Curriculum Vitae

Personal Information

Name: Nicola Gigante

Web site: `https://www.inf.unibz.it/~gigante/`

Education

2019 **Ph.D. in Computer Science, Mathematics and Physics**, *University of Udine*, Italy
Thesis: **Timeline-based Planning: Expressiveness and Complexity**
Supervisor: Prof. **Angelo Montanari**, Ph.D.
Co-supervisors: **Andrea Orlandini**, Ph.D. – ISTC-CNR, Rome, Italy
Prof. **Mark Reynolds**, Ph.D. – University of Western Australia

2015 **Master Degree in Computer Science**, *University of Udine*, Italy
Final mark: **110**/110 cum **laude**
Thesis title: **A Linear Temporal Logic Approach to Classical and Temporal Planning**
Supervisor: Prof. **Angelo Montanari**, Ph.D.
Co-supervisors: **Andrea Orlandini**, Ph.D. – CNR, Rome, Italy
Prof. **Marta Cialdea Mayer**, Ph.D. – Roma Tre University, Rome, Italy

Career

2026-ongoing **Research Fellow (Contratto di Ricerca)**, *Faculty of Computer Science, Free University of Bozen-Bolzano, Italy*, Seal of Excellence Fellowship, Autonomous Province of Bozen-Bolzano.

2020-2026 **Researcher (RTD/a)**, *Faculty of Computer Science, Free University of Bozen-Bolzano, Italy*

2018–2020 **Research fellow (*Assegnista di ricerca*)**, *Department of Mathematics, Computer Science and Physics, University of Udine, Italy*
Research project: Temporal logic and models for understanding complex interaction systems
Principal Investigator: Prof. **Carla Piazza**, Ph.D.

Visits

2024 **Short-term visit**, *Institut de Recherche en Informatique et Systèmes Aléatoires*, IRISA, Rennes, France
Visit to Prof. Sophie Pinchinat, January 2024

2023 **Short-term visit**, *Laboratoire Bordelais de Recherche en Informatique*, LaBRI, Bordeaux, France
Visit to Prof. Frédéric Herbreteau, December 2023

Short-term visit, *IMDEA Software Institute*, Madrid, Spain
Visit to Prof. César Sánchez, November 2023

Short-term visit, *Verimag*, CNRS, Grenoble, France
Visit to Dr. Radu Iosif, October 2023

Short-term visit, *National Institute for Aerospace*, NASA Langley Research Center, Hampton (VA), USA
Visit to Dr. Laura Titolo, February 2023

2017 **Long-term visit**, *Department of Computer Science and Software Engineering*, University of Western Australia, Perth, Australia
6 months research visit to Prof. Mark Reynolds from 1 September 2017 to 31 March 2018

Awards

2024 **Seal of Excellence**, *Seal of Excellence for a Marie Skłodowska-Curie Actions proposal from the European Commission*, for the RESYST proposal "Reactive Synthesis meets First-Order"

2021 **Best Paper Award**, *SEFM 2021 - 19th International Conference on Software Engineering and Formal Methods*, for the paper *"Fairness, Assumptions, and Guarantees for Extended Bounded Response LTL synthesis"*, co-authored with Alessandro Cimatti, Luca Geatti, Angelo Montanari, and Stefano Tonetta

2019 **Special mention**, *GULP (Gruppo Ricercatori e Utenti di Logic Programming)*, for the doctoral dissertation *"Timeline-based Planning: Expressiveness and Complexity"*, Trieste, June 20th, 2019

Teaching

Formal teaching

2024 **60 hours**, *Computer Architecture*, Bachelor degree in Electronics and Cyber-Physical Systems Engineering, Free University of Bozen-Bolzano

2024 **60 hours**, *Computer Systems Architecture*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

2024 **20 hours**, *Operating Systems Lab*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

2023 **60 hours**, *Computer Systems Architecture*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

2022 **60 hours**, *Computer Systems Architecture*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

20 hours, *Operating Systems Lab*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

2021 **60 hours**, *Computer Systems Architecture*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

20 hours, *Introduction to Analysis and Optimization Techniques*, Bachelor degree in Informatics and Management of Digital Business, Free University of Bozen-Bolzano

2020 **20 hours**, *Computer Systems Architecture Lab*, Bachelor degree in Computer Science, Free University of Bozen-Bolzano

