

Dario Della Monica

PhD, Associate Professor (*Professore Associato*)

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Current academic position

Since November 28, 2022 **Associate Professor (Professore Associato)**, *University of Udine - Department of Mathematics, Computer Science, and Physics (DMIF)*, Udine, Italy.
Research area: Formal Methods for Computer Science, Artificial Intelligence

Academic titles

ASN 01/B1 **Abilitazione Scientifica Nazionale (ASN)**, 01/B1 (*Informatica*), seconda fascia, valida dall'11/09/2019 all'11/09/2025.
National Academic Qualification as Associate Professor in Computer Science
<https://asn18.cineca.it/pubblico/miur/esito-abilitato/01%252FB1/2/2>

ASN 09/H1 **Abilitazione Scientifica Nazionale (ASN)**, 09/H1 (*Ingegneria Informatica*), seconda fascia, valida dal 26/07/2018 al 26/07/2024.
National Academic Qualification as Associate Professor in Computer Engineering
<https://asn16.cineca.it/pubblico/miur/esito-abilitato/09%252FH1/2/5>

Previous academic positions

- November 28, 2019– **Assistant Professor (tenure track – RTD-B)**, *University of Udine - Department of Mathematics, Computer Science, and Physics (DMIF)*, Udine, Italy.
- November 27, 2022 Research area: Formal Methods for Computer Science, Artificial Intelligence
- October 1, 2018– **Assistant Professor (RTD-A)**, *University of Udine - Department of Mathematics, Computer Science, and Physics (DMIF)*, Udine, Italy.
- November 27, 2019 Research area: Formal Methods for Computer Science and Information Retrieval
- October 2016– **“INdAM-Marie Curie” Fellow**, *Istituto Nazionale di Alta Matematica (INdAM)*, April 2018–September 2018: **Research Assistant** at University “Federico II” of Naples - Department of Electrical Engineering and Information Technology (DIETI), Naples, Italy
- September 2018 *October 2016–March 2018: Research Assistant* at Universidad Complutense de Madrid - Sección Departamental de Sistemas Informáticos y Computación, Madrid, Spain.
Research area: Formal Methods for System Verification
- January 2016– **Research Assistant**, *University “Federico II” of Naples - Department of Electrical Engineering and Information Technology (DIETI)*, Naples, Italy.
- September 2016 Research area: Formal Methods for System Verification
- March 2012– **Research Assistant**, *Reykjavik University - School of Computer Science*, Reykjavik, Iceland.
- December 2015 Research area: Interval Temporal Logic
- February 2011– **Research Assistant**, *University of Salerno - Department of Computer Science*, Salerno, Italy.
- January 2012 Research area: Formal Methods for Systems Verification

Education

- January 2008–April 2011 **PhD Student in Computer Science**, *University of Udine - Department of Mathematics and Computer Science*, Udine, Italy.
Research area: Interval Temporal Logics
Thesis title: Expressiveness, decidability, and undecidability of Interval Temporal Logic
- January 2005– **"Laurea specialistica" (Master's degree) in Computer Science**, *University of Napoli “Federico II”*, Napoli, Italy, *Grade: 110/100 cum laude*.
- October 2007 Area: automatic verification of software
Thesis title: Una procedura di model checking in un dominio lineare astratto per la verifica di programmi C con array (A model checking procedure in abstract linear domain for the verification of C program with array)
- September 2001– **"Laurea triennale" (Bachelor's Degree) in Computer Science**, *University of Napoli “Federico II”*, Napoli, Italy, *Grade: 110/110*.
- January 2005 Area: 3-D skeletonization process of digital image

Phd thesis

- title *Expressiveness, decidability, and undecidability of Interval Temporal Logic*
- subject Interval Temporal Logic

supervisor Angelo Montanari
co-supervisor Guido Sciavicco and Valentin Goranko
note Winner of the *GULP prize for the best Italian PhD dissertation in the area of Computational Logic* for the years 2010-2011.
abstract Interval Temporal Logics are formalisms particularly suitable to express temporal properties. Unlike standard temporal logics, they use intervals, instead of points, as primitive ontological entities. The most studied propositional interval temporal logic is Halpern and Shoham's Modal Logic of Time Intervals (HS for short). It features a modal operator for each possible ordering relation between pairs of intervals (the so-called Allen's relations). HS is very expressive, but its satisfiability problem turns out to be highly undecidable (over most classes of linear orders). The three main contributions of this thesis are the following ones. First, we provide a complete classification of HS fragments with respect to their relative expressive power in the class of all linear orders. Second, we systematically investigate the decidable/undecidable status of the satisfiability problem for a number of previously unclassified HS fragments, showing that, once more, undecidability is the rule and decidability the exception. Pairing the results given here with existing ones, the long-standing goal of obtaining a complete classification of all HS fragments with respect to their satisfiability problem is now almost achieved. Third, we study metric, hybrid, and first-order extensions of Propositional Neighborhood Logic (over natural numbers), a meaningful and well-studied decidable fragment of HS.

