GIUSEPPE PERELLI
Research Associate
Sapienza University of Rome

CURRENT POSITIONS AND QUALIFICATIONS

Research Associate   01/01/2020 – Present
Sapienza University of Rome   *Department of Computer, Control, and Management Engineering*

National Scientific Qualification   23/11/2020 – 23/11/2029
Associate Professorship   *Field: Computer Science – INF/01*

FORMER POSITIONS

Postdoc Researcher   01/06/2019 – 31/12/2019
University of Göteborg   *Department of Computer Science and Engineering*

Research Associate   01/07/1028 – 31/05/2019
University of Leicester   *Department of Informatics*

Research Assistant   15/04/02015 – 31/05/2018
University of Oxford   *Department of Computer Science*

Visiting Research Scholar   22/08/2013 – 31/03/2014
Rice University   Host **Prof. Moshe Vardi** *– Department of Computer Science*

PROJECTS PARTICIPATION

WhiteMech: White-Box Self-Programming Mechanisms   01/01/2020 – Present
ERC Advanced Grant (Agreement n. 834228)   P.I.: **Prof. Giuseppe De Giacomo**

dSynMA: Distributed Synthesis from Single to Multiple Agents   02/07/2018 – 31/12/2019
ERC Consolidator Grant (Agreement n. 772459)   P.I.: **Prof. Nir Piterman**

RACE: Reasoning About Computational Economies   15/04/2015 – 31/05/2018
ERC Advanced Grant (Agreement n. 291528)   P.I.: **Prof. Michael Wooldridge**

ExCAPE: Computer Augmented Program Engineering   22/08/2013 – 31/03/2014
US National Science Foundation   P.I.: **Prof. Moshe Vardi**

EDUCATION

Ph.D. in Computer Science   01/03/2012 – 28/02/2015
University of Naples   *Department of Mathematics "R. Caccioppoli"*
Thesis title: Logics for Multi-Agent Systems Verification.   *Supervisor*: **Prof. Aniello Murano**.
Defense date: 21/05/2015

MS in Mathematics   27/10/2011
University of Naples   *Department of Mathematics "R. Caccioppoli"*
Final mark: *110/110 cum laude*   *Final dissertation's Supervisor*: **Prof. Aniello Murano**.

BS in Mathematics   17/12/2008
University of Naples   *Department of Mathematics "R. Caccioppoli"*
Final Mark: *107/110*   *Final dissertation's Supervisor*: **Prof. Francesca Visentin**.

AWARDS, SCHOLARSHIPS, AND FELLOWSHIPS

AILA Award   25/05/2012
Best MS Theses in Logics of 2012   *Italian Association of Logics for Applications*
Ph.D. Scholarship   06/02/2012
First place in the final rank selection   *University of Naples*

AFFILIATIONS

AILA   01/01/2013 – Present
Member   *Italian Association for Logic and its Applications*
GNCS   01/01/2013 – Present
Member   *Italian Association for Scientific Calculus*

TEACHING

Doctoral Consortium   10/05/2020
Mentor   *Student: Michael Pernpeintner – AAMAS 2020*
Game Theory and Formal Methods   25/03/2019 – 27/03/2019
Instructor   *Short Ph.D. Course – University of Leicester*
Computer-Aided Formal Verification   25/10/2017 – 29/11/2017
Tutor   *Undergraduate and Graduate program – University of Oxford*
Computational Complexity   02/02/2017 – 23/05/2017
Tutor and Marker for revision classes   *Undergraduate and Graduate program – University of Oxford*
Computer-Aided Formal Verification   27/10/2016 – 01/12/2016
Tutor   *Undergraduate and Graduate program – University of Oxford*

SUPERVISED STUDENTS

Senthil Rajasekaran   University of Oxford
MSc Mathematics and Foundations of Computer Science.   *Dissertation date: 01/09/2017*
Co-Supervisors: Prof. Michael Wooldridge and Dr. Julian Gutierrez.

