Ferruccio Damiani - Curriculum Vitae (January 2023)

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Career: Ferruccio Damiani is a Full Professor of Computer Science at the Department of Computer Science of the University of Turin (UNITO), Turin (TO), Italy; and an Adjunct Professor (10% of a full post) at the Department of Computer science, Electrical engineering and Mathematical sciences of the Western Norway University of Applied Sciences (HLV), Bergen, Norway (since Jan 2021). He received a Laurea Degree (BSc+MSc) in Computer Science and a PhD in Computer Science from UNITO, in 1993 and 1998, respectively. He was postdoc at the Laboratoire d'informatique de l'École Polytechnique (LIX), Palaiseau, France in Jun-Aug 1998. He was Assistant Professor at UNITO in the period 1999-2005 and Associate Professor at UNITO in the period 2005-2021.

Research Activity: His overall research goal is to contribute to an effective seamless integration of Formal Methods into software and system development methodologies. Currently his research mainly focuses on Rigorous Approaches to Software Engineering and Domain Specific Languages for Self-organising systems and collective intelligence, Software product lines and variability modelling, Internet of Things and Cyber-Physical Systems, Edge-Fog-Cloud Continuum (and and on their validation in Industry X.0, Smart-cities, Precision agriculture, and Scientific computing scenarios). Important research outcomes, also in terms of prototypes, are the delta-oriented modelling approach for software product lines - adopted, e.g., by the Abstract Behavioral Specification modeling language (https://abs-models.org/) - and the aggregate programming approach for programming the Internet of Things - implemented by the domain specific languages Protelis (http://protelis.github.io/), ScaFi (https://scafi.github.io/) and FCPP (https://fcpp.github.io/). He is the founder and coordinator of the System Modelling, Verification and Reuse (MoVeRe) research group (http://di.unito.it/movere/) which is engaged in research activities that span from foundational aspects to tools for supporting rigorous engineering of industrial systems. In May 2021 he founded the University of Turin node of the Embedded Systems & Smart Manufacturing national laboratory of the National Interuniversity Consortium for Informatics (CINI, https://www.consorzio-cini.it/).

Research Projects: He has been involved in many research and innovation projects in the areas of formal methods and software development. He gained funding for more than 1 MEuro in regional (CSP, POR-FESR), national (PRIN,PNRR), and int'l projects (German/Italy bilateral mobility programs, and H2020). He is currently responsible for the research unit of UNITO and WP3 leader of the MUR (Italian Ministry of University and Research) PRIN project COMMON-WEARS (COMMunity-OrieNted WEARable Computing Systems, https://common-wears.github.io/2022/). He was responsible for the research unit of UNITO and WP2 leader of the EC H2020 RIA project HyVar (Scalable Hybrid Variability for Distributed Evolving Software Systems, http://www.hyvar-project.eu/hyvar/) aimed at the design and implementation of a development framework for continuous and individualized evolution of distributed software applications running on remote devices in heterogeneous environments. He was a member of the Scientific Advisory Board of the EC FP7 IP project HATS (Highly Adaptable and Trustworthy Software using Formal Models,

https://www.hats-project.eu/) aimed at turning software product family development into a rigorous approach. He was a member of the Management Committee of the EC-COST Action IC4202 ARVI (Run-time Verification beyond Monitoring, https://www.cost-arvi.eu/) and a member of the Management Committee of the EC-COST Action IC0701 FoVeOOS (Formal Verification of Object-Oriented Software, http://www.cost-ic0701.org/).

Young Researchers' Formation: Since 2015, he supervised three postdoctoral research fellows. Currently, he is supervising three PhD students at UNITO (one of them in the National PhD Programme in Artificial Intelligence - Industry 4.0). Since 2017 he has been a member of the Scientific Board of the Research Doctorate in Computer Science at UNITO.

Publications and Awards: He is author of more than 150 papers in international journals, research volumes and proceedings of international peer-reviewed conferences and workshops in his research area. In particular, he published more than 40 papers in international journals and he received a Most Influential Paper Award (https://2022.splc.net/program/awards/), a Distinguished Artifact Award (https://2022.ecoop.org/track/ecoop-2022-awards), and six Best Paper Awards for papers presented at international conferences.

Bibliometrics: According to Scopus (2 Jan **2022**) he has: h-index=22, citations=1795, journal articles=41, whereas the bibliometrics according to the current Italian National Scientific Habilitation (with respect to the threshold values for committee full professors) are: number of journal articles (last 10 years) = 29/11, h-index (last 15 years) = 20/11, citations (last 15 years) = 1638/391. According to Google Scholar (2 Jan **2022**) he has: citations = 3115, h-index = 28, i10-index = 81 (since 2017: citations = 1618, h-index = 21, i10-index = 45).

Professional Research Services: He is currently a member of the Steering Committee of the Integrated Formal Methods conference series (iFM, http://www.ifmconference.org/) and of the Coordination Models and Languages conference series (COORDINATION, https://www.discotec.org/). He participated (sometimes as chair) in the program committee of more than 50 conferences/workshops and served as invited reviewer for some of the premiere Int'l journals in his research area (IEEE and ACM trans. Journals as well as Elsevier and Springer journals).

Int'l Activity: He established collaborations with researchers from foreign research institutions: Denmark (University of Southern Denmark), France (ONERA - The French Aerospace Lab), Germany (Karlsruhe Institute of Technology, TU Braunschweig, TU Darmstadt, TU Kaiserslautern), Israel (The Academic College of Tel Aviv Yaffo), Norway (Simula Research Laboratory, University of Oslo, Western Norway University of Applied Sciences), Sweden (Chalmers University of Technology), Switzerland (University of St. Gallen), US (The University of Iowa), Japan (National Institute of Informatics). He is coordinator for the Department of Computer Science in four ERASMUS+ agreements for the exchange of bachelor's students, master's students, PhD students and professors.

Teaching Activity: He is the president of the Steering Committee of the Bachelor's and Master's Degree Courses in Computer Science. He currently teaches two BSc-level courses (Programming II, Development of Software Applications), a MSc-level course (Mobile Device

Programming) and a PhD-level course (Aggregate Programming for the Internet of Things) in the computer science area at UNITO. Overall, in his career, he provided more than 200 didactic institutional credits. Moreover, he supervised more than 10 MSc students and more than 50 BSc students in developing their degree thesis. The results of 9 of these theses have been published in international venues.

Technology Transfer: Since 2014 he is a member of the Company Relations Committee of the Department of Computer Science of UNITO, established in 2014 with the aim of promoting scientific exchange between universities and companies. Since 2019 he is a representative for the Department of Computer Science in the Board of the Interdepartmental Center of Unito for Companies and the Territory (ICxT), founded thanks to the collaboration of 10 departments and aimed at the development of innovative projects to support local businesses and institutions. He established collaborations with companies based in the Turin area (FPT Industrial, IVECO, Magneti Marelli, Santer Reply, and Synesthesia) for developing innovative Internet of Things, Cyber-Physical and Embedded Systems solutions.

EAPLS Professional Activity: Since 2020 he has been a member of the Board of the European Association for Programming language and Systems (EAPLS, https://eapls.org/).

MPAI Professional Activity: Since Feb 2021 he has been involved in the activities of the Moving Picture, Audio and Data Coding by Artificial Intelligence (MPAI, https://mpai.community/). In Jan 2022 he got a "Certificate of Appreciation for outstanding contributions to the development of: MPAI-AIF – Artificial Intelligence Framework Technical Specification V1".