Master thesis

title *Una procedura di model checking in un dominio lineare astratto per la verifica di programmi C con array (A model checking procedure in abstract linear domain for the verification of C program with array)*
subject Automatic Software Verification
supervisor Massimo Benerecetti
description The thesis regarded the formalization (with relative proof of correctness and completeness) and implementation in C++ language of a new strategy of abstraction and verification absorbed in an abstraction-verification-refinement cycle (CEGAR - CounterExample Guided Abstraction Refinement), basic for Eureka tool (<http://www.ai-lab.it/eureka/>), for automatic verification of linear programs (in C language) with arrays.

Research interests

Interval Temporal Logic Interval temporal logics are based on temporal structures where time intervals, rather than time instants, are the primitive ontological entities. The most important and natural among them is the Halpern and Shoham's Interval Temporal Logic (HS, for short). It features the modal operators corresponding to the various relations between intervals, known as Allen's relations. I have mainly been working on satisfiability and expressiveness issues for (classical extensions of) HS and its fragments.

Automated system verification Automated verification of multi-agent systems is a significant topic in the recent literature in artificial intelligence. The need of modeling this kind of systems has inspired logical formalisms, the most famous being the Alternating-time Temporal Logics, namely ATL*, ATL+, and ATL, oriented towards the description of collective behaviors. These logics are natural specification languages for open systems, that is, systems whose behavior depends on the interaction with an external entity, usually called the environment or the opponent. I faced the problem of model checking ATL-specifications with respect to multi-agents systems (formalized as game arena) where the agents must act subject to quantitative constraints (e.g., single agents' resource availability, global energy threshold) as well as qualitative ones (expressed, e.g., by means of parity conditions).

Reactive systems and concurrency theory Equivalence/preorder checking is one of the main approaches to the computer-aided verification of reactive systems. Systems and their specifications are both expressed in the same state-machine-based formalism, and checking whether a system correctly implements its specification amounts to verifying whether the state machines describing them are related by some suitable notion of behavioural equivalence/preorder. I have been working on a logical characterisation of several behavioural relations that have been considered in the field of concurrency theory, aiming at exploring the link between equivalence/preorder checking and another major approach to automated verification of system, namely model checking.

Events and editorship

Editorship

EPTCS, *Guest Editor*, Proceedings of GandALF 2022.

CEUR Workshop Proceedings, *Guest Editor*, Proceedings of OVERLAY 2021.

Fundamenta Informaticae, *Guest Editor*, Special Issue of Fundamenta Informaticae based on a selection of papers presented at CILC 2017.

CEUR Workshop Proceedings, *Guest Editor*, Joint Proceedings of ICTCS 2017 and CILC 2017.

Program Committee Chair

GandALF 2023, 14th International Symposium on Games, Automata, Logics, and Formal Verification “GandALF 2023”, Udine (Italy), date: TBA, (url: <http://gandalf23.uniud.it/>).

GandALF 2022, 13th International Symposium on Games, Automata, Logics, and Formal Verification “GandALF 2022”, Madrid (Spain), 21–23 September 2022, (<https://gandalf2022.software.imdea.org/>).

OVERLAY 2021, 3rd Workshop on fOrmal VERification, Logic, Automata, and sYnthesis “OVERLAY 2021”, Padova (Italy), 22 September 2021, (<https://overlay.uniud.it/workshop/2021/>).

CILC 2017, 32nd Italian Conference on Computational Logic “CILC 2017”, Naples (Italy), 26–28 September 2017, (<http://cilc2017.unina.it/>).

Program Committee Membership

CILC 2023, 38th Italian Conference on Computational Logic “CILC 2023” (<https://www.programmazione logica.it/associazione/il-convegno/cilc23/>), June 21–23, 2023, Udine (Italy).

AI*IA 2022, 21st International Conference of the Italian Association for Artificial Intelligence “AI*IA 2022” (<https://aixia2022.uniud.it/>), November 28–December 2, 2022, Udine (Italy).

