue 2, pages 91-127, Springer, 2018.

[BFRR17] Véronique Bruyère, Emmanuel Filiot, Mickael Randour, Jean-François Raskin. Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games. *Information and Computation*, volume 254, pages 259-295, Elsevier, 2017.

[RRS17] Mickael Randour, Jean-François Raskin, Ocan Sankur. Percentile Queries in Multi-Dimensional Markov Decision Processes. *Formal Methods in System Design*, volume 50, issue 2, pages 207-248, Springer, 2017.

[CDRR15] Krishnendu Chatterjee, Laurent Doyen, Mickael Randour, Jean-François Raskin. Looking at Mean-Payoff and Total-Payoff through Windows. *Information and Computation*, volume 242, pages 25-52, Elsevier, 2015.

[CRR14] Krishnendu Chatterjee, Mickael Randour, Jean-François Raskin. Strategy Synthesis for Multi-Dimensional Quantitative Objectives. *Acta Informatica*, volume 51, issue 3-4, pages 129-163, Springer, 2014.

──────── **International peer-reviewed conference proceedings (26)** ────────

[AMNR25] Michal Ajdarów, James C. A. Main, Petr Novotný, Mickael Randour. Taming Infinity one Chunk at a Time: Concisely Represented Strategies in One-Counter MDPs. *ICALP'25*, , LIPIcs, Schloss Dagstuhl, 2025.

[BFRV23] Patricia Bouyer, Nathanael Fijalkow, Mickael Randour, Pierre Vandenhove. How to Play Optimally for Regular Objectives? *ICALP'23*, LIPIcs 261, pages 118:1–118:18, Schloss Dagstuhl, 2023.

[MRS22] James C. A. Main, Mickael Randour, Jeremy Sproston. Timed Games with Bounded Window Parity Objectives. *FORMATS'22*, LNCS 13465, pages 165–182, Springer, 2022.

[BCRV22] Patricia Bouyer, Antonio Casares, Mickael Randour, Pierre Vandenhove. Half-Positional Objectives Recognized by Deterministic Büchi Automata. *CONCUR'22*, LIPIcs 243, pages 20:1–20:18, Schloss Dagstuhl, 2022.

[MR22] James C. A. Main, Mickael Randour. Different strokes in randomised strategies: Revisiting Kuhn's theorem under finite-memory assumptions. *CONCUR'22*, LIPIcs 243, pages 22:1–22:18, Schloss Dagstuhl, 2022.

[BRV22a] Patricia Bouyer, Mickael Randour, Pierre Vandenhove. Characterizing Omega-Regularity through Finite-Memory Determinacy of Games on Infinite Graphs. *STACS'22*, LIPIcs 219, pages 16:1–16:16, Schloss Dagstuhl, 2022.

[BORV21] Patricia Bouyer, Youssouf Oualhadj, Mickael Randour, Pierre Vandenhove. Arena-Independent Finite-Memory Determinacy in Stochastic Games. *CONCUR'21*, LIPIcs 203, pages 26:1-26:18, Schloss Dagstuhl, 2021.

[MRS21] James C. A. Main, Mickael Randour, Jeremy Sproston. Time Flies When Looking out of the Window: Timed Games with Window Parity Objectives. *CONCUR'21*, LIPIcs 203, pages 25:1-25:16, Schloss Dagstuhl, 2021.

[BBR+20] Patricia Bouyer, Thomas Brihaye, Mickael Randour, Cédric Rivière, Pierre Vandenhove. Decisiveness of Stochastic Systems and its Application to Hybrid Models. *GandALF'20*, EPTCS 326, pages 149-165, 2020.

[BLO+20] Patricia Bouyer, Stéphane Le Roux, Youssouf Oualhadj, Mickael Randour, Pierre Vandenhove. Games Where You Can Play Optimally with Arena-Independent Finite Memory. *CONCUR'20*, LIPIcs 171, pages 24:1-24:22, Schloss Dagstuhl, 2020.

[DKQR20] Florent Delgrange, Joost-Pieter Katoen, Tim Quatmann, Mickael Randour. Simple Strategies in Multi-Objective MDPs. *TACAS'20*, LNCS 12078, pages 346-364, Springer, 2020.

[BHRR19] Véronique Bruyère, Quentin Hautem, Mickael Randour, Jean-François Raskin. Energy mean-payoff games. *CONCUR'19*, LIPIcs 140, pages 21:1–21:17, Schloss Dagstuhl, 2019.

[BDOR19] Thomas Brihaye, Florent Delgrange, Youssouf Oualhadj, Mickael Randour. Life is Random, Time is Not: Markov Decision Processes with Window Objectives. *CONCUR'19*, LIPIcs 140, pages 8:1–8:18, Schloss Dagstuhl, 2019. *Best paper award at CONCUR 2019*.

