Laura Nenzi

Curriculum Vitae

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Personal Information

Date of Birth [redacted]
Citizenship
Languages Italian (mothertongue), English (fluent), German (basic)

Academic Appointments

15th Nov. 2024 - **Associate Professor**, *Department of Engineering and Architecture*, University of Trieste, Italy.

Nov. 2021 -Nov.2024 **Assistant Professor (tenure-track)**, *Department of Engineering and Architecture*, University of Trieste, Italy.

Sept. 2019 - Nov. 2021 **Assistant Professor (part-time)**, *Department of Mathematics and Geoscience*, University of Trieste, Italy.

Aug. 2019 - Nov. 2021 **Project Assistant (part-time)**, *Faculty of informatics, Institute of Computer Engineering*, Vienna University of Technology, Austria.

Nov. 2018 - Jul 2019 **Assistant Professor**, *Department of Mathematics and Geoscience*, University of Trieste, Italy.

Jun. 2017- Dec. 2018 **Project Assistant**, *Faculty of informatics, Institute of Computer Engineering*, Vienna University of Technology, Austria.

Sept. 2016- Jun. 2017 **Research collaborator**, *System Modelling and Analysis Group*, IMT School of Advanced Studies Lucca, Italy.

Qualification

2022 **Scientific National Italian Habilitation (10/06/2022) as Associate Professor in Computer Engineering**, *granted by the Italian Ministry of Education, Universities and Research, sc 09/H1 "Ingegneria Informatica" - ssd ING-INF/05 "Sistemi di elaborazione delle informazioni".*

Education

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2013-2016 **PhD in Computer Science (XVIII Cycle)**, *IMT School of Advanced Studies Lucca, Italy*, Thesis: "A logic-based approach to specify and design spatio-temporal behaviours of complex system", ***Marks: Excellent***.

2010-2012 **Master Degree in Mathematics**, *University of Trieste, Italy*, Thesis: "A logic-based approach to determine the connection between biological modules and their behavioral properties", ***Marks: 110/110***.

2006-2010 **Bachelor Degree in Mathematics**, *University of Padova, Italy*, Thesis: Biomechanical models for pattern formation.

2003-2006 **Bachelor Degree in Biotechnology**, *University of Padova, Italy*, Thesis: Adult stem cells in the tissue engineering: epithelium reconstruction.

Visiting Positions

2014-2015 **Research visit (7 months) in the MoSi (Modelling and Simulation) group, at the Saarland University**, Saarbrücken, Germany.

2012 **Research visit (3 months) in the PEPA (Performance Evaluation Process Algebra) group, at the School of Informatics, University of Edinburgh**, Edinburgh, United Kingdom.

Honors & Awards

2020 **Winner of the 2020 Hedy Lamarr Award of the City of Vienna (10 k Euro) for innovative achievements in IT**, Austria.

2018 **Winner of "procedura selettiva, D.R. n. 938, prot. n. 50407, per l'assunzione di un ricercatore a tempo determinato, tipologia a)"**, Trieste, Italy.

2018 **Invited to the final interview for the MRC/UoE Cross-Disciplinary Post-Doctoral Fellowship (XDF)**, Edinburgh, United Kingdom.

Projects and Grants

Principal Investigator

2023-Present **DREAM: modular software Design to Reduce uncertainty in Ethics-based cyber-physicAl systeMs**, *Responsabile di unità*, Total Funding ∼210 k Euro, 105 k Euro to the University of Trieste, Funded by MUR, PRIN 2022.

2019-2021 **High-dimensional statistical learning: new methods to advance economic and sustainability policies**, *Project Leader for TU Wien*, Total Funding ∼2 Mio Euro, ∼400 k Euro to TU Wien, Funded by Austrian FWF within the YIRG programme.

2017-2018 **Christiana HÖRBIGER Preis**, *grant by the TU Wien for the promotion of international mobility of young scientists.*

2017 **STSM: Short Term Scientific Mission**, *grant by the COST Action IC1402 to collaborate with the University of Trieste on Monitoring of mobile and spatially distributed Cyber-Physical Systems..*

Member

2022-Present **iNEST - Interconnected Nord-Est Innovation Ecosystem**, *Spoke 9*, RT3, RT4, PNRR .