LAMAS&SR 2022, International Workshop on Logical Aspects in Multi-Agent Systems and Strategic Reasoning “LAMAS&SR 2022” (<https://lamassr.github.io/>), August 25–26, 2022, Rennes (France).

CILC 2022, 37th Italian Conference on Computational Logic “CILC 2022” (<http://cilc2022.apice.unibo.it/>), June 29–July 1, 2022, Bologna (Italy).

AAMAS 2022, 21st International Conference on Autonomous Agents and Multiagent Systems “AAMAS 2022” (<https://aamas2022-conference.auckland.ac.nz/>), May 9–13, 2022, Auckland (New Zealand).

AAAI 2022, 36th AAAI Conference on Artificial Intelligence “AAAI 2022” (<https://aaai.org/Conferences/AAAI-22/>), February 22–March 1, 2022.

IJCAI 2022, 31st International Joint Conference on Artificial Intelligence “IJCAI 2022” (<https://ijcai-22.org/>), July 23–29, 2022, Vienna (Austria).

Nominated “Distinguished PC member” (top 3%).

IJCAI 2022/2024, Member of the Program Committee Board of IJCAI for the years 2022, 2023, and 2024.

CILC 2021, 36th Italian Conference on Computational Logic “CILC 2021” (<https://www.ailab.unipr.it/cilc21/>), September 7–9, 2021, Parma (Italy).

IJCAI 2021, 30th International Joint Conference on Artificial Intelligence “IJCAI 2021” (<https://ijcai-21.org/>), August 19–26, 2021 (virtual conference).

AAAI 2021, 35th AAAI Conference on Artificial Intelligence “AAAI 2021” (<https://aaai.org/Conferences/AAAI-21/>), February 2–9, 2021 (virtual conference).

PRIMA 2020, 23rd International Conference on Principles and Practice of Multi-Agent Systems “PRIMA 2020” (<http://uchiya.web.nitech.ac.jp/prima2020/>), November 18–20, 2020 (virtual conference).

OVERLAY 2020, 2nd Workshop on fORMAL VERification, Logic, Automata, and sYNthesis “OVERLAY 2020” within TIME 2020 and BOSK 2020 (<https://overlay.uniud.it/workshop/2020/>), September 25–26, 2020, Bolzano (Italy).

AI*IA 2020, 19th International Conference of the Italian Association for Artificial Intelligence “AI*IA 2020” (<https://aixia2020.disco.unimib.it/home>), November 24–27, 2020, Milano (Italy).

CILC 2020, 35th Italian Conference on Computational Logic “CILC 2020” (<https://cilc2020.demacs.unical.it/>), September 24–25, 2020, Rende (Italy).

IJCAI-PRICAI 2020, 29th International Joint Conference on Artificial Intelligence and the 17th Pacific Rim International Conference on Artificial Intelligence “IJCAI-PRICAI 2020” (<https://ijcai20.org/>), July 11–17, 2020, Yokohama (Japan).

AAMAS 2020, 19th International Conference on Autonomous Agents and Multiagent Systems “AAMAS 2020” (<https://aamas2020.conference.auckland.ac.nz/>), May 9–13, 2020, Auckland (New Zealand).

AAAI 2020, 34th AAAI Conference on Artificial Intelligence “AAAI 2020” (<https://aaai.org/Conferences/AAAI-20/>), February 7–12, 2020, New York (USA).

PRIMA 2019, 22nd International Conference on Principles and Practice of Multi-Agent Systems “PRIMA 2019” (<https://prima2019.di.unito.it/>), October 28–31, 2019, Torino (Italy).

OVERLAY 2019, 1st Workshop on fOrmal VERification, Logic, Automata, and sYnthesis “OVERLAY 2019” within AIxIA 2019 (<https://overlay.uniud.it/workshop/2019/>), November 19–20, 2019, Rende (Italy).

AI*IA 2019, 18th International Conference of the Italian Association for Artificial Intelligence “AI*IA 2019” (<https://aiia2019.mat.unical.it/>), November 19–22, 2019, Rende (Italy).

GandALF 2019, 10th International Symposium on Games, Automata, Logics, and Formal Verification “GandALF 2019” (<https://gandalf2019.sciencesconf.org/>), September 2–4, 2019, Bordeaux (France).

IJCAI 2019, 28th International Joint Conference on Artificial Intelligence “IJCAI 2019” (<http://ijcai19.org/>), August 10–16, 2019, Macao (China).

Nominated “Distinguished PC member”.