2019 **6 hours**, *Timeline-based planning: Theory and Practice*, Ph.D. Course in Computer Science, Mathematics and Physics, University of Udine

24 hours, *Operating Systems Lab*, Bachelor degree in Computer Science, University of Udine

2016 **24 hours**, *Operating Systems Lab*, Bachelor degree in Computer Science, University of Udine

Software Security teaching

CyberChallenge.IT (`https://cyberchallenge.it`) is a training program, recognized by the Italian Ministry of Education, for young people from 16 to 24 years old on the general topic of *cyber security*. For selected students, the project consists in an extensive course and other specific activities. The candidate acted as instructor for parts of the course over several years.

2024 Software Security instructor for the CC.IT initiative at the Free University of Bozen-Bolzano

2023 Software Security instructor for the CC.IT initiative at the Free University of Bozen-Bolzano

2022 Software Security instructor for the CC.IT initiative at the University of Udine

2021 Software Security instructor for the CC.IT initiative at the University of Udine

2020 Software Security instructor for the CC.IT initiative at the University of Udine

Theses co-supervision

2022 **Master thesis**, *Controller Synthesis for Timeline-based Games*, Renato Acampora, Master degree in Computer Science, University of Udine
co-supervised, main supervisor prof. Angelo Montanari

2020 **Master thesis**, *A SAT-based encoding of the one-pass and tree-shaped tableau system for LTL+Past*, Gabriele Venturato, Master degree in Computer Science, University of Udine
co-supervised, main supervisor prof. Angelo Montanari

Master thesis, *A Deterministic Automaton for Timeline-based Planning*, Valentino Picotti, Master degree in Computer Science, University of Udine
co-supervised, main supervisor prof. Angelo Montanari

2018 **Master thesis**, *One-Pass Tree-Shaped Tableau Systems for Timed Temporal Logics*, Luca Geatti, Master degree in Computer Science, University of Udine
co-supervised, main supervisor prof. Angelo Montanari

2016 **Bachelor thesis**, *Implementation of Open Memory Transactions in Haskell*, Valentino Picotti, Bachelor degree in Computer Science, University of Udine
co-supervised, main supervisor prof. Marino Miculan

Supervised Postdocs

2021–2022 Dr. **Luca Geatti**
12 month Research Fellowship (Assegno di Ricerca) funded by the TOTA research project (see below).

Granted Research Projects

Externally funded projects

2024 **TelAIo**

Role: Principal Investigator
Funder: *Not disclosable*
Dates: January–December 2024
Budget: € 50,000.00
Topic: Development of an automated planning and monitoring infrastructure for the production belt of a world-renowned Italian car manufacturer.

2022 **PURPLE**

Role: Principal Investigator
Funder: *Fondazione Bruno Kessler*, Trento, Italy. In the context of the 1st *Open Call for Innovators* of the H2020 project *AIPlan4EU*. `https://www.aiplan4eu-project.eu`
Dates: September 2022–March 2023
Budget: € 60,000.00
Topic: Development of an automated planning engine for classical and temporal planning problems based on LTL satisfiability.

Internal faculty grants

2021 **STAGE**, *Synthesis for Timeline-based Planning Games*

Role: Principal Investigator
Funder: Faculty of Computer Science, Free University of Bozen-Bolzano
Budget: € 10,000.00
Dates: 2021–2023
Topic: Develpment of reactive synthesis algorithms for timeline-based games.
Outcomes: See the publication at GandALF 2022.

2020 **TOTA**, *Temporal Ontologies and Tableaux Algorithms*

Role: Principal Investigator
Funder: Faculty of Computer Science, Free University of Bozen-Bolzano
Budget: € 25,000.00
Dates: 2020–2022
Topic: First-order extensions of tree-shaped tableau algorithms for *linear temporal logic*.
Outcomes: See the publications at IJCAI 2022 and ECAI 2023.