INVITED TALKS

From Synthesis to Rational Synthesis: a Game-Theoretic Approach   10/04/2019
Seminar Talk   *Imperial College London*

From Synthesis to Rational Synthesis: a Game-Theoretic Approach   29/03/2018
Seminar Talk   *University of Naples*

Logics for Multi-Agent System Verification   15/12/2015
Seminar Talk   *Imperial College London*

Strategy Logic: a Powerful Formalism for Game-Theoretic Issues   24/11/2014
Seminar Talk   *University of California Santa Cruz*

ORGANIZATION OF SCIENTIFIC MEETINGS

Chair: LAMAS&SR-21, RADICAL-19.

Senior Program committee member: IJCAI-21.

Program committee member: AAAI-21, AAMAS-21 IJCAI-PRICAI-20, EUMAS-20, AAMAS-20, ECAI, IJCAI-19, AAMAS-19, EUMAS-18, IJCAI-ECAI-18, AAMAS-18, AAAI-18, EUMAS-17, SR-17, CILC-17, IJCAI-17, IJCAI-16, AAMAS-16.

Organizing committee member: SR-15, SR-13, GAMES-12.

REVIEWING

Since 2020: Logical Methods in Computer Science (ISSN: 18605974).

Since 2019: Artificial Intelligence Journal (ISSN: 00043702).

Since 2018: ACM Transaction on Computational Logic (ISSN: 15293785), Information and Computation (ISSN:0890-5401).

Since 2015: Special Issue of Strategic Reasoning on Information and Computation (ISSN: 0890-5401).

Since 2014: Journal on Artificial Intelligence Research (ISSN: 10769757).

REFERENCES

Prof. Giuseppe De Giacomo   Sapienza University of Rome
degiacomo@diag.uniroma1.it

Prof. Aniello Murano   University of Naples
aniello.murano@unina.it

Prof. Nir Piterman   University of Göteborg
piterman@chalmers.se

Prof. Moshe Vardi   Rice University
vardi@cs.rice.edu

Prof. Michael Wooldridge   University of Oxford
mjw@cs.ox.ac.uk

PUBLICATIONS

Journals

11. Julian Gutierrez and Giuseppe Perelli and Michael Wooldridge. Iterated Games with LDL Goals over Finite Traces. In *Information and Computation*. 2021. doi: **10.1016/j.ic.2020.104555**.

10. Laura Bozzelli and Aniello Murano and Giuseppe Perelli and Loredana Sorrentino. Hierarchical Cost-Parity Games. In *Theoretical Computer Science*. 2020. doi: **10.1016/j.tcs.2020.10.002**.

9. Julian Gutierrez and Muhammad Najib and Giuseppe Perelli and Michael Wooldridge. Automated Temporal Equilibrium Analysis: Verification and Synthesis of Multi-Player Games. In *Artificial Intelligence*. 2020. doi: **10.1016/j.artint.2020.103353**.

8. Julian Gutierrez, Aniello Murano, Giuseppe Perelli, Sasha Rubin, Thomas Steeples, and Michael Wooldridge. Equilibria for Games with Combined Qualitative and Quantitative Objectives. In *ACTA Informatica*. 2020. doi: **0.1007/s00236-020-00385-4**.

7. Julian Gutierrez and Paul Harrenstein and Giuseppe Perelli and Michael Wooldridge. Nash Equilibrium and Bisimulation Invariance. In *Logical Methods in Computer Science*, volume 15, issue 3. 2019. doi: **10.23638/LMCS-15(3:32)2019**.

6. Gaëlle Fontaine and Fabio Mogavero and Aniello Murano and Giuseppe Perelli and Loredana Sorrentino. Cycle Detection in Computation Tree Logic. In *Information and Computation*, volume 262, pages 265–279. 2018. doi: **10.1016/j.ic.2018.09.007**.

5. Julian Gutierrez and Giuseppe Perelli and Michael Wooldridge. Imperfect Information in Reactive Modules Games. In *Information and Computation*, volume 261, pages 650–675. 2018. doi: **10.1016/j.ic.2018.02.023**.

4. Fabio Mogavero and Aniello Murano and Giuseppe Perelli and Moshe Vardi. Reasoning about Strategies: On the Satisfiability Problem. In *Logical Methods in Computer Science*, volume 13, issue 1. 2017. doi: **10.23638/LMCS-13(1:9)2017**.