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2022-Present **Progetto Transform4Europe**, *T4E*, WP3 T3.3 , MA programme in Digital Transformation meeting .

2018-2021 **Cyber-Physical Safety: coexistence of humans and robots (Total Funding ∼150 k Euro)**, *Funded by Programma Triennale MIUR 2016-2018.*

2017-2018 **RISE: Rigorous Systems Engineering**, *member of the TU Wien unit.*

2013-2017 **EU FP7 QUANTICOL**, *member of the IMT Lucca unit.*

Community Service

Organisation of International Events

2025 **Repeatability Evaluation co-Chair of HSCC 2025**, *the 28th ACM International Conference on Hybrid Systems: Computation and Control*, May 6-9, Irvine, California.

2024 **Repeatability Evaluation co-Chair of HSCC 2024**, *the 27th ACM International Conference on Hybrid Systems: Computation and Control*, May 14-16, Hong-Kong, China.

2023 **PC co-Chair of RV 2023**, *the 23rd International 22nd International Conference on Runtime Verification*, October 2-6, Thessaloniki, Greece.

2022 **PC co-Chair of NSV 2022**, *the 15th International Workshop on Numerical Software Verification*, collocated with FLoC, August 11, 2022 Haifa, Israel.

2021 **Publicity co-Chair of SEFM 2021**, *the 19th edition of the International Conference on Software Engineering and Formal Methods*, December 6-10, Online.

2020 **PC co-Chair of HSB 2020**, *the 7th International Workshop on Hybrid Systems and Biology*, September 4-5, Vienna (on-line), Austria.

2019 **PC co-Chair of the 1st Workshop on Spatio-Temporal Reasoning**, *at CDC 2019*, December 10, Nice, France.

2019 **Local Organisation co-Chair of CMSB 2019**, *the 17th International Conference on Computational Methods in Systems Biology*, September 18-20, Trieste, Italy.

2018 **Co-Organizer of AVM 2018**, *Alpine Verification Meeting , September 24-27* , Wagrain, Austria.

Program Committees

2025 **TACAS 2025**.

2024 **TACAS 2024, RV 2024, GANDALF 2024, OVERLAY 24**.

2023 **TACAS 2023, HSCC 2023, VORTEX 2023**.

2022 **HSCC 2022, RV 2022, VORTEX 2022**.

2021 **SEFM 2021, CMSB 2021, RV 2021, SEAMS 2021, VORTEX 2021, OVERLAY 21, ACOS 2021, NSV 21, VCLA Awards 2021**.

2020 **CMSB 2020, QEST 2020, RV 2020,VCLA Awards 2020**.

2019 **CMSB 2019, DataMod 2019, CSBio2019, CIBCB 2019, ICTCS 2019, HSB 2019**.

2018 **CMSB 2018, DataMod 2018, COMPUTATION TOOLS 2018**.

2017 **CILC 2017, DataMod 2017**.

Award Committees

2021–2023 **Hedy Lamarr preis**, .

2020–2021 **Vienna Center for Logic and Algorithms International Student Awards**.

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Responsibility in Doctoral Colleges

2023-Present **Faculty Member of the Applied Data Science & Artificial Intelligence (AD-SAI)**, *University of Trieste,Italy*.
`https://adsai.units.it/`

2021-2023 **Associated Faculty Member of SecInt, the Doctoral College for Secure and Intelligent Human-Centric Digital Technologies**, *Vienna, Austria*.
`https://secint.visp.wien/program/`

2019-2023 **Associated Faculty Member of LogiCS DK, the Doctoral College in Logical Methods for Computer Science**, *Vienna, Austria* .
`http://logic-cs.at/phd/faculty/`

PhD Examiner

2024 **Giovanni Pagliarini, Ph.D student in Mathematics at the University of Parma, (Examiner of the final dissertation)**, *Parma*, Italy, Thesis title: Modal Symbolic Learning: From Theory to Practice.

2023 **Georgios Argyris, Ph.D student in Computer science at the Technical University of Denmark, (Examiner of the final dissertation)**, *Copenhagen*, Denmark, Thesis title: Reduction Techniques for Boolean Networks.