International conferences committee memberships

Organization

2024 **Organizing committee chair**. Sixth Workshop on Artificial Intelligence and f**O**rmal **VER**ification, **L**ogics, **A**utomata, and s**Y**nthesis (**OVERLAY** 2024). `https://overlay.uniud.it/workshop/2024/`

2023 **Organizing committee** member. 14th International Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2023), Udine, Italy. `https://gandalf23.uniud.it`

Technical advisor. Fifth Workshop on Artificial Intelligence and f**O**rmal **VER**ification, **L**ogics, **A**utomata, and s**Y**nthesis (**OVERLAY** 2023). `https://overlay.uniud.it/workshop/2023/`

2022 **Organizing committee co-chair**. 21st International Conference of the Italian Association for Artificial Intelligence (AIxIA 2022) `https://aixia2022.uniud.it`

Organizing committee member. 4th International Conference on Process Mining (ICPM 2022). `https://icpmconference.org/2022/`

2019 **Chair**. First Workshop on Artificial Intelligence and f**O**rmal **VER**ification, **L**ogics, **A**utomata, and s**Y**nthesis (**OVERLAY** 2019). `https://overlay.uniud.it/workshop/2019/`

2018 **Organizing committee** member. Logic Colloquium 2018, Udine, 23–28 July 2018. `https://lc18.uniud.it`

Program committees

2025 *Program Committee Area Chair*. 35th International Conference on Automated Planning and Scheduling (ICAPS 2025), November 9–14, Melbourne, Australia

Program Committee member. 34th International Joint Conference on Artificial Intelligence (IJCAI 2025), August 16–22, Montreal, Canada

2024 *Program Committee* member. 38th AAAI Conference on Artificial Intelligence (AAAI 2024), Febryary 20–27, Vancouver, Canada

Program Committee member. 21st International Conference on Knowledge Representation and Reasoning (KR 2024), November 2–8, Hanoi, Vietnam

Program Committee member. 31st International Symposium on Temporal Representation and Reasoning (TIME 2024), October 28–30, Montpellier, France

Program Committee member. 33rd International Joint Conference on Artificial Intelligence (IJCAI 2024), August 3–9, Jeju, South Korea

Program Committee member. 34th International Conference on Automated Planning and Schedulinge (ICAPS 2024), June 1–6, Banff, Alberta, Canada

2023 *Program Committee* member. 26th European Conference on Artificial Intelligence (ECAI 2023), September 30–October 5, Kraków, Poland

Program Committee member. 20th European Conference of Multi-Agents Systems (EUMAS 2023), September 14–15, Naples, Italy

Program Committee member. 14th International Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2023), Udine, Italy

Program Committee member. 32st International Joint Conference on Artificial Intelligence (IJCAI 2023), August 19–25, Macao SAR, China.

Program Committee member. 33rd International Conference on Automated Planning and Scheduling (ICAPS 2023), July 8–13, Prague, Czechia

Program Committee member. 37th AAAI Conference on Artificial Intelligence (AAAI 2023), February 7–14, Washington DC, USA

2022 *Program Committee* member. 31st International Joint Conference on Artificial Intelligence (IJCAI 2022), July 22–29, Vienna, Austria.

Program Committee member. 36th AAAI Conference on Artificial Intelligence (AAAI 2022), February 22–March 1, Virtual.

2021 *Program Committee* member. Third Workshop on Artificial Intelligence and fOrmal VERification, Logics, Automata, and sYnthesis (OVERLAY 2021), September 22, Padua, Italy.

Program Committee member. 30th International Joint Conference on Artificial Intelligence (IJCAI 2021), August 19–26, Virtual.

Program Committee member. 35th AAAI Conference on Artificial Intelligence (AAAI 2021), February 2–9, Virtual.

2020 *Program Committee* member. Second Workshop on Artificial Intelligence and fOrmal VERification, Logics, Automata, and sYnthesis (OVERLAY 2020), September 25, Virtual.

Program Committee member. 29th International Joint Conference on Artificial Intelligence (IJCAI 2020), July 11–17, Virtual.

Program Committee member. 24th European Conference on Artificial Intelligence (ECAI 2020), June 8–12, Virtual.

Program Committee member. 34th AAAI Conference on Artificial Intelligence (AAAI 2020), February 7–12, New York (NY), USA.

2019 *Program Committee* member. 28th International Joint Conference on Artificial Intelligence (IJCAI 2019), Macao (China).

Conference tutorials

Tutorials given at scientific conferences.