3. Alberto Molinari and Angelo Montanari and Aniello Murano and Giuseppe Perelli and Adriano Peron. Checking Interval Properties of Computations. In *ACTA Informatica*, pages 1–33. Springer Berlin Heidelberg, 2016. doi: **10.1007/s00236-015-0250-1**.

2. Orna Kupferman and Giuseppe Perelli and Moshe Vardi. Synthesis with Rational Environments. In *Annals of Mathematics and Artificial Intelligence*, volume 8953 of *Lecture Notes in Computer Science*, pages 219–235. Springer International Publishing, 2016. doi: **10.1007/978-3-319-17130-2_15**.

1. Fabio Mogavero and Aniello Murano and Giuseppe Perelli and Moshe Vardi. Reasoning about Strategies: On the Model-Checking Problem. In *ACM Transaction on Computational Logic*, volume 15(4), pages 34:1–34:47. ACM Association for Computing Machinery, 2014. doi: **10.1145/2631917**.

Conferences

23. Patricia Bouyer, Orna Kupferman, Nicolas Markey, Bastien Maubert, Aniello Murano, and Giuseppe Perelli. Reasoning about quality and fuzziness of strategic behaviours. In *ECAI 2020 - 24th European Conference on Artificial Intelligence, 29 August-8 September 2020, Santiago de Compostela, Spain, August 29 - September 8, 2020*, volume 325 of *Frontiers in Artificial Intelligence and Applications*, pages 2887–2888, 2020.

22. Yehia Abd Alrahman, Giuseppe Perelli, and Nir Piterman. Reconfigurable Interaction for MAS Modelling. In *Proceedings of the 19th International Conference on Autonomous Agents and MultiAgent Systems, AAMAS '20, Auckland, New Zealand, May 09-13, 2020*, pages 7–15.

21. Julian Gutierrez, Muhammad Najib, Giuseppe Perelli, and Michael Wooldridge. Equilibrium design for concurrent games. In *30th International Conference on Concurrency Theory, CONCUR 2019, August 27-30, 2019, Amsterdam, the Netherlands.*, pages 22:1–22:16, 2019.

20. Julian Gutierrez and Muhammad Najib and Giuseppe Perelli and Michael Wooldridge. On Computational Tractability for Rational Verification. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China, August 10-16, 2019*, pages 329–335, 2019.

19. Patricia Bouyer and Orna Kupferman and Nicolas Markey and Bastien Maubert and Aniello Murano and Giuseppe Perelli. Reasoning about Quality and Fuzziness of Strategic Behaviours. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China, August 10-16, 2019*, pages 1588–1594, 2019.

18. Giuseppe Perelli. Enforcing Equilibria in Multi-Agent Systems. In *Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems, AAMAS '19, Montreal, QC, Canada, May 13-17, 2019*, pages 188–196, 2019.

17. Julian Gutierrez and Muhammad Najib and Giuseppe Perelli and Michael Wooldridge. EVE: A Tool for Temporal Equilibrium Analysis. In *Automated Technology for Verification and Analysis - 16th International Symposium, ATVA 2018, Los Angeles, CA, USA, October 7-10, 2018, Proceedings*, pages 551–557, 2018.

16. Shaull Almagor and Orna Kupferman and Giuseppe Perelli. Synthesis of Controllable Nash Equilibria in Games with Quantitative Objectives. In *Proceedings of the Twenty-Seventh International Joint Conference on Artificial Intelligence, IJCAI 2018, July 13-19, 2018, Stockholm, Sweden.*, pages 35–41, 2018.

15. Laura Bozzelli and Aniello Murano and Giuseppe Perelli and Loredana Sorrentino. Hierarchical Cost-Parity Games. In *24th International Symposium on Temporal Representation and Reasoning, TIME 2017, October 16-18, 2017, Mons, Belgium*, pages 6:1–6:17, 2017.

14. Julian Gutierrez and Paul Harrenstein and Giuseppe Perelli and Michael Wooldridge. Nash Equilibrium and Bisimulation Invariance. In *28th International Conference on Concurrency Theory, CONCUR 2017, September 5-8, 2017, Berlin, Germany*, pages 17:1–17:16, 2017.

