**Name:** **Antonio**
**Family Name:** **Giovannetti**
**Citizenship:** **Italian**
**Affiliation:** **Simulation Team, University of Genoa**

*Office Address: Via Opera Pia 15, 16145, Genova, Italy*
*Via Magliotto 2, 17100, Savona, Italy*

*Office Email: Antonio.