2023 ICAPS 2023, *33rd The International Conference on Automated Planning and Scheduling*, July 8–13, Prague, Czech Republic
Tutorial title: *How hard can it be? The computational complexity of planning*

AAAI 2023, *37th AAAI Conference on Artificial Intelligence*, February 7–14, Washington DC, USA
Tutorial title: *Hands-On with the BLACK Satisfiability Checker*

2022 IJCAI 2022, *31st International Joint Conference on Artificial Intelligence*, July 22–29, Vienna, Austria
Tutorial title: *Tableau methods for linear-time temporal logics*

2019 IJCAI 2019, *28th International Joint Conference on Artificial Intelligence*, August 10–16, Macao, China
Tutorial title: *Timeline-based planning: theory and practice*

2018 AI*IA 2018, *17th International Conference of the Italian Association for Artificial Intelligence*, November 20–23, Trento, Italy
Tutorial title: *Timeline-based planning: theory and practice*

ICAPS 2018, *28th International Conference on Automated Planning and Scheduling*, June 24–29, Delft, The Netherlands
Tutorial title: *Timeline-based planning: theory and practice*

Courses given at summer schools

Courses given at international doctoral schools.

2023 ESSAI 2023, *First European Summer School on Artificial Intelligence*
24–28 July, 2023, Ljubljana, Slovenia
Course title: *Temporal reasoning in AI: an introduction*

Publications

Edited volumes

2020 Nicola Gigante, Federico Mari, and Andrea Orlandini, eds. *Proceedings of the 1st Workshop on Artificial Intelligence and Formal Verification, Logic, Automata, and Synthesis, co-located with the 18th International Conference of the Italian Association for Artificial Intelligence, OVERLAY@AI*IA 2019, Rende, Italy, November 19-20, 2019*. Vol. 2509. CEUR Workshop Proceedings. CEUR-WS.org, 2020. URL: http://ceur-ws.org/Vol-2509

Journal articles

2024 Luca Geatti, Nicola Gigante, Angelo Montanari, and Gabriele Venturato. "SAT Meets Tableaux for Linear Temporal Logic Satisfiability". In: *J. Autom. Reason.* 68.2 (2024), p. 6. DOI: 10.1007/S10817-023-09691-1

Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "Fairness, assumptions, and guarantees for extended bounded response LTL+P synthesis". In: *Softw. Syst. Model.* 23.2 (2024), pp. 427–453. DOI: 10.1007/S10270-023-01122-4. URL: https://doi.org/10.1007/s10270-023-01122-4

Renato Acampora, Luca Geatti, Nicola Gigante, Angelo Montanari, and Valentino Picotti. "Controller Synthesis for Timeline-based Games". In: *Log. Methods Comput. Sci.* 20.3 (2024). DOI: 10.46298/LMCS-20(3:17)2024

Nicolò Rossi, Nicola Gigante, Nicola Vitacolonna, and Carla Piazza. "Inferring Markov Chains to Describe Convergent Tumor Evolution With CIMICE". in: *IEEE ACM Trans. Comput. Biol. Bioinform.* 21.1 (2024), pp. 106–119. DOI: 10.1109/TCBB.2023.3337258

2023 Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "A first-order logic characterisation of safety and co-safety languages". In: *Logical Methods in Computer Science* 19.3 (2023). DOI: 10.46298/LMCS-19(3:13)2023

Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "GR(1) is equivalent to R(1)". In: *Inf. Process. Lett.* 179 (2022), p. 106319. DOI: 10.1016/j.ipl.2022.106319

2022 Nicola Gigante, Andrea Micheli, Angelo Montanari, and Enrico Scala. "Decidability and Complexity of Action-Based Temporal Planning over Dense Time". In: *Artificial Intelligence* 307 (2022), p. 103686. DOI: 10.1016/j.artint.2022.103686

2021 Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "Extended Bounded Response LTL: a New Safety Fragment for Efficient Reactive Synthesis". In: *Formal Methods in System Design* (2021, to appear on paper). DOI: 10.1007/s10703-021-00383-3

Luca Geatti, Nicola Gigante, Angelo Montanari, and Mark Reynolds. "One-pass and tree-shaped tableau systems for TPTL and TPTL_b+Past". In: *Inf. Comput.* 278 (2021), p. 104599. DOI: 10.1016/j.ic.2020.104599