[LPR18] Stéphane Le Roux, Arno Pauly, Mickael Randour. Extending finite-memory determinacy by Boolean combination of winning conditions. *FSTTCS'18*, LIPIcs 122, pages 38:1-38:21, Schloss Dagstuhl, 2018.

[BGMR18] Patricia Bouyer, Mauricio González, Nicolas Markey, Mickael Randour. Multi-weighted Markov decision processes with reachability objectives. *GandALF'18*, EPTCS 277, pages 250-264, 2018.

[BRR17] Raphaël Berthon, Mickael Randour, Jean-François Raskin. Threshold Constraints with Guarantees for Parity Objectives in Markov Decision Processes. *ICALP'17*, LIPIcs 80, pages 121:1-121:15, Schloss Dagstuhl, 2017.

[BHM+17] Patricia Bouyer, Piotr Hofman, Nicolas Markey, Mickael Randour, Martin Zimmermann. Bounding Average-energy Games. *FoSSaCS'17*, LNCS 10203, pages 179-195, Springer, 2017.

[BHR16] Véronique Bruyère, Quentin Hautem, Mickael Randour. Window parity games: an alternative approach toward parity games with time bounds. *GandALF'16*, EPTCS 226, pages 135-148, 2016.

[BMR+16] Patricia Bouyer, Nicolas Markey, Mickael Randour, Arnaud Sangnier, Daniel Stan. Reachability in Networks of Register Protocols under Stochastic Schedulers. *ICALP'16*, LIPIcs 55, pages 106:1-106:14, Schloss Dagstuhl, 2016.

[BMR+15] Patricia Bouyer, Nicolas Markey, Mickael Randour, Kim G. Larsen, Simon Laursen. Average-energy games. *GandALF'15*, EPTCS 193, pages 1-15, 2015.

[RRS15b] Mickael Randour, Jean-François Raskin, Ocan Sankur. Percentile Queries in Multi-Dimensional Markov Decision Processes. *CAV'15*, LNCS 9206, pages 123-139, Springer, 2015.

[BFRR14b] Véronique Bruyère, Emmanuel Filiot, Mickael Randour, Jean-François Raskin. Expectations or Guarantees? I Want It All! A crossroad between games and MDPs. *SR'14*, EPTCS 146, pages 1-8, 2014.

[BFRR14a] Véronique Bruyère, Emmanuel Filiot, Mickael Randour, Jean-François Raskin. Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games. *STACS'14*, LIPIcs 25, pages 199-213, Schloss Dagstuhl, 2014.

[CDRR13] Krishnendu Chatterjee, Laurent Doyen, Mickael Randour, Jean-François Raskin. Looking at Mean-Payoff and Total-Payoff through Windows. *ATVA'13*, LNCS 8172, pages 118-132, Springer, 2013.

[Ran13] Mickael Randour. Automated synthesis of reliable and efficient systems through game theory: a case study. Proceedings of the *European Conference on Complex Systems 2012*, Springer Proceedings in Complexity XVII, pages 731-738, Springer, 2013.

[CRR12] Krishnendu Chatterjee, Mickael Randour, Jean-François Raskin. Strategy Synthesis for Multi-Dimensional Quantitative Objectives. *CONCUR'12*, LNCS 7454, pages 115-131, Springer, 2012.

International peer-reviewed conferences without proceedings (1)

[Ran16] Mickael Randour. Reconciling Rationality and Stochasticity: Rich Behavioral Models in Two-Player Games. *GAMES 2016, 5th World Congress of the Game Theory Society*, 16 pages, 2016.

Talks

Total: 63. All slides are available on my website.

Invited talks (20)

2025

○ TBA, *RP 2025*, 1-3/10, Madrid, Spain.

2024

○ Controllers in Reactive Synthesis: A Strategic Perspective, *GT Vérif*, 19/11, Lille, France.

2023

○ Half-Positional Objectives Recognized by Deterministic Büchi Automata, *IJCAI 2023 — Sister Conferences Best Papers Track*, 24/08, Macao, China.

2019

○ Life Is Random, Time Is Not: Markov Decision Processes with Window Objectives, *LSV working group*, 22/11, Ecole Normale Supérieure de Paris-Saclay, Cachan, France.
○ Rich behavioral models: illustration on journey planning, *LSV seminar*, 24/04, Ecole Normale Supérieure de Paris-Saclay, Cachan, France.
○ Rich behavioral models: illustration on journey planning, *GAMENET Workshop – Theory and Algorithms in Graph and Stochastic Games*, 14/03, Université de Mons, Mons, Belgium.