2020 **Maria Sinziana Astefanoaei, Ph.D student at University of Edinburgh (Examiner of the VIVA)**, *Edinburgh*, UK, Thesis title: Algorithms for learning from spatial and mobility data.

Journal Editor

2021-Now **Editorial Board Member for FoMaC**, *Foundations of Mastering Change, track at STTT (the International Journal on Software Tools for Technology Transfer).* .

2024 **Guest Editor of STTT**, *the International Journal on Software Tools for Technology Transfer, for the Special Issue of RV 2023.*

2023 **Guest Editor of LNCS**, *Lecture Notes in Computer Science, Springer, for the proceeding of RV 2023.*

2022 **Guest Editor of LNCS**, *Lecture Notes in Computer Science, Springer, for the post-proceeding of NSV 2022.*

2020-2021 **Guest Editor for TCS-C**, *Theoretical Computer Science, Section Natural Computing, for the Special Issue of CMSB 2019.*

2020-2021 **Guest Editor of Information and Computation**, *for the Special Issue of HSB 2020.*

Journal Reviewer for

PE (Performance Evaluation), TII (IEEE Transactions on Industrial Informatics), TCPS (Transactions on Cyber-Physical Systems), FMSD (Formal Methods in System Design), TCS (Theoretical Computer Science), SCICO (Science of Computer Programming), JSS (Journal of Systems and Software), TAAS (Transaction on Autonomous and Adaptive Systems), IEEE Access.

Subreviewer for

CAV 2021, SIGSIM-PADS'19, ATVA 2019, SAC 2018, InfQ 2017, VALUETOOLS 2017, ALPA 2017, QEST 2017, ENASE 2017, ICTS 2016, QEST 2016, CONCUR 2016, HSCC 2016, RV 2015, FoCAS 2014.

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Teaching

2019-2024 **Cyber-Physical Systems**, *6 ECTS/CFU, Master Program in Data Science and Scientific Computing*, University of Trieste, Italy.

2023-2024 **Information Retrieval and Data Visualization**, *3 ECTS/CFU, Master Program in Data Science and Scientific Computing*, University of Trieste, Italy.

2023-2024 **Informatica**, *3 ECTS/CFU, Bachelor Program in Matematica*, University of Trieste, Italy.

2023-2024 **Informatica applicata alle scienze geoliche**, *3 ECTS/CFU, Bachelor Program in Geologia*, University of Trieste, Italy.

2022-2023 **Introduction to Artificial Intellligence**, *9 ECTS/CFU, Bachelor Program in Intelligenza Artificiale e Data Analytics*, University of Trieste, Italy.

2021-2022 **Computabilità Complessità e Logica**, *4 ECTS/CFU, Bachelor Program in Intelligenza Artificiale e Data Analytics*, University of Trieste, Italy.

2020-2021 **Engineering Cyber Physical Systems Advanced**, *PhD course, 8 hours, Gran Sasso Science Institute (GSSI), Italy.*

2019-2021 **Introduction to Logical Methods in Computer Science**, *PhD course, 4 hours, TU Wien, Austria.*

2018-2019 **Cyber-Physical Systems and Reinforcement Learning**, *6 ECTS/CFU, together with Antonio Celani, Master Program in Data Science and Scientific Computing*, University of Trieste, Italy.

2018-2019 **Laboratorio di Programmazione**, *3 ECTS/CFU, together with Simone Silvetti, Bachelor Program in Mathematics.*

Supervision

(Co-)Supervision of PhD Students

2023-Present **Irene Ferforglia**, *PhD in Applied Data Science & Artificial Intelligence (ADSAI), (Advisor: Luca Bortolussi, co-advisor: Laura Nenzi), Topic: developing Explainable AI methods to make digital twins more accurate and reliable.*

2021-Present **Gaia Saveri**, *PhD Nazionale in Intelligenza Artificiale - area AI & Society (Advisor: Luca Bortolussi, co-advisor: Laura Nenzi), Topic: Explainable AI combining Logic and Statistical Learning, stochastic systems.*

2020-Present **Ennio Visconti**, *PhD student in Computer Science (Advisor: Ezio Bartocci, co-advisor: Laura Nenzi), Topic: Formal Methods for large-scale, spatially-distributed, stochastic systems.*

(Co-)Supervision of Master Students

2024-Present **Alessandro Cesa**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Laura Nenzi, co-advisor: Simone Silvetti), Topic: Reinforcement Learning and Temporal Logic for automatic control.

