

PERSONAL INFORMATION

Fabrizia Auletta www.github.com/FabLtt linkedin.com/in/fablтт

EDUCATION

9 November 2022 **(Cotutelle) PhD degree in Psychology**

Macquarie University, Sydney, NSW, Australia

Final thesis: Identifying and modelling decision making and collective behaviour in multi-agent human and artificial systems

27 September 2022 **(Cotutelle) PhD degree in Engineering Mathematics**

University of Bristol, United Kingdom

Final thesis: Identifying and modelling decision making and collective behaviour in multi-agent human and artificial systems

23 May 2018 **Laurea Magistrale in Automation Engineering**

University of Naples Federico II, Italy

Department of Electrical Engineering and Information Technology

Final thesis: Analysis and control of Painlevé phenomenon in mechanical systems with friction

23 September 2014 **Laurea Triennale In Electronic Engineering**

University of Naples Federico II, Italy

Department of Electrical Engineering and Information Technology

Final thesis: Project and development of a circuit for the square root calculus with Newton's iterative method

WORK EXPERIENCE

March 2022 - present **Research Fellow**

Neuro-Robotic Touch Lab, The BioRobotics Institute, Sant'Anna School of Advanced Studies, Pisa, Italy

Research topics: Biorobotics, Artificial sense of touch, Machine intelligence, Computer vision, Multisensory mechatronics

September 2024 **Tutor**

2nd Doctoral Summer School on Robotics and Intelligent Machines – DRIMS2

Subject: Tactile sensing (Post-graduate level)

Responsibilities: Supervisor and help to the students' practical activities, Delivery of tutorials

August 2023 **Tutor**

1st Doctoral Summer School on Robotics and Intelligent Machines – DRIMS2

Subject: Tactile sensing (Post-graduate level)

Responsibilities: Supervisor and help to the students' practical activities, Delivery of tutorials

April 2020 - February 2022 **PhD student (Cotutelle)**

Macquarie University, Sydney, NSW, Australia

Department of Psychology, Faculty of Medicine, Health and Human Sciences

Research topics: Complex joint dynamics, behavioural dynamics, Human-AI interactions, Supervised machine learning, Artificial neural networks, Explainable AI

October 2018 - February 2022 PhD student (Cotutelle)

University of Bristol, United Kingdom

School of Computer Science, Electrical and Electronic Engineering, and Engineering Maths

Research topics: Multiagent systems, Nonlinear dynamics and control, Agent-Based Systems, Biologically-Inspired Agents, Autonomous agents

Additional responsibilities: teaching assistance, advising students' thesis

April 2021 Intern

Senmag Robotics, Bristol, United Kingdom

Responsibilities: Market research, Market identification, Website development

February 2020 - June 2020 Teaching support assistant

University of Bristol, United Kingdom

School of Computer Science, Electrical and Electronic Engineering, and Engineering Maths

Subject: Control theory (Masters level)

Responsibilities: Supervisor to the students' activities, Help in exam questions marking, Office hours, Delivery of tutorial lessons

PUBLICATIONS

- [1] F. De Lellis, **Fabrizia Auletta**, G. Russo, and M. di Bernardo. "An Application of Control- Tutored Reinforcement Learning to the Herding Problem". In Proc. of the 17th International Workshop on Cellular Nanoscale Networks and their Applications (CNNA) (pp. 1-4). IEEE. 2021
- [2] **F. Auletta**, M. di Bernardo, and M. J. Richardson. "Human-inspired strategies to solve complex joint tasks in multi agent systems". In Proc. of the 6th IFAC Hybrid Conference on Analysis and Control of Chaotic Systems (CHAOS), IFAC-PapersOnLine, 54(17), 105-110. 2021
- [3] **F. Auletta**, D. Fiore, M. J. Richardson, and M. di Bernardo. "Herding stochastic autonomous agents via local control rules and online global target selection strategies". Autonomous Robots, 1-13. 2022
- [4] **F. Auletta**, G. Patil, R. W. Kallen, M. di Bernardo, and M. J. Richardson. "Modeling and Understanding Future Action Decisions of Players during Online Gaming". In Proc. of the 10th International Conference on Human-Agent Interaction, 324-326. 2022
- [5] **F. Auletta**, R. W. Kallen, M. di Bernardo, and M. J. Richardson. "Predicting and Understanding Human Action Decisions during Skillful Joint-Action via Machine Learning and Explainable-AI". Scientific Reports, 13.1: 4992. 2023
- [6] A. S. Hassan, A. M. Khalil, **F. Auletta**, M. Filosa, D. Camboni, A. Menciassi, C. M. Oddo. "Contamination Detection Using a Deep Convolutional Neural Network with Safe Machine—Environment Interaction". Electronics, 12(20), 4260. 2023

LICENSES AND CERTIFICATIONS

- May 2021 SETsquared Partnership IKEEP Programme Intrapreneurial Project Placement Experience Award
- Completed a 70 hour project placement with an organisation
 - Worked in an interdisciplinary team of four members
 - Achieved the pre-agreed deliverables

- April 2021** SETsquared Partnership IKEEP Programme Intrapreneurial Training Award
- Committed 8+ hours completing the IKEEP Intrapreneurial training workshops like problem solving, innovation management and team working
- April 2020** Bristol Plus Award
- Participated in an extra-curricular award scheme to develop my skills in employability
- November 2019** “Innovation and Enterprise” course completion, provided by Bristol Futures