AAMAS 2019, 18th International Conference on Autonomous Agents and Multiagent Systems “AAMAS 2019” (<http://aamas2019.encs.concordia.ca/>), May 13–17, 2019, Montreal (Canada).

AAAI 2019, 33rd AAAI Conference on Artificial Intelligence “AAAI 2019” (<http://aaai.org/Conferences/AAAI-19/>), January 27–February 1, 2019, Honolulu, Hawaii (USA).

AI*IA 2018, 17th International Conference of the Italian Association for Artificial Intelligence “AI*IA 2018” (<http://aixia2018.fbk.eu/index.php/home/>), November 20–23, 2018, Trento (Italy).

CILC 2018, 33rd Italian Conference on Computational Logic “CILC 2018” (<https://cilc2018.events.unibz.it>), September 20–22, 2018, Bolzano (Italy).

GandALF 2018, 9th International Symposium on Games, Automata, Logics, and Formal Verification “GandALF 2018” (<https://www.react.uni-saarland.de/gandalf2018/>), September 26–28, 2018, Saarbrücken (Germany).

IJCAI-ECAI 2018, 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence “IJCAI-ECAI 2018” (<https://www.ijcai-18.org/>), July 13–19, 2018, Stockholm (Sweden).

LRBA 2015, ESSLLI Workshop on Logics for Resource-Bounded Agents “LRBA 2015” (<http://www.cs.nott.ac.uk/~nza/lrba15/>), August 10–14, 2015, Barcelona (Spain).

Organizing Committee Membership

AI*IA 2022, 21st International Conference of the Italian Association for Artificial Intelligence “AI*IA 2022”, Udine (Italy), November 28–December 2, 2022, (<https://aixia2022.uniud.it/>).

LC 2018, Logic Colloquium 2018, Udine (Italy), 23-28 July 2018, (<https://lc18.uniud.it/>).

ICTCS 2017, 18th Italian Conference on Theoretical Computer Science “ICTCS 2017”, Naples (Italy), 26-28 September 2017, (<http://ictcs2017.unina.it/>).

FMAI 2017, 1st Workshop on Formal Methods in AI “FMAI 2017”, Naples (Italy), 22-24 February 2017, (<https://sites.google.com/site/fmai2017homepage/>).

NWPT 2015, 27th Nordic Workshop on Programming Theory “NWPT 2015”, Reykjavik (Iceland), 21-23 October 2015, (<http://icetcs.ru.is/nwpt2015/>).

Madrid Meet 2015 (CONCUR/QEST/FORMATS and others), joint conference including CONCUR 2015, QEST 2015, FORMATS 2015, TGC 2015, WS-FM/BEAT 2015, and several co-located workshops, Madrid (Spain), 31 August-5 September 2015, (<http://mafalda.fdi.ucm.es/madrid2015/>).

GandALF 2012, 3rd International Symposium on Games, Automata, Logics and Formal Verification “GandALF 2012”, Napoli (Italy), 6-8 September 2012, (<http://www.gandalf.unina.it/>).

GandALF 2011, 2nd International Symposium on Games, Automata, Logics and Formal Verification “GandALF 2011”, Minori, Amalfi Coast, Salerno (Italy), 15-17 June 2011, (<http://gandalf.dia.unisa.it/2011/>).

GandALF 2010, 1st International Symposium on Games, Automata, Logics and Formal Verification “GandALF 2010”, Minori, Amalfi Coast, Salerno (Italy), 17-18 June 2010, (<http://gandalf.dia.unisa.it/2010/>).

GAMES 2009, Annual Workshop “GAMES 2009”, Udine (Italy), 14-17 September 2009, (<http://games2009.dimi.uniud.it/>).

GAMES 2009 is part of the ESF Research Networking Programme on Games for Design and Verification (GAMES) (<http://www.games.rwth-aachen.de/>).

Fundings, research projects, and groups

Principal investigator of funded peer-reviewed research projects

- 2019 **Principal Investigator**, *Formal methods for combined verification (Metodi formali per tecniche di verifica combinata)*.
Italian INdAM-GNCS project. **Amount of the grant: 7,000.00 EUR.**
- 2017-2018 **Principal Investigator**, *Model Rating: Enhancing model checking with information on model distance*.
INdAM-COFUND Fellowship in Mathematics and/or Applications for experienced researchers, co-funded by “Marie Curie Actions”. **Amount of the grant: ca. 100,000.00 EUR.**
- 2013-2015 **Principal Investigator**, *Decidability and Expressiveness for Interval Temporal Logics*, project nr. 130802-051.
START Postdoctoral Fellowship programme, Rannis, Icelandic Research Fund, co-funded by “Marie Curie Actions”. **Amount of the grant: 13,320,000.00 ISK (ca. 107,000.00 EUR—exchange rate: Dec 2nd, 2017).**

Participation in funded projects

- 2020 **Ragionamento Strategico e Sintesi Automatica di Sistemi Multi-Agente**.
Italian INdAM-GNCS project.
- 2016 **Strategic reasoning for multi-agent systems**.
University “Federico II” of Naples.

