

Stefano Ricciardi is an assistant professor (RTD-b) of computer science at the Department of Biosciences, University of Molise, Italy. He received the BSc in Computer Science, the MSc degree in Informatics and the PhD degree from the University of Salerno, Italy. His main research interests are focused on the use of 3D and 2D techniques and descriptors in computer vision for applications to biometry and for advanced interaction in the fields of virtual and augmented reality. He is author of more than 90 papers published on some of the most regarded peer-reviewed journals, conference proceedings and book chapters (H-index Google Scholar: 17, H index Scopus: 15). He is co-Director of Software and Knowledge Engineering Lab (STAKE-Lab) at the University of Molise. He is member of IEEE and also member of Italian association for research in Computer Vision, Pattern Recognition e Machine Learning, affiliated to IAPR. He is also member of Italian CINI National Cybersecurity Laboratory.

#### RESEARCH INTERESTS

Virtual and Augmented Reality, Human-Computer Interaction, Pattern Recognition, Computer Vision, Biometry.

#### EDUCATION

Ph.D., Sciences and Technologies of Information, Complex Systems and Environment

Thesis: " Image Processing Techniques For Mixed Reality And Biometry "

Advisor: Prof. Michele Nappi

MSc. in Informatics (two years degree)

Thesis: "A 3D face recognition approach aimed at biometric applications "

Advisor: Prof. Andrea Abate

BSc in Computer Science (four years degree)

Thesis: "Advanced three-dimensional modeling and animation techniques applied to the dynamic simulation of bipeds"

Advisor: Prof. Michele Nappi

#### FUNDED RESEARCH PROJECTS

- Scientific supervisor for the research agreement between Department of Biosciences and Territory of the University of Molise and Soft Strategy BIT S.p.A. related to the DI3D project with reference to OR 1-2-3-4-5-6. Funding 100K Euro. The DI3D project is aimed at the realization of a system for the reconstruction of three-dimensional models of mechanical parts starting from multiple cameras and the subsequent identification of anomalies through methods based on template matching and Deep Learning (2019/10-2020/09).

- Task leader of WP2 "Definition of a specification for data security" within the project "ATTICUS: Ambient-intelligent Tele-monitoring and Telemetry for Incepting & Catering over human Sustainability" funded by MIUR under the PON program "Projects Industrial Research and Experimental Development "(PNR 2015-2020). Budget: 5.5M. Duration: 3 years (2018-2021). ATTICUS is a hardware / software system based on artificial intelligence capable of constantly monitoring an individual and detecting anomalies that affect both his health and his behavior (eg, habits, movements).

- Task Leader of WP1.2 "Dynamic Camera-Network Optimization" as part of the Work Package WP1, "Data and Requirements" of the PRIN 2018 PREVUE (PRediction of activities and Events by Vision in an Urban Environment) project principal investigator: Prof.ssa Rita Cucchiara (UNIMORE). The PREVUE project investigates modern artificial intelligence and machine vision approaches for video analysis and event prediction in urban scenarios.
- Task Leader of the WP "Face recognition through facial dynamics" related to the "3D Face" Work Package of the PRIN 2015 COSMOS (COntactless Multibiometric mObile System) project principal investigator: prof. Michele Nappi (UNISA). The project aims to provide a comprehensive approach to the multi-biometric verification and recognition of individuals, including most of the contactless biometrics. The task carried out is focused on proposing methods for recognizing facial biometrics using 3D techniques optimized to work on a mobile hardware architecture and capable of providing accurate and highly reliable authentication even in the presence of presentation attacks.
- Task leader of a research unit for the PON n ° 01\_02705 "FIBAC" project "Models, methodologies and techniques for cultural remediation" (2015).
- Task leader for the "WISCH" project (Work Into Shaping Campania's Home) POR Campania FESR 2007/2013 O.O. 2.2. lead partner 3F & EDIN SpA and the University of Salerno (2014).
- Task leader for the "ARM" (Augmented Reality based Maintenance) applied research project of Department of Mathematics and Informatics of the University of Salerno, funded by SELEX Sistemi Integrati SpA (currently Leonardo SpA) 2008-2010.

## TEACHING

Lecturer in university courses for a total of 84 ECTS, post-graduate training courses for a total of 38 ECTS as well as 365 frontal hours in training and specialization courses at various university.