2018

○ Rich behavioral models: illustration on journey planning, *GT Vérif invited session*, 29/05, Université Grenoble Alpes, Grenoble, France.
○ Rich behavioral models: illustration on journey planning, *verification seminar*, 18/01, University of Oxford, Oxford, UK.

- Rich behavioral models: illustration on journey planning, *invited session talk*, 13/09, *HIGHLIGHTS 2017*, Queen Mary University, London, UK.
- Rich behavioral models: illustration on journey planning and focus on multi-constraint percentile queries in Markov decision processes, *Informatik Kolloquium*, 20/03, RWTH Aachen, Aachen, Germany.

2016

- Reachability in Networks of Register Protocols under Stochastic Schedulers, *IRISA - INRIA Rennes seminar*, 07/04, IRISA, Rennes, France.

2015

- Synthesis in Multi-Criteria Quantitative Games, *Ackermann Award lecture*, 11/09, CSL'15, Berlin, Germany.
- Percentile Queries in Multi-Dimensional Markov Decision Processes, *LACL seminar*, 01/06, UPEC - Université Paris-Est Créteil Val-de-Marne, Créteil, France.

2014

- Planning a Journey in an Uncertain Environment: The Stochastic Shortest Path Problem Revisited, *LIF seminar - MOVE research group*, 11/12, Université d'Aix-Marseille, Marseille, France.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *IST Austria seminar*, 17/06, IST Austria, Vienna, Austria.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *GT Jeux*, 24/01, Université Paris Diderot - Paris 7, Paris, France.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *LaBRI seminar*, 16/01, Université de Bordeaux, Bordeaux, France.

2013

- Looking at Mean-Payoff and Total-Payoff through Windows, *LIAFA seminar*, 16/12, Université Paris Diderot - Paris 7, Paris, France.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *LSV seminar*, 26/11, LSV - CNRS & ENS Cachan, Cachan, France.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *Nord Pas de Calais / Belgium Congress of Mathematics*, 28/10, Université de Valenciennes, Valenciennes, France.

Other oral contributions: conferences, seminars, etc (43)

2025

- Controllers in Reactive Synthesis: A Strategic Perspective, *UMONS Formal Methods Reading Group*, 27/01, Mons, Belgium.

2022

- Distances and refinement mechanisms in many-sided reactive synthesis, *UMONS Formal Methods Reading Group*, 27/01, Mons, Belgium.

2021

- Games Where You Can Play Optimally With Finite Memory, *FMAI 2021*, 16/04, London, UK.

2019

- Games Where You Can Play Optimally With Finite Memory, *GT ALGA annual meeting 2019*, 10/10, Paris, France.
- Games Where You Can Play Optimally With Finite Memory, *HIGHLIGHTS 2019*, 18/09, Warsaw, Poland.
- Extending finite-memory determinacy by Boolean combination of winning conditions, *RP 2019*, 12/09, Brussels, Belgium.
- Extending finite-memory determinacy by Boolean combination of winning conditions, *MoRe 2019 – 2nd International Workshop on Multi-objective Reasoning in Verification and Synthesis*, 22/06, Vancouver, Canada.
- Journey planning in uncertain environments, the multi-objective way, *Complex Systems think tank*, 15/01, Mons, Belgium.

2018

- Answering reachability problems in Markov decision processes using learning algorithms, L^2 *meeting*, 19/10, Mons, Belgium.

2017

- Bounding Average-Energy Games, *FoSSaCS'17*, 25/04, Uppsala, Sweden.
- Bounding Average-Energy Games, *MFV seminar*, 29/03, ULB, Brussels, Belgium.

2016

- Average-energy games, *HIGHLIGHTS 2016*, 09/09, Brussels, Belgium.
- Reconciling Rationality and Stochasticity: Rich Behavioral Models in Two-Player Games, *GAMES 2016 - 5th World Congress of the Game Theory Society*, 24/07, Maastricht, Netherlands.
- Reachability in Networks of Register Protocols under Stochastic Schedulers, *MFV seminar*, 19/05, ULB, Brussels, Belgium.
- Planning a journey in an uncertain environment: variations on the stochastic shortest path problem, *INFORTECH Scientific Day*, 21/04, UMONS, Mons, Belgium.
- Planning a journey in an uncertain environment, *Modeling & Simulation Day - Energie and Complexys Institutes*, 28/01, UMONS, Mons, Belgium.