13. Julian Gutierrez and Aniello Murano and Giuseppe Perelli and Sasha Rubin and Michael Wooldridge. Nash Equilibrium in Concurrent Games with Lexicographic Preferences. In *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence, IJCAI 2017, Melbourne, Australia, August 19-25, 2017*, pages 1067–1073, 2017.

12. Julian Gutierrez and Giuseppe Perelli and Michael Wooldridge. Iterated Games with LDL Goals on Finite Traces. In *Proceedings of the 16th Conference on Autonomous Agents and MultiAgent Systems, AAMAS 2017, São Paulo, Brazil, May 8-12, 2017*, pages 696–704, 2017.

11. Gaëlle Fontaine and Fabio Mogavero and Aniello Murano and Giuseppe Perelli and Loredana Sorrentino. Cycle Detection in Computation Tree Logic. In *Proceedings of the Seventh International Symposium on Games, Automata, Logics and Formal Verification, GandALF 2016, Catania, Italy, 14-16 September 2016.*, pages 164–177, 2016.

10. Antonio di Stasio and Aniello Murano and Giuseppe Perelli and Moshe Vardi. Solving Parity Games by Using an Automata-Based Algorithm. In *Implementation and Application of Automata*

- 21st International Conference, CIAA 2016, Seoul, South Korea, July 19-22, 2016, Proceedings, pages 64–76, 2016.

9. Julian Gutierrez and Paul Harrenstein and Giuseppe Perelli and Michael Wooldridge. Expressiveness and Nash Equilibrium in Iterated Boolean Games. In *Proceedings of the 2016 International Conference on Autonomous Agents & Multiagent Systems, Singapore, May 9-13, 2016*, pages 707–715, 2016.

8. Julian Gutierrez and Giuseppe Perelli and Michael Wooldridge. Imperfect Information in Reactive Module Games. In *Principles of Knowledge Representation and Reasoning: Proceedings of the Fifteenth International Conference, KR 2016, Cape Town, South Africa, April 25-29, 2016.*, pages 390–400, 2016.

7. Michael Wooldridge and Julian Gutierrez and Paul Harrenstein and Enrico Marchioni and Giuseppe Perelli and Alexis Toumi. Rational Verification: From Model Checking to Equilibrium Checking. In *Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence, February 12-17, 2016, Phoenix, Arizona, USA.*, pages 4184–4191, 2016.

6. Aniello Murano and Giuseppe Perelli and Sasha Rubin. Multi-Agent Path Planning in Known Dynamic Environments. In *PRIMA 2015: Principles and Practice of Multi-Agent Systems - 18th International Conference, Bertinoro, Italy, October 26-30, 2015, Proceedings*, pages 218–231, 2015.

5. Fabio Mogavero and Giuseppe Perelli. Binding Forms in First-Order Logic. In *24th EACSL Annual Conference on Computer Science Logic, CSL 2015, September 7-10, 2015, Berlin, Germany*, pages 648–665, 2015.

4. Aniello Murano and Giuseppe Perelli. Pushdown Multi-Agent System Verification. In *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence, IJCAI 2015, Buenos Aires, Argentina, July 25-31, 2015*, pages 1090–1097, 2015.

3. Orna Kupferman and Giuseppe Perelli and Moshe Vardi. Synthesis with Rational Environments. In *Multi-Agent Systems - 12th European Conference, EUMAS 2014, Prague, Czech Republic, December 18-19, 2014, Revised Selected Papers*, pages 219–235, 2014.

2. Angelo Montanari, Aniello Murano, Giuseppe Perelli, and Adriano Peron. Checking Interval Properties of Computations. In *21st International Symposium on Temporal Representation and Reasoning, TIME 2014, Verona, Italy, September 8-10, 2014*, pages 59–68, 2014.

1. Fabio Mogavero, Aniello Murano, Giuseppe Perelli, and Moshe Vardi. What Makes ATL* Decidable? A Decidable Fragment of Strategy Logic. In *CONCUR 2012 - Concurrency Theory - 23rd International Conference, CONCUR 2012, Newcastle upon Tyne, UK, September 4-7, 2012. Proceedings*, LNCS 7454. Springer, 2012.

RoMA 17-01-2021

    Luogo e Data   Giuseppe Perelli