2024-Present **Thomas Axel Deponte**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Laura Nenzi, co-advisor: Simone Silvetti), Topic: A formal methods approach to interpretable reinforcement learning for robotic arm planning.

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2024-Present **Bruno Bonaiuto Bolivar**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Laura Nenzi, co-advisor: Marco De Pasquale), Topic: Study of 'Collaborative Filtering' for the Recommender System Used Within an Application Developed by ESTECO SpA.

2023-Present **Matteo Zambon**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Laura Nenzi), Topic: Monitoring-driven optimization of stochastic models.

2023 **Beatrice Tinto**, *Master Degree in Mathematics*, (Advisor: Laura Nenzi, co-advisor: Simone Silvetti), Title: Cross-Entropy Importance Sampling in Statistical Model Checking for an efficient estimation of satisfaction probability for rare events.

2021 **Patrick Indri**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Eric Medvet, co-advisor: Laura Nenzi, Title: One-Shot Ensemble Learning for Anomaly Detection in Multivariate Time Series.

2020 **Federico Pigozzi**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Eric Medvet, co-advisor: Laura Nenzi, Title: Evolutionary Inference of Signal Temporal Logic Expressions for Ruling Real Road Traffic.

2019 **Giuseppe Gallo**, *Master Degree in Data Science and Scientific Computing*, (Advisor: Luca Bortolussi, co-advisor: Laura Nenzi), Title: A behavioural kernel-based distance between stochastic models.

(Co-)Supervision of Bachelor Students

2023 **Nicola Cortinovis**, *Bachelor Degree in Intelligenza Artificiale e Data Analytics*, (Advisor: Laura Nenzi, Title: Algoritmi per l'apprendimento di formule logiche temporali da data-set di traiettorie di sistemi ciber-fisici.

2023 **Marta Lucas**, *Bachelor Degree in Intelligenza Artificiale e Data Analytics*, (Advisor: Laura Nenzi, Title: Una panoramica sull'utilizzo delle Logic Explained Networks nel deep learning.

2017 **Davide Prandini**, *Bachelor Degree in Mathematics*, (Advisor: Luca Bortolussi, co-advisor: Laura Nenzi, Title: Robust Monitoring of Imprecise Signals.

Selected Talks and Tutorial

Invited Talks at Conferences and Workshops

Sept. 25-26, 2023 **Invited talk at TIME 2023, the 30th International Symposium on Temporal Representation and Reasoning**, *Athens, Greece.*
Title: *Learning Temporal Logic Formulas from Time-series Data*

Oct. 6, 2020 **Invited tutorial at RV 2020: the 18th International Conference on Runtime Verification**, *Online.*
Title: *Monitoring Spatio-Temporal Properties*

Apr. 6, 2019 **Invited speakers at SynCoP 2019: the 6th Workshop on Synthesis of Complex Parameters**, *Prague*, Poland.
Title: *Parametric Verification and Synthesis based on Gaussian Processes*

Other Talks

Oct. 4, 2022 **Talk at Dagstuhl Seminar (22401)** , *on Computer Science Methods for Effective and Sustainable Simulation Studies*, Daghstul, Germany.
Title: *Statistical Model Checking*

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Feb. 14, 2022 **Talk at CASCB**, *Centre for the Advanced Study of Collective Behaviour*, Kostanz, Germany.
Title: *A logic-based approach to Specify, Monitor and Learn (Spatio-)Temporal BehavioursS*

Feb. 13, 2019 **Talk at Daghstul Seminar(19071)** , *on Specification Formalisms for Modern Cyber-Physical Systems*, Daghstul, Germany.
Title: *Expressive Spatio-Temporal Specifications for CPS*