2015

- Percentile Queries in Multi-Dimensional Markov Decision Processes, *HIGHLIGHTS'15*, 16/09, Prague, Czech Republic.
- Percentile Queries in Multi-Dimensional Markov Decision Processes, *CAV'15*, 21/07, San Francisco, USA.
- Average-energy games, *annual seminar of the LSV*, 09/06, Dourdan, France.
- Average-energy games, *5th CASSTING meeting*, 18/05, Brussels, Belgium.
- Planning a journey in an uncertain environment: variations on the stochastic shortest path problem, *EDT Complex Meeting*, 13/05, UNamur, Namur, Belgium.
- Average-energy games, *ERC Workshop in Verification*, 12/03, IST Austria, Vienna, Austria.

- Games with Window Quantitative Objectives, *FFM 2015*, 25/02, Aachen, Germany.
- Percentile Queries in Multi-Dimensional Markov Decision Processes, *Dagstuhl seminar on "Non-zero-sum games and control"*, 05/02, Leibniz-Zentrum für Informatik, Dagstuhl, Germany.
- Percentile Queries in Multi-Dimensional Markov Decision Processes, *CFV seminar*, 23/01, ULB, Brussels, Belgium.

2014

- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *HIGHLIGHTS'14*, 03/09, Paris, France.
- Synthesis in Multi-Criteria Quantitative Games, *public PhD defense*, 24/04, UMONS, Mons, Belgium.
- Synthesis in Multi-Criteria Quantitative Games, *private PhD defense*, 18/04, UMONS, Mons, Belgium.
- Expectations or Guarantees? I Want It All! A crossroad between games and MDPs, *SR'14*, 05/04, Grenoble, France.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *STACS'14*, 06/03, Lyon, France.

2013

- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *FM&V seminar*, 19/11, ULB, Brussels, Belgium.
- Looking at Mean-Payoff and Total-Payoff through Windows, *ATVA'13*, 16/10, Hanoi, Vietnam.
- Meet Your Expectations With Guarantees: Beyond Worst-Case Synthesis in Quantitative Games, *CASSTING 2nd meeting*, 01/10, Aalborg, Denmark.
- Looking at Mean-Payoff and Total-Payoff through Windows, *HIGHLIGHTS conference*, 20/09, Paris, France.
- Looking at Mean-Payoff and Total-Payoff through Windows, *ERC Workshop on Quantitative Models*, 09/05, Jerusalem, Israel.
- Looking at Mean-Payoff and Total-Payoff through Windows, *CASSTING kick-off meeting*, 12/04, Paris, France.
- Looking at Mean-Payoff and Total-Payoff through Windows, *CFV seminar*, 29/03, ULB, Brussels, Belgium.
- Looking at Mean-Payoff and Total-Payoff through Windows, FM&V seminar, 08/02, ULB, Brussels, Belgium.

2012

- Strategy Synthesis for Multi-dimensional Quantitative Objectives, *CONCUR'12*, 04/09, Newcastle, United Kingdom.
- Automated synthesis of reliable and efficient systems through game theory: a case study, *ECCS'12*, 03/09, Brussels, Belgium.
- Strategy Synthesis for Multi-dimensional Quantitative Objectives, *ERC Workshop on Synthesis*, 08/06, Brussels, Belgium.
- Strategy Synthesis for Multi-dimensional Quantitative Objectives, *FM&V seminar*, 18/04, ULB, Brussels, Belgium.

2011

- Strategy Synthesis for Quantitative Objectives, *GASICS Meeting*, 30/11, Brussels, Belgium.

Outreach and popular science

2023

- It's your turn to play!, *workshop for high school students, Mathematics and Science Days*, 23–24/03, Mons, Belgium.

2022

- Playing games is not a game!, *workshop for high school students (Athénée Royal de Dour)*, 26/04, Mons, Belgium.

2019

- Pint of Science 2019 Mons, *city coordinator*, 20–22/05, Mons, Belgium.
- It's your turn to play!, *workshop for high school students, Mathematics and Science Days*, 28–29/03, Mons, Belgium.

2018

- It's your turn to play!, *workshop for high school students, Mathematics and Science Days*, 22–23/03, Mons, Belgium.

2014

- Playing games is not a game!, *workshop for high school students, Mathematics and Science Days*, 27–28/03, Mons, Belgium.

2013

- Playing games is not a game!, *workshop for high school students, Mathematics and Science Days*, 21–22/03, Mons, Belgium.

Media

2023 Fascinante, l'IA va bouleverser la recherche et la société !, interview, *FNRS.news*, volume 128, 28/06/2023. Online.

2020 Les éclaireurs : la première ligne de soins, la théorie des jeux et les bugs informatiques, interview, *RTBF La Première*, 26/09/2020. Audio.

2018 Prévenir les bugs informatiques, interview, *FNRS.tv*, 14/09/2018. Video.