2020 *Nicola Gigante*, Angelo Montanari, Andrea Orlandini, Marta Cialdea Mayer, and Mark Reynolds. "On timeline-based games and their complexity". In: *Theoretical Computer Science* 815 (2020), pp. 247–269. DOI: 10.1016/j.tcs.2020.02.011

Conference papers

2025 Luca Geatti, Alessandro Gianola, and Nicola Gigante. "First-Order Automata". In: *Proceedings of AAAI-25*. Ed. by Toby Walsh, Julie Shah, and Zico Kolter. AAAI Press, 2025, pp. 14940–14948. DOI: 10.1609/AAAI.V39I14.33638

2024 Michele Chiari, Luca Geatti, Nicola Gigante, and Matteo Pradella. "SMT-Based Symbolic Model-Checking for Operator Precedence Languages". In: *Proceedings of the 36th International Conference on Computer Aided Verification*. Ed. by Arie Gurfinkel and Vijay Ganesh. Vol. 14681. Lecture Notes in Computer Science. Springer, 2024, pp. 387–408. DOI: 10.1007/978-3-031-65627-9_19

2023 Alessandro Artale, Luca Geatti, Nicola Gigante, Andrea Mazzullo, and Angelo Montanari. "LTL over finite words can be exponentially more succinct than pure-past LTL, and *vice versa*". In: *Proceedings of the 30th International Symposium on Temporal Representation and Reasoning*. Vol. 278. LIPIcs. 2023, 2:1–2:14

Nicola Gigante, Lucía Gómez Álvarez, and Tim S. Lyon. "Standpoint Linear Temporal Logic". In: *Proceedings of the 20th International Conference on Principles of Knowledge Representation and Reasoning*. Ed. by Pierre Marquis, Tran Cao Son, and Gabriele Kern-Isberner. KR 2023, pp. 311–321. DOI: 10.24963/kr.2023/31

Alessandro Artale, Luca Geatti, Nicola Gigante, Andrea Mazzullo, and Angelo Montanari. "A Singly Exponential Transformation of LTL[X, F] into Pure Past LTL". in: *Proceedings of the 20th International Conference on Principles of Knowledge Representation and Reasoning*. KR 2023, pp. 65–74. DOI: 10.24963/kr.2023/7

Nicola Gigante and Enrico Scala. "On the Compilability of Bounded Numeric Planning". In: *Proceedings of the Thirty-Second International Joint Conference on Artificial Intelligence*. IJCAI 2023, pp. 5341–5349. DOI: 10.24963/ijcai.2023/593

Alessandro Artale, Luca Geatti, Nicola Gigante, Andrea Mazzullo, and Angelo Montanari. "Complexity of Safety and coSafety Fragments of Linear Temporal Logic". In: *Proceedings of the 37th AAAI Conference on Artificial Intelligence*. AAAI 2023, pp. 6236–6244

Luca Geatti, Alessandro Gianola, Nicola Gigante, and Sarah Winkler. "Decidable Fragments of LTL_f Modulo Theories". In: *26th European Conference on Artificial Intelligence*. Ed. by Kobi Gal, Ann Nowé, Grzegorz J. Nalepa, Roy Fairstein, and Roxana Radulescu. Vol. 372. Frontiers in Artificial Intelligence and Applications. IOS Press, 2023, pp. 811–818. DOI: 10.3233/FAIA230348

2022 Renato Acampora, Luca Geatti, Nicola Gigante, Angelo Montanari, and Valentino Picotti. "Controller Synthesis for Timeline-based Games". In: *Proceedings of the 13th International Symposium on Games, Automata, Logics and Formal Verification*. Vol. 370. EPTCS. 2022, pp. 131–146. DOI: 10.4204/EPTCS.370.9

Nicola Gigante, Andrea Micheli, and Enrico Scala. "On the Expressive Power of Intermediate and Conditional Effects in Temporal Planning". In: *Proceedings of the 19th International Conference on Principles of Knowledge Representation and Reasoning*. 2022. URL: https://proceedings.kr.org/2022/18/

Luca Geatti, Alessandro Gianola, and Nicola Gigante. "Linear Temporal Logic Modulo Theories over Finite Traces". In: *Proceedings of the Thirty-First International Joint Conference on Artificial Intelligence*. 2022, pp. 2641–2647. DOI: 10.24963/ijcai.2022/366

Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "A first-order logic characterisation of safety and co-safety languages". In: *Proceedings of the 25th International Conference on Foundations of Software Science and Computation Structures*. Vol. 13242. LNCS. 2022, pp. 244–263. DOI: 10.1007/978-3-030-99253-8_13

2021 Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "Fairness, Assumptions, and Guarantees for Extended Bounded Response LTL+P Synthesis". In: *Proceedings of the 19th International Conference Software Engineering and Formal Methods*. Vol. 13085. Lecture Notes in Computer Science. **Best Paper Award**. Springer, 2021, pp. 351–371. DOI: 10.1007/978-3-030-92124-8_20

Luca Geatti, Nicola Gigante, Angelo Montanari, and Gabriele Venturato. "Past Matters: Supporting LTL+Past in the BLACK Satisfiability Checker". In: *28th International Symposium on Temporal Representation and Reasoning*. Vol. 206. LIPIcs. 2021, 8:1–8:17. DOI: 10.4230/LIPIcs.TIME.2021.8

Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "Expressiveness of Extended Bounded Response LTL". in: *Proceedings 12th International Symposium on Games, Automata, Logics, and Formal Verification*. Vol. 346. EPTCS. 2021, pp. 152–165. DOI: 10.4204/EPTCS.346.10

2020 Alessandro Cimatti, Luca Geatti, Nicola Gigante, Angelo Montanari, and Stefano Tonetta. "Reactive Synthesis from Extended Bounded Response LTL Specifications". In: *2020 Formal Methods in Computer Aided Design*. IEEE, 2020, pp. 83–92. DOI: 10.34727/2020/isbn.978-3-85448-042-6_15

Dario Della Monica, Nicola Gigante, Salvatore La Torre, and Angelo Montanari. "Complexity of Qualitative Timeline-Based Planning". In: *27th International Symposium on Temporal Representation and Reasoning*. Ed. by Emilio Muñoz-Velasco, Ana Ozaki, and Martin Theobald. Vol. 178. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, TIME 2020, 16:1–16:13. DOI: 10.4230/LIPIcs.TIME.2020.16. URL: https://doi.org/10.4230/LIPIcs.TIME.2020.16

Nicola Gigante, Andrea Micheli, Angelo Montanari, and Enrico Scala. "Decidability and Complexity of Action-Based Temporal Planning over Dense Time". In: *Proceedings of the 34th AAAI Conference on Artificial Intelligence*. AAAI 2020, pp. 9859–9866. URL: https://aaai.org/ojs/index.php/AAAI/article/view/6539

2019 *Luca Geatti*, Nicola Gigante, and Angelo Montanari. "A SAT-Based Encoding of the One-Pass and Tree-Shaped Tableau System for LTL". in: *Proceedings of the 28th International Conference on Automated Reasoning with Analytic Tableaux and Related Methods*. TABLEAUX 2019, pp. 3–20. DOI: 10.1007/978-3-030-29026-9_1

2018 Dario Della Monica, Nicola Gigante, Angelo Montanari, and *Pietro Sala*. "A Novel Automata-Theoretic Approach to Timeline-Based Planning". In: *Proceedings of the 16th International Conference on Principles of Knowledge Representation and Reasoning*. KR 2018, pp. 541–550. URL: https://aaai.org/ocs/index.php/KR/KR18/paper/view/18024

Luca Geatti, *Nicola Gigante*, Angelo Montanari, and Mark Reynolds. "One-Pass and Tree-Shaped Tableau Systems for TPTL and TPTLb+Past". In: *Proceedings of the 9th International Symposium on Games, Automata, Logics, and Formal Verification*. GandALF 2018, pp. 176–190. DOI: 10.4204/EPTCS.277.13

Nicola Gigante, Angelo Montanari, Marta Cialdea Mayer, Andrea Orlandini, and Mark Reynolds. "A Game-Theoretic Approach to Timeline-Based Planning with Uncertainty". In: *Proceedings of the 25th International Symposium on Temporal Representation and Reasoning*. TIME 2018, 13:1–13:17. DOI: 10.4230/LIPIcs.TIME.2018.13