Dec. 13, 2018 **Seminar at NII, National Institute of Informatics**, *in the Mathematical and Metamathematical Modelling Group, Hasuo-Lab*, Tokyo, Japan.
Title: *Specification formalisms and learning techniques for Cyber-Physical Systems*

Oct. 12, 2018 **Seminar at UC, University of California**, *in the group of Sanjit Seshia at the department of Electrical Engineering and Computer Science, Berkeley*, USA.
Title: *A Robust Genetic Algorithm for Learning Temporal Specifications from Data*

Oct. 10, 2018 **CS Colloquium at USC, University of Southern California**, *in the Viterbi School of Engineering*, Los Angeles, USA.
Title: *System Design of Stochastic Models using Robustness of Temporal Properties*

Jul. 04, 2018 **Seminar at the University of Camerino**, *Camerino*, Italy.
Title: *A Robust Genetic Algorithm for Learning Temporal Specifications from Data*

Dec. 15, 2017 **Seminar at Masaryk University**, *Brno*, Czech Republic.
Title: *System design of stochastic models using robustness of temporal properties*

Dec. 02, 2016 **Seminar at the PEPA club meeting, Informatics Forum, University of Edinburgh**, *Edinburgh*, United Kingdom.
Title: *A logic-based approach to specify and design spatio-temporal behaviours of complex systems*

Selected Academic and Terza Missione Activities

2023-Present **Delegato all'orientamento in entrata**, *for the Bachelor Degree in Intelligenza Artificiale e Data Analytics.*

2023-2024 **Responsabile del PROGETTO PILOTA GALILEI**, *parte del PNRR orientamento*, 3 corsi di 15 ore su Analisi Dati e Robotica al Liceo Galilei di Trieste alle classi quarte.

2022-2024 **Responsabile patto formativo PCTO**, *2 corsi pomeridiani di 15 ore su Statistica e Intelligenza Artificiale con linguaggio Python al Liceo Galilei di Trieste.*

2022-2023 **Speaker per gli AI TALKS**, *Seminari di divulgazione scientifica per pubblico non esperto organizzati dall'AI Student Society*, `https://www.youtube.com/@aistudentsociety4882`.

2022-2024 **Attività di Teatro scientifico**, per la promozione delle lauree scientifiche e la divulgazione per pubblico non esperto.

- Scrittura e rappresentazione dello spettacolo: "Let it bit", spettacolo sulla basi dell'informatica, rappresentato al teatro Verdi di Gorizia a Maggio 2023 ed all'Hangar a Trieste a Marzo 2024
- Scrittura e rappresentazione del Monologo "Anche i termostati hanno un cuore", sui Cyber-Physical System, all'interno del progetto A Basic sCience Trieste, ideato dalla regista e attrice Diana Hobel in collaborazione con il Cut Trieste nell'ambito dello Science in the City festival

2021 **Interview with TEDxVienna**, Hedy Lamarr Prize Laureate Laura Nenzi on the human side of the technology, `https://magazine.tedxvienna.at/2021/01/02/laura-nenzi/`.

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Publications

Total citations 711, h-index 13, i10-index 15, (Google Scholar, April 2023)