- 2016 **Logics, Automata, and Games for Auto-Adaptive Systems.**
Italian INdAM-GNCS project.
- 2015 **Algorithmic techniques for model checking and synthesis of safety-critical systems.**
Italian INdAM-GNCS project.
- 2014-2015 **Formal Methods for the Development and Evaluation of Sustainable Systems.**
Project funded under the Programme NILS Science and Sustainability (Abel - Coordinated Mobility for Researchers), within the Priority Sectors Programme of the EEA Grants Framework.
- 2014 **Automata, Games, and Temporal Logics for Verification and Synthesis of Controllers in Safety-Critical Systems.**
Italian INdAM-GNCS project.
- 2012-2013 **Processes and Modal Logics, *project nr. 100048021.***
Icelandic Research Fund.
- 2011 **Metodi formali per la verifica automatica di sistemi.**
University of Salerno.
- 2010 **Logics, Automata, and Games for Formal Verification of Complex Systems.**
Italian INdAM-GNCS project (<http://itl.dimi.uniud.it/gnecs>).
- 2008 **Innovative and multi-disciplinary approaches for constraint and preference reasoning.**
Italian PRIN project.

Participation in research groups

- 2018– **Member of the “Data Science and Automatic Verification” laboratory.**
The “Data Science and Automatic Verification” laboratory (<http://datasciencelab.dimi.uniud.it>) is led by prof. Angelo Montanari, within the Dipartimento di Scienze Matematiche, Informatiche e Fisiche (DMIF) at University of Udine (Italy).
- 2016–2018 **Member of ASTREA.**
ASTREA is the “Automated STRategic REASONing” group, led by prof. Aniello Murano, within the Department of Electrical Engineering and Information Technology (DIETI) at University “Federico II” of Naples (Italy).
- March 2012– **Member of ICE-TCS.**
December 2015 ICE-TCS is the “Icelandic Center of Excellence in Computer Science”, within the School of Computer Science at Reykjavik University
- January 2007– **Member of the Eureka project.**
Artificial Intelligence laboratory at the University of Genova (Italy), in collaboration with the Section of Computer Science, Physical Sciences Department, University of Napoli (Italy)
- October 2007 “Federico II” (<http://www.ai-lab.it/eureka/>).

Grant and prizes

Major awards

- August 2016 **Winner of one of the INdAM-COFUND Fellowships in Mathematics and/or Applications for experienced researchers, co-funded by “Marie Curie Actions”**, administered by INdAM (*Istituto Nazionale di Alta Matematica “F. Severi”—National Institute for Advanced Mathematics*), for funding the project “Model Rating: Enhancing model checking with information on model distance” (2017-2018), **amount of the grant: ca. 100,000.00 EUR**.
- March 2013 **Young researcher award for 2011**, from *University of Udine (Italy)* for the paper “Metric Propositional Neighborhood Logics on Natural Numbers” (coauthors: *D. Bresolin, A. Montanari, V. Goranko, and G. Sciavicco*), *Software and Systems Modeling (SoSyM)* — see below for publication details.
- January 2013 **Winner of the START Postdoctoral Fellowship programme, co-funded by “Marie Curie Actions”**, administered by Rannis through the *Icelandic Research Fund (IRF)*, in partnership with the *European Commission Framework 7 Programme (People)*, for funding the project nr. 130802-051 “Decidability and Expressiveness for Interval Temporal Logics” (2013-2015), **amount of the grant: 13,320,000.00 ISK (ca. 107,000.00 EUR—exchange rate: Dec 2nd, 2017)**.
- November 2012 **GULP prize for the best Italian PhD dissertation in the area of Computational Logic**, for the years 2010-2011 for the PhD thesis “Expressiveness, decidability, and undecidability of Interval Temporal Logic”.
GULP is the Italian Association for Logic Programming, affiliated to Association for Logic Programming (ALP).
- [Other awards](#)
- September 2022 **IJCAI 2022 Distinguished PC member**.
- June 2019 **IJCAI 2019 Distinguished PC member**.
- August 2014 **ECCAI travel grant**, to attend the *21st European Conference on Artificial Intelligence (ECAI 2014)*.
- May 2014 **Best paper award**, for the paper “First steps towards automated synthesis of tableau systems for interval temporal logics” (coauthors: *A. Montanari, G. Sciavicco, and D. Tishkovsky*), *5th International Conference on Computational Logics, Algebras, Programming, Tools, and Benchmarking (COMPUTATION TOOLS 2014)* — see below for publication details.
- August 2012 **ECCAI travel grant**, to attend the *20th European Conference on Artificial Intelligence (ECAI 2012)*.
- August 2010 **ECCAI travel grant**, to attend the *19th European Conference on Artificial Intelligence (ECAI 2010)*.