2017 Dario Della Monica, *Nicola Gigante*, Angelo Montanari, Pietro Sala, and Guido Sciavicco. "Bounded Timed Propositional Temporal Logic with Past Captures Timeline-based Planning with Bounded Constraints". In: *Proc. of the 26th International Joint Conference on Artificial Intelligence*. IJCAI 2017, pp. 1008–1014. DOI: 10.24963/ijcai.2017/140

Nicola Gigante. "On the Complexity and Expressiveness of Automated Planning Languages Supporting Temporal Reasoning (Extended Abstract)". In: *Proc. of the 26th International Joint Conference on Artificial Intelligence*. IJCAI 2017, pp. 5181–5182. DOI: 10.24963/ijcai.2017/750

Nicola Gigante, Angelo Montanari, Marta Cialdea Mayer, and Andrea Orlandini. "Complexity of Timeline-based Planning". In: *Proc. of the 27th International Conference on Automated Planning and Scheduling*. ICAPS 2017, pp. 116–124

Nicola Gigante, Angelo Montanari, and Mark Reynolds. "A One-Pass Tree-Shaped Tableau for LTL+Past". In: *Proc. of the 21st International Conference on Logic for Programming, Artificial Intelligence and Reasoning*. LPAR 21, pp. 456–473

2016 *Nicola Gigante*, Angelo Montanari, Marta Cialdea Mayer, and Andrea Orlandini. "Timelines Are Expressive Enough to Capture Action-Based Temporal Planning". In: *Proc. of the 23rd International Symposium on Temporal Representation and Reasoning*. TIME 2016, pp. 100–109. DOI: 10.1109/TIME.2016.18

Matteo Bertello, Nicola Gigante, Angelo Montanari, and Mark Reynolds. "Leviathan: A New LTL Satisfiability Checking Tool Based on a One-Pass Tree-Shaped Tableau". In: *Proc. of the 25th International Joint Conference on Artificial Intelligence*. IJCAI 2016, pp. 950–956

2015 Alberto Policriti, Nicola Gigante, and *Nicola Prezza*. "Average Linear Time and Compressed Space Construction of the Burrows-Wheeler Transform". In: *Proc. of the 9th International Conference on Language and Automata Theory and Applications*. LATA 2015, pp. 587–598

Workshop papers and extended abstracts

2023 Luca Geatti, Alessandro Gianola, and Nicola Gigante. "Torwards Infinite-State Verification and Planning with Linear Temporal Logic Modulo Theories (Extended Abstract)". In: *30th International Symposium on Temporal Representation and Reasoning*. Ed. by Alexander Artikis, Florian Bruse, and Luke Hunsberger. Vol. 278. LIPIcs. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2023, 21:1–21:3. DOI: 10.4230/LIPICS.TIME.2023.21

Renato Acampora, Luca Geatti, Nicola Gigante, and Angelo Montanari. "Qualitative past Timeline-Based Games (Extended Abstract)". In: *30th International Symposium on Temporal Representation and Reasoning*. Ed. by Alexander Artikis, Florian Bruse, and Luke Hunsberger. Vol. 278. LIPIcs. 2023, 22:1–22:3. DOI: 10.4230/LIPICS.TIME.2023.22

2022 Alessandro Gianola and Nicola Gigante. "LTL Modulo Theories over Finite Traces: modeling, verification, open questions". In: *4th Workshop on Artificial Intelligence and Formal Verification, Logic, Automata, and Synthesis*. Ed. by Luca Geatti, Guido Sciavicco, and Alessandro Umbrico. Vol. 3311. CEUR Workshop Proceedings. CEUR-WS.org, 2022, pp. 13–19. URL: https://ceur-ws.org/Vol-3311/paper3.pdf

2021 Luca Geatti, Nicola Gigante, and Angelo Montanari. "BLACK: A Fast, Flexible and Reliable LTL Satisfiability Checker". In: *Proceedings of the 3rd Workshop on Artificial Intelligence and Formal Verification, Logic, Automata, and Synthesis*. Vol. 2987. CEUR Workshop Proceedings. CEUR-WS.org, 2021, pp. 7–12

2017 *Nicola Gigante*. "On the Complexity and Expressiveness of Automated Planning Languages Supporting Temporal Reasoning (Extended Abstract)". In: *Proc. of the 26th International Joint Conference on Artificial Intelligence*. IJCAI 2017, pp. 5181–5182. DOI: 10.24963/ijcai.2017/750