Journal Papers

Published

- Federico Pigozzi, Laura Nenzi, Eric Medvet: **BUSTLE: a Versatile Tool for the Evolutionary Learning of STL Specifications from Data**. EVOLUTIONARY COMPUTATION, p. 1-24, ISSN: 1063-6560
- Laura Nenzi, Ezio Bartocci, Luca Bortolussi, Simone Silvetti, Michele Loreti: **MoonLight: A Lightweight Tool for Monitoring Spatio-Temporal Properties**, STTT, International Journal on Software Tools for Technology Transfer, 25(4): 503-517, 2023.
- Laura Nenzi, Ezio Bartocci, Luca Bortolussi, Michele Loreti. **A Logic for Monitoring Dynamic Networks of Spatially-distributed Cyber-Physical Systems**, Log. Methods Comput. Sci. 18(1), 2022.
- Federico Pigozzi, Eric Medvet, Laura Nenzi: **Mining Road Traffic Rules with Signal Temporal Logic and Grammar-based Genetic Programming**, Applied Sciences, Special Issue: Focus on Traffic Safety, Applied Sciences (Switzerland), 2021, 11(22), 10573
- Ludovica Luisa Vissat, Michele Loreti, Laura Nenzi, Jane Hillston and Glenn Marion, **Analysis of spatio-temporal properties of stochastic systems using TSTL**, ACM Trans. Model. Comput. Simul. 29(4): 20:1-20:24 (2019)
- Luca Bortolussi, Roberta Lanciani, Laura Nenzi, **Model checking Markov population models by stochastic approximations**, Information and Computation, vol. 262, pp. 189-220 (2018), DOI: 10.1016/j.ic.2018.09.004
- Laura Nenzi, Luca Bortolussi, Vincenzo Ciancia, Michele Loreti, Mieke Massink, **Qualitative and Quantitative Monitoring of Spatio-Temporal Properties with SSTL**, Logical Methods in Computer Science, vol. 14(4) (2018), DOI: 10.1016/j.ic.2018.09.004
- Ezio Bartocci, Luca Bortolussi, Laura Nenzi, Guido Sanguinetti, **System Design of Stochastic Models using Robustness of Temporal Properties**, Theoretical Computer Science, vol. 587, pp. 3-25 (2015), DOI: 10.23638/LMCS-14(4:2)2018

Under Minor or Major Revision

- Ennio Visconti, Christos Tsigkanos , Laura Nenzi: **Automated Monitoring of Web User Interface**, Transactions on the Web, *Major Revision*
- Adelinde Uhrmacher, Peter Frazier, Reiner Hänle, Franziska Klügl, Fabian Lorig, Bertram Ludäscher, Laura Nenzi, Cristina Ruiz-Martin, Claudia Szabo, Gabriel A. Wainer, Pia Wilsdorf: **Context, Composition, Automation, and Communication - The C2AC Roadmap for Modeling and Simulation**, ACM Trans. Model. Comput. Simul, *Minor Revision*

Peer-Reviewed Conferences and Workshops

- Ennio Visconti, Christos Tsigkanos, Laura Nenzi: **Adaptable configuration of decentralized monitors**. FORTE 2024 (To appear)
- Ennio Visconti, Christos Tsigkanos, Laura Nenzi: **WebMonitor: Verification of Web User Interfaces**. ASE 2022: 170:1-170:4
- Patrick Indri, Alberto Bartoli, Eric Medvet, Laura Nenzi: **One-Shot Learning of Ensembles of Temporal Logic Formulas for Anomaly Detection in Cyber-Physical Systems**. EuroGP 2022: 34-50
- Luca Bortolussi, Giuseppe Maria Gallo, Jan Kretínský, Laura Nenzi: **Learning Model Checking and the Kernel Trick for Signal Temporal Logic on Stochastic Processes**. TACAS (1) 2022: 281-300
- Ennio Visconti, Ezio Bartocci, Michele Loreti, Laura Nenzi: **Online Monitoring of Spatio-**

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Temporal Properties for Imprecise Signals, MEMOCODE 2021.