Teaching and supervision

Teaching at undergraduate and graduate level

- 2021–2022 **Advanced Database Systems For Big Data/Data Management for Big Data** (2nd period) **(in English)**, *University of Udine and University of Trieste*, Master course.
- 2021–2022 **Database Laboratory (in Italian)**, *University of Udine*, Bachelor course. (1st period)
- 2020–2021 **Advanced Database Systems For Big Data/Data Management for Big Data** (2nd period) **(in English)**, *University of Udine and University of Trieste*, Master course.

- 2020–2021 **Database Laboratory (in Italian)**, *University of Udine*, Bachelor course.
(1st period)
- 2019–2020 **Data Management for Big Data (in English)**, *University of Udine and University of Trieste*, Master course.
(2nd period)
- 2019–2020 **Database Laboratory (in Italian)**, *University of Udine*, Bachelor course.
(1st period)
- 2018–2019 **Data Management for Big Data (in English)**, *University of Udine and University of Trieste*, Master course.
(2nd period)
- 2018–2019 **Database Laboratory (in Italian)**, *University of Udine*, Bachelor course.
(1st period)
- 2014–2015 **Programming Languages (in English)**, *Reykjavik University*, Bachelor course.
(2nd period)
- January 2009–May 2011 **Advanced Laboratory of Databases and Information Systems (in Italian)**, *University of Udine*, Bachelor course.

Teaching at Professional Master's Programmes (Master italiani di I e II livello)

- 2019–2020 **Data Management for Big Data (in Italian)**, *University of Udine*, Master di I livello in **Filosofia del Digitale** (modulo: *Gli strumenti del digitale*).
(2nd period)

Student (co-)supervision

- Master theses **University of Udine (Italy)**: Ionel Eduard Stan
University of Udine and University of Trieste (Italy): Paolo Pulcini, Nicolas Solomita, Alex Fulgosi .
- Bachelor theses **University of Udine (Italy)**: Chiara Sequalini, Alessandra Tracanelli, Kalaja Klajdi, Raimondo Barbuto, Fabio Lena, Matteo Zof, Xavier Zentilin, Lorenzo Marcon, Emanuele D'Agostini.
University of Salerno (Italy): Luigi D'Amora.

- Undergraduate project supervision **Tómas Ken Magnússon**, *Enumeration algorithms for modal logics, Horn theories, and hyper-graphs*, Reykjavik University, Iceland.

Other experiences

Extra-academic talks and seminars

- 25 May 2016 **Dissemination seminar**, *La mente tra logica e percezione: Ragionamento cognitivo e ragionamento simbolico (in Italian—English translation: Mind between logic and perception: Cognitive and symbolic reasoning)*, seminar within the international educational event “Pint of Science 2016”, held at club “U-Turn Piano B”, vico Pallonetto Santa Chiara, 15, Napoli (Italy).

Miscellaneous

- May 2017 **Research visiting Period**, *University of Malta - Malta*, Research collaboration. Visiting period c/o professor Adrian Francalanza at University of Malta - Malta for research collaboration.
- September 2015– **Research visiting Period**, *Universidad Complutense de Madrid - Spain*, Research collaboration.
- November 2015 Visiting period c/o professor David de Frutos Escrig at Universidad Complutense de Madrid - Madrid - Spain for research collaboration.

