

## Curriculum Vitae – Sara Concas

### Professional Experience

Period	Institution	Main Activities and Responsibilities
AY 2024/2025 – 1st semester	University of Cagliari	Teaching: Information Processing Systems, Integrated Course: Healthcare Programming Degree: Rehabilitation Sciences for Health Professions Total hours: 18
AY 2023/2024 – 2nd semester	University of Cagliari	Teaching: Introductory Seminar on Computer Vision Total hours: 15
AY 2022/2023 – 2nd semester	University of Cagliari	Tutoring: Fundamentals of Computer Science Degree: Chemical Engineering and Mechanical Engineering Total hours: 20
AY 2021/2022 – 2nd semester	University of Cagliari	Tutoring: Fundamentals of Computer Science Degree: Chemical Engineering and Mechanical Engineering Total hours: 20
AY 2020/2021 – 2nd semester	University of Cagliari	Tutoring: Fundamentals of Computer Science Degree: Chemical Engineering and Mechanical Engineering Total hours: 20
AY 2020/2021 – 2nd semester	University of Cagliari	Tutoring: Biometric Technologies and Behavioural Security Degree: Computer Engineering, Cybersecurity and Artificial Intelligence Total hours: 20
AY 2020/2021 – 1st semester	University of Cagliari	Tutoring: Industrial Software Development Degree: Computer Engineering, Cybersecurity and Artificial Intelligence

		Total hours: 20
07/2021 - 12/2021	CINI (National Interuniversity Consortium for Informatics)	Freelance contract: "Development of a personal recognition system based on iris"

### Education and Training

Date	Title / Main Topics	Institution
21/02/2025	PhD in Electronic and Computer Engineering	University of Cagliari
25/02/2021	Master's Degree in Computer Engineering, Cybersecurity and Artificial Intelligence	University of Cagliari
01/12/2022	English Language Certification - B2 Level	University of Cagliari
14/11/2018	Bachelor's Degree in Electrical and Electronic Engineering	University of Cagliari

### Publications / Conferences

Quality-based Artifact Modeling for Facial Deepfake Detection in Videos Concas, S., La Cava, S.M., Casula, R., Orrù, G., Puglisi, G., Marcialis, G.L. 2nd Workshop and Challenge on DeepFake Analysis and Detection at CVPR 2024 (DFAD 2024)
SDFR: Synthetic Data for Face Recognition Competition Shahreza, H. O., Ecabert, C., George, A., Unnervik, A., Marcel, S., Di Domenico, N., Borghi, G., Maltoni, D., Boutros, F., Vogel, J., Damer, N., Sánchez-Pérez, A., Mas-Candela, E., Calvo-Zaragoza, J., Biesseck, B., Vidal, P., Granada, R., Menotti, D., DeAndres-Tame, I., La Cava, S. M., Concas, S., Melzi, P., Tolosana, R., Vera-Rodriguez, R., Perelli, G., Orrù, G., Marcialis, G. L., Fierrez, J. The 18th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2024), IN PRESS
Texture and artifact decomposition for improving generalization in deep-learning-based deepfake detection Gao, J., Micheletto, M., Orrù, G., Concas, S., Feng, X., Marcialis, G.L., Roli, F. Engineering Applications of Artificial Intelligence 2024, 133, 108450
Generalized Deepfake Detection Algorithm Based on Inconsistency Between Inner and Outer Faces Gao, J., Concas, S., Orrù, G., Feng, X., Marcialis, G.L., Roli, F. International Workshop on Recent Advances in Digital Security: Biometrics and Forensics (BIOFOR 2023)
LivDet2023 -- Fingerprint Liveness Detection Competition: Advancing Generalization Micheletto, M., Casula, R., Orrù, G., Carta, S., Concas, S., La Cava, S.M., Fierrez, J., Marcialis, G.L. IEEE International Joint Conference on Biometrics (IJCB 2023)
Preliminary Results On A "Real" Iris Recognition System Under Challenging Operational Conditions Concas, S., Orrù, G., De Paoli, E., Marcialis, G.L. Italian Conference on CyberSecurity (ITASEC23)
The Face Deepfake Detection Challenge Guarnera, L., Giudice, O., Guarnera, F., Ortis, A., Puglisi, G., Paratore, A., Bui, L.M.Q., Fontani, M., Coccomini, D.A., Caldelli, R., Falchi, F., Gennaro, C., Messina, N., Amato, G., Perelli, G., Concas, S., Cuccu, C., Orrù, G., Marcialis, G.L., Battiato, S. Applied Sciences, MDPI
Analysis of Score-Level Fusion Rules for Deepfake Detection Concas, S., La Cava, S.M.,

Orrù, G., Cuccu, C., Gao, J., Feng, X., Marcialis, G.L., Roli, F. Applied Sciences, MDPI
Tensor-Based Deepfake Detection in Scaled and Compressed Images Concas, S., Perelli, G., Marcialis, G.L., Puglisi, G. International Conference on Image Processing (ICIP 2021)
Experimental Results on Multi-modal Deepfake Detection Concas, S., Gao, J., Cuccu, C., Orrù, G., Feng, X., Marcialis, G.L., Puglisi, G., Roli, F. International Conference on Image Analysis and Processing (ICIAP 2022)
Livdet 2021 fingerprint liveness detection competition - Into the unknown Casula, R., Micheletto, M., Orru, G., Delussu, R., Concas, S., Panzino, A., Marcialis, G.L. IEEE International Joint Conference on Biometrics (IJCB 2021)

### Other Scientific Activities

Oral Presentation – BIOFOR 2023, Udine Title: Generalized Deepfake Detection Algorithm based on Inconsistency Between Inner and Outer Faces
Oral Presentation – ITASEC23, Bari Title: Preliminary results on a “real” iris recognition system under challenging operational conditions
Oral Presentation – ICIP 2022, Bordeaux Title: Tensor-based deepfake detection in scaled and compressed images
Poster Presentation – ICIAP 2022, Lecce Title: Experimental Results on Multi-modal Deepfake Detection
Research Grant 396/2021, University of Cagliari Project: Development of a deepfake detection algorithm based on local feature analysis Scientific Supervisor: Prof. Gian Luca Marcialis – Duration: 5 months

### Additional Relevant Information

Practical sessions for the course 'Biometric Technologies and Behavioural Security' – MSc in Computer Engineering, Cybersecurity and AI – AYs: 2021/2022, 2022/2023, 2023/2024
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