- Sara Mohammadinejad, Jyotirmoy V. Deshmukh, Laura Nenzi: **Mining Interpretable Spatio-Temporal Logic Properties for Spatially Distributed Systems**, ATVA 2021.
- Laura Nenzi, Ezio Bartocci, Luca Bortolussi, Michele Loreti,Ennio Visconti, **Monitoring Spatio-Temporal Properties (Invited Tutorial)**, RV 2020: 21-46
- Ezio Bartocci, Luca Bortolussi, Michele Loreti, Laura Nenzi, Simone Silvetti **MoonLight: A Lightweight Tool for Monitoring Spatio-Temporal Properties**, RV 2020: 417-428,
- Josephine Lamp, Simone Silvetti, Laura Nenzi, Lu Feng, **A Logic-Based Learning Approach to Explore Diabetes Patient Behaviors**, CMSB 2019: The 17th International Conference on Computational Methods in Systems Biology,
- Christos Tsigkanos, Laura Nenzi, Michele Loreti, Martin Garriga, Schahram Dustdar, Carlo Ghezzi: **Inferring Analyzable Models from Trajectories of Spatially-Distributed Internet of Things**, SEAMS 2019: The 14th International Symposium on Software Engineering for Adaptive and Self-Managing Systems,
- Simone Silvetti, Laura Nenzi, Ezio Bartocci, Luca Bortolussi, **Signal Convolution Logic**, ATVA 2018: The 16th International Symposium on Automated Technology for Verification and Analysis, vol. 11138, pp. 267–283, Springer, LNCS, DOI: 10.1007/978-3-030-01090-4_16
- Laura Nenzi, Simone Silvetti, Ezio Bartocci, Luca Bortolussi, **A Robust Genetic Algorithm for Learning Temporal Specifications from Data**, QEST 2018: The 15th International Conference on Quantitative Evaluation of SysTems, vol. 11024, pp. 323–338, Springer, LNCS, DOI: 10.1007/978-3-319-99154-2_20
- L. L. Vissat, J. Hillston, M. Loreti, L. Nenzi, **Automatic verification of reliability requirements of spatio-temporal analysis using Three-Valued Spatio-Temporal Logic** , VALUETOOLS 2017: The 11th EAI International Conference on Performance Evaluation Methodologies and Tools, pp. 74-79, ACM, DOI: 10.1145/3150928.3150961
- E. Bartocci, L. Bortolussi, M. Loreti, L. Nenzi, **Monitoring Mobile and Spatially Distributed Cyber-Physical Systems**, MEMOCODE 2017: The 15th ACM-IEEE International Conference on Formal Methods and Models for System Design, pp. 146–155, ACM, DOI: 10.1145/3127041.3127050
- Ludovica Luisa Vissat, Michele Loreti, Laura Nenzi, Jane Hillston, Glenn Marion, **Three-Valued Spatio-Temporal Logic: a further analysis on spatio-temporal properties of stochastic systems** , QEST 2017: The 14th International Conference on Quantitative Evaluation of SysTems, vol. 10503 pp. 317–332, Springer, LNCS, DOI: 10.1007/978-3-319-66335-7_22
- Luca Bortolussi, Michele Loreti, Laura Nenzi, **jSSTL - A Tool to Monitor Spatio-Temporal Properties** , VALUETOOLS 2016: The 10th EAI International Conference on Performance Evaluation Methodologies and Tools, pp. 74-79, ACM, DOI: 10.4108/eai.25-10-2016.2266978
- Ezio Bartocci, Luca Bortolussi, Laura Nenzi, Dimitrios Milios, Guido Sanguinetti, **Studying Emergent Behaviours in Morphogenesis using Signal Spatio-Temporal Logic**, HSB 15: the 4th International Workshop on Hybrid Systems Biology, vol. 9271, pp. 156–172, 2015, Springer DOI: 10.1007/978-3-319-26916-0_9
- Laura Nenzi, Luca Bortolussi, Vincenzo Ciancia, Michele Loreti, Mieke Massink, **Qualitative and Quantitative Monitoring of Spatio-Temporal Properties with SSTL**, RV 15: The 15th International Conference on Runtime Verification, vol. 9333, pp. 21–3, 2015, Springer, LNCS DOI: 10.1007/978-3-319-26916-0_9
- Luca Bortolussi, Laura Nenzi, **Specifying and monitoring properties of stochastic spatio-temporal systems in signal temporal logic** , VALUETOOLS 2014: The 8th International Conference on Performance Evaluation Methodologies and Tools, pp. 66-73, ACM, DOI:10.4108/icst.valuetools.2014.258183
- Ezio Bartocci, Luca Bortolussi, Laura Nenzi, **A temporal logic approach to modular design of synthetic biological circuits**, CMSB 2013: The 11th International Conference on Computational

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Methods in Systems Biology, IST Austria, Klosterneuburg, Austria, September 23-25, 2013, LNCS 8130, pp. 164–178, Springer DOI: 10.1007/978-3-642-40708-6_13

- Ezio Bartocci, Luca Bortolussi, Laura Nenzi, Guido Sanguinetti, **On the Robustness of Temporal properties for Stochastic Models**, HSB 2013: The 2nd International Workshop on Hybrid Systems and Biology, September 2013, Taormina, Italy, 2013, EPTCS 125, pp. 3–19 DOI: 10.4204/EPTCS.125.1

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