- April 2014–June 2014 **Research visiting Period**, *Universidad Complutense de Madrid - Spain*, Research collaboration.
 Visiting period c/o professor David de Frutos Escrig at Universidad Complutense de Madrid - Madrid - Spain for research collaboration.
- April 2013–June 2013 **Research visiting Period**, *University of Murcia - Spain*, Research collaboration.
 Visiting period c/o professor Guido Sciavicco at University of Murcia - Departamento de Ingenieria de la Información y las comunicaciones - Murcia - Spain for research collaboration.
- September 2010– **Research visiting period**, *Technical University of Denmark (DTU), Lyngby, Copenhagen - Denmark*, Research collaboration.
- November 2010 Visiting period c/o professor Valentin Goranko at Section Algorithms and Logic - Department of Informatics and Mathematical Modelling (IMM) - Technical University of Denmark (DTU), Lyngby, Copenhagen (Denmark) for research collaboration.
- Since February 2010 **Webmaster**.
 Webmaster of the website <http://itl.dimi.uniud.it/gncc> (developed in Drupal) about a GNCS project I am involved in.
- October 2009–December 2009 **Research visiting Period**, *University of Murcia - Spain*, Research collaboration.
 Visiting period c/o professor Guido Sciavicco at University of Murcia - Departamento de Ingenieria de la Información y las comunicaciones - Murcia - Spain for research collaboration.
- Since March 2009 **Webmaster**.
 Webmaster of the website about Interval Temporal Logic (a major research topic of mine) <http://itl.dimi.uniud.it/> (developed in Drupal).
- February 2005–June 2005 **Programmer**, Napoli, Italy.
 Implementation of a program for customers/suppliers management for a business agent. Program implemented using the following languages: html, php, javascript, SQL.
- December 2003–February 2004 **Programmer**, *"EDISUD" Publishing House*, Salerno, Italy.
 Implementation of a DataBase for customers/suppliers management for a publishing house.
- [Jobs in areas different than computer science](#)
- November 2007–January 2008 **Dishwasher**, *"Hamburger Union" Fast Food - Restaurant*, Londra, UK.
- July 2007 **Waiter**, *Pub "Tre Conchiglie"*, Agropoli (SA), Italy.
- June 2007 **Waiter**, *Restaurant "Esplanade"*, Paestum (SA), Italy.
- August 2006 **Waiter**, *Pub "Tre Conchiglie"*, Agropoli (SA), Italy.
- April 2006 **Leafleting**, Napoli, Italy.
- January 2006–May 2006 **Private tutor**, Napoli, Italy.
 Lessons for Primary School and University students.
- Summer 2005 **Head of Entertainment Staff**, *Camping Residence "Isola La Chianca"*, Vieste (FG), Italy.
- September 2004–June 2005 **Librarian**, *University of Napoli "Federico II"*, Napoli, Italy.

Summer 2004 **Resort Entertainer**, *Tour Operator "Mr. Volare"*, Mahdia and Monastir, Tunisia.
April 2004 **Promoter**, *Promotion agency*, Napoli, Italy.
Summer 2001-2002-2003 **Entertainer**, *"Jolly Animation"*, Palinuro (SA) and Vieste (FG), Italy.
Summer 1999 **Car Washer**, Bellizzi (SA), Italy.

Artistic performances

May 2014 **Background actor**, in the Icelandic film *Life in a Fishbowl*.
<http://www.imdb.com/title/tt2172554/>
September 2010 **Scriptwriter**, Co-scriptwriter of the short film *Tempo finito! (Time over!)*, Gruppo Teatrale Universitario (GTU), University of Udine, Italy.

Languages

Italian Native

English Fluent

Spanish Fluent

French Beginner

Several life and work experiences abroad

Several life and work experiences in Spain

Two years at High School

Computer skills

OS Linux, Unix, Windows

programming JAVA, C/C++, Prolog, Lisp, SQL, PHP, JSP

web design HTML, XHTML, CSS, Drupal

administration Tomcat, Apache

scripting Javascript

typography L^AT_EX, BibTeX

database MySQL

verification NuSMV
tool

Personal skills

social Good relationship in the group work.

organizational Planning capacities to work in team and analytical skills.

technical Computer programming, neural network, automatic software verification, logics.

driving B

license

Interests

Football (playing it more than watching it), music, cinema, inter-personal relationships.

