

# Stefano Demarchi

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CONTACT INFORMATION	DIBRIS - Viale Causa, 13 16145 Genova, IT	(+39) 01033 - 52150 stefano.demarchi@edu.unige.it github.com/sdemarch
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EMPLOYMENT AND EXPERIENCE	<b>Università degli Studi di Genova</b> <i>Adjunct Professor</i> 2024 B. Sc. course in “Principles and practice of Computer Science” An introduction to Computer Science and Python programming for first year students in Electrical Engineering.  <i>Post-Doc Researcher</i> 2022 - Present <i>PhD student</i> 2019 - 2022 Study and development of AI techniques for the formal verification of Neural Networks, part of the <b>NeVerTools</b> development team. Teaching support activities for an introductory course to Computer Science and Python programming.  <b>Università degli Studi di Sassari   Athena Sardegna</b> <i>Research Engineer</i> 2018 - 2019 Development of a backend framework for a commercial platform ( <b>PILOW</b> ), research and design of optimization algorithms for logistics.  <b>AI-Lift</b> <i>R&amp;D collaborator</i> 2017 - 2019 Part of the development team of <b>LiftCreate</b> , a tool for the design of elevator systems enabled by AI techniques.
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EDUCATION	<b>Università degli Studi di Genova, Genova, IT</b> <b>Ph.D</b> in Computer Science, May 2023 <i>Experimenting with Constraint Programming Techniques in AI: Automated System Design and Verification of Neural Networks</i> <b>M.Sc.</b> in Computer Engineering, October 2018 <i>Product Configuration for Complex Systems: a case study in Computer-automated Design of Elevators</i> 108/110  <b>Université de Technologie de Compiègne, Compiègne, FR</b> European Master in Complex Systems in Interaction, September 2018 Double-degree program in collaboration with Università degli Studi di Genova A, <b>mention</b>
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PROGRAMMING AND SOFTWARE	<b>Programming:</b> Python, Java, C <b>Frameworks:</b> PyQt5/6, SPRING Java, Vaadin <b>Markup:</b> L <sup>A</sup> T <sub>E</sub> X, HTML5, CSS <b>Environments:</b> Microsoft Windows, Ubuntu Linux, Microsoft Office Suite, Microsoft Visual Studio, JetBrains, Oracle mySQL, GitHub
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LANGUAGES	<b>Italian:</b>	Mothertongue		
	<b>English:</b>	Fluent	B1 (certificate)	C1 estimated
	<b>French:</b>	Fluent	B1 (certificate)	C1 estimated
PUBLICATIONS	S. Demarchi, D. Guidotti, L. Pulina and A. Tacchella, <i>NeVer2: Learning and Verification of Neural Networks</i> , to appear in Soft Computing, 2024			
	S. Demarchi, A. Gimelli and A. Tacchella, <i>Improving Abstract Propagation for Verification of Neural Networks</i> , in International Conference on Modelling and Simulation, ECMS 2024, Cracow, Poland, June 4-7, 2024, Proceedings, 2024.			
	S. Demarchi, D. Guidotti, L. Pulina and A. Tacchella, <i>Supporting Standardization of Neural Networks Verification with VNN-LIB and CoCoNet</i> , in Workshop on Formal Methods for ML-Enabled Autonomous Systems, FoMLAS 2023, Paris, France, July 17-18, 2023.			
	S. Demarchi, <i>Experimenting with Constraint Programming Techniques in Artificial Intelligence: Automated System Design and Verification of Neural Networks</i> , PhD Thesis, 2023.			
	D. Guidotti, S. Demarchi, <i>Counter-Example Guided Abstract Refinement for Verification of Neural Networks</i> , in Cyber-Physical Systems Summer School workshop, CPSWS 2022, Pula, Italy, September 19, 2022, Proceedings, 2022.			
	S. Demarchi, D. Guidotti, A. Pitto and A. Tacchella, <i>Formal Verification of Neural Networks: a Case Study about Adaptive Cruise Control</i> , in International Conference on Modelling and Simulation, ECMS 2022, Aalesund, Norway, May 30th-June 3rd, 2022, Proceedings, 2022.			
	G. Cicala, S. Demarchi, M. Menapace, L. Annunziata and A. Tacchella, <i>A Comparison of Declarative AI Techniques for Computer Automated Design of Elevator Systems</i> , in Intelligenza Artificiale 16 (1), 131-150, 2022			
	S. Demarchi, M. Menapace and A. Tacchella, <i>Automated Design of Elevator Systems: Experimenting with Constraint-Based Approaches</i> , in International Conference of the Italian Association for Artificial Intelligence, AIxIA 2021, Online, Proceedings, 2022.			
	S. Demarchi, M. Menapace and A. Tacchella, <i>Automating Elevator Design with Satisfiability Modulo Theories</i> , in IEEE International Conference on Tools with Artificial Intelligence, ICTAI 2019, Portland, Oregon, November 4-6, 2019, Proceedings, 2019.			
	S. Demarchi, <i>Automated Design of Complex Systems with Constraint Programming Techniques</i> , in Cyber-Physical Systems Summer School workshop, CPSWS 2019, Alghero, Italy, September 23, 2019, Proceedings, 2019.			
ROLES	<i>Reviewer</i> , PeerJ Computer Science (2024)			
	<i>Sub-reviewer</i> , ICAPS (2023)			
HONORS AND AWARDS	<i>Best Paper</i> award, ECMS 2022 Conference			
	<i>Best “Creative Lab Idea”</i> award, CPS 2022 Summer School			