- Graduate course on "Biometric Systems", University of Molise, Italy, AY 2017/2022(6 ECTS)
- Graduate course on "Video Systems for Security", University of Molise, Italy, AY 2017/2022 (3 ECTS)
- Graduate course on "Computer Forensics", University of Molise, Italy, AY 2016/2017 (6 ECTS)
- Undergraduate course on "Game Design and Development", University of Molise, Italy, AY 2017/2022 (6 ECTS)
- Undergraduate course on "Computer Networks and Security", University of Molise, Italy, AY 2015/2016 (3 ECTS)
- Summer School on " Mathematics and Computer Science for Supporting Scientific Research" for PhD students AY 2017 (3 ECTS)

## PHD STUDENTS SUPERVISION

Member of the Doctorate Board of the Biosciences and Territory doctoral program, University of Molise, Italy, since 2016.

- Supervisor of the PhD student Filippo Catalano in the context of the PhD "Biosciences and Territory", 33rd cycle of the University of Molise.
- Supervisor of the PHD student Nicoletta Balletti enrolled in the first year of the computer-mathematical curriculum of the Doctorate of Biology and Applied Sciences - BEAT (DOT 1339138 - 36 ° cycle) of the University of Molise.

## SERVICE

- Associate Editor of Nature's Scientific Reports for the Engineering/Computational Science division: <https://www.nature.com/srep/about/editors#computational-science>.
- Managing Guest Editor of Elsevier's Pattern Recognition Letters international magazine for the Special Issue I-BIO (Implicit BIometric Authentication and Monitoring through Internet of Things) <https://www.journals.elsevier.com/pattern-recognition-letters/call-for-papers/implicit-biometric-authentication>.
- Guest Editor of Springer's international magazine Machine Vision and Applications for the Special Issue on Biometrics, Human Analysis and Behavior Understanding.
- Co-Chair of the "International Workshop on Ubiquitous implicit BIometrics and health signals monitoring for person-centric applications" UBIO 2019 within the international conference IEEE SITIS 2019 - The 15th International Conference on Signal Image Technology & Internet Based Systems, Sorrento, Italy. <http://www.sitis-conf.org/en/ubio-2019.php>.
- Co-Chair of the "International Workshop on Ubiquitous implicit BIometrics and health signals monitoring for person-centric applications" UBIO 2018 within the international conference IEEE SITIS 2019 - The 14th International Conference on Signal Image Technology & Internet Based Systems 26-29 November 2018 - Las Palmas de Gran Canaria, Spain. <http://www.sitis-conf.org/en/ubio-2018.php>.
- Member of the Technical Program Committee of the 12th International Conference on Network and System Security (NSS-2018), Hong Kong, China, 27-29 August, 2018. <http://www4.comp.polyu.edu.hk/~nss2018/tpcommittee.html>.
- Scientific Committee Member for IEB 2014 (Insight on Eye Biometrics) in the international conference Signal Image Technology & Internet Based Systems (SITIS) 2014, Marrakech - Morocco.
- Scientific Committee Member for the Eurographics 2011 conference Italian chapter - Salerno (Italy)
- Expert for the Research Executive Agency (REA) of the European Commission, at the Brussels office Expert ID Code: EX2006C189993. Evaluator of international research projects proposals submitted to the European research program Horizon2020 (Call Secure Societies) as an expert for the Research Executive Agency (REA) of the European Commission, at the Brussels office.
- Expert for the Research Executive Agency (REA) of the European Commission. Evaluator of project international peer-reviewed research project BEAT (FP7), to which the following European scientific institutions have contributed: IDIAP Research Institute, Universidad Autonoma de Madrid, University of Surrey, Ecole Polytechnique Federale de Lausanne, Katholieke Universiteit Leuven.

## REVIEWER ACTIVITY FOR INTERNATIONAL JOURNALS

- Reviewer for numerous international peer-reviewed scientific journals, including: IEEE Transactions on Emerging Topics in Computing, IEEE Transactions on Industrial Informatics, IEEE Transactions on Network Science and Engineering, IEEE Transactions on Information Forensics and Security, IEEE Access, Pattern Recognition, Pattern Recognition Letters, Image and Vision Computing, Multimedia Tools and Applications, Virtual Reality, Quantum Machine Intelligence, Artificial Intelligence Review, ACM Transactions on Multimedia Computing Communications and Applications.

## HONORS AND AWARDS

- Best Paper Award for the article "Dependable Person Recognition by Means of Local Descriptors of Dynamic Facial Features" awarded by the Technical Committee of the International Conference on Dependability in Sensor, Cloud, and Big Data Systems and Applications - DependSys 2019.
- Feature Article Award on march 2018 issue of IEEE Cloud Computing for paper "Context Aware Ubiquitous Biometrics in Edge of Military Things"
- Italian Habilitation as Associate Professor of Computer Science (01/B1) and Computer Engineering and Information Processing Systems (09/H1)