Publications

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- [6] Dario Della Monica, Nicola Gigante, Salvatore La Torre, and Angelo Montanari. Complexity of qualitative timeline-based planning. In Emilio Muñoz-Velasco, Ana Ozaki, and Martin Theobald, editors, *Proc. of the 27th International Symposium on Temporal Representation and Reasoning (TIME)*, volume 178 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 16:1–16:13. Schloss Dagstuhl–Leibniz-Zentrum für Informatik, 2020.
- [7] Willem Conradie, Dario Della Monica, Emilio Muñoz-Velasco, and Guido Sciavicco. An approach to fuzzy modal logic of time intervals. In *Proc. of the 24th European Conference on Artificial Intelligence (ECAI)*, volume 325 of *Frontiers in Artificial Intelligence and Applications*, pages 696–703, 2020.
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- [10] D. Bresolin, D. Della Monica, A. Montanari, P. Sala, and G. Sciavicco. Decidability and complexity of the fragments of the modal logic of Allen’s relations over the rationals. *Information and Computation*, 2019. Available online since 4 March 2019.
- [11] Luca Aceto, Dario Della Monica, Ignacio Fábregas, and Anna Ingólfssdóttir. When are prime formulae characteristic? *Theoretical Computer Science*, 777:3–31, 2019. Available online since 6 December 2018.
- [12] D. Della Monica, N. Gigante, A. Montanari, and P. Sala. A novel automata-theoretic approach to timeline-based planning. In Michael Thielscher, Francesca Toni, and Frank Wolter, editors, *Proc. of the 16th International Conference on Principles of Knowledge Representation and Reasoning (KR)*, pages 541–550. AAAI Press, 2018.

- [13] D. Della Monica and A. Murano. Parity-energy ATL for Qualitative and Quantitative Reasoning in MAS. In *Proc. of the 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS)*, pages 1441–1449, Stockholm, Sweden, 2018.
- [14] Dario Della Monica, Aniello Murano, Sasha Rubin, and Luigi Sauro, editors. *Joint Proceedings of the 18th Italian Conference on Theoretical Computer Science (ICTCS) and the 32nd Italian Conference on Computational Logic (CILC)*, volume 1949 of *CEUR Workshop Proceedings*. CEUR-WS.org, 2017.
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- [16] Adrian Francalanza, Luca Aceto, Antonis Achilleos, Duncan Paul Attard, Ian Cassar, Dario Della Monica, and Anna Ingólfssdóttir. A foundation for runtime monitoring. In Shuvendu K. Lahiri and Giles Reger, editors, *Proc. of the 17th International Conference on Runtime Verification (RV)*, volume 10548 of *Lecture Notes in Computer Science*, pages 8–29, Seattle, WA, USA, September 2017. Springer.
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- [18] Dario Della Monica, Angelo Montanari, and Pietro Sala. Beyond ωBS -regular languages: ωT -regular expressions and counter-check automata. In Patricia Bouyer, Andrea Orlandini, and Pierluigi San Pietro, editors, *Proc. of the 8th International Symposium on Games, Automata, Logics and Formal Verification (GandALF)*, volume 256 of *EPTCS*, pages 223–237, Roma, Italy, September 2017.
- [19] Dario Della Monica, Angelo Montanari, Aniello Murano, and Pietro Sala. Prompt interval temporal logic. In *Proc. of the 15th European Conference On Logics In Artificial Intelligence (JELIA)*, volume 10021 of *Lecture Notes in Computer Science*, pages 207–222, 2016.
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- [22] L. Aceto, D. Della Monica, I. Fábregas, and A. Ingólfssdóttir. When are prime formulae characteristic? In Giuseppe F. Italiano, Giovanni Pighizzini, and Donald Sannella, editors, *Proc. of the 40th International Symposium on Mathematical Foundations of*

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- [29] Luca Aceto, Dario Della Monica, Anna Ingólfssdóttir, Angelo Montanari, and Guido Sciavicco. An algorithm for enumerating maximal models of Horn theories with an application to modal logics. In *Proc. of the 19th International Conference on Logic for Programming, Artificial Intelligence, and Reasoning (LPAR)*, volume 8312 of *Lecture Notes in Computer Science*, pages 1–17. Springer, 2013.
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- [35] D. Bresolin, D. Della Monica, A. Montanari, P. Sala, and G. Sciavicco. Interval Temporal Logics over strongly discrete linear orders: the complete picture. In *Proc. of the 3rd International Symposium on Games, Automata, Logics and Formal Verification (GandALF)*, Naples, Italy, September 2012.
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- [39] D. Della Monica, V. Goranko, A. Montanari, and G. Sciavicco. Interval Temporal Logics: a Journey. *Bulletin of the EATCS*, 105, October 2011.
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- [41] D. Bresolin, D. Della Monica, A. Montanari, and G. Sciavicco. The light side of Interval Temporal Logic: the Bernays-Schönfinkel’s fragment of CDT. In *Proc. of the 18th International Symposium on Temporal Representation and Reasoning (TIME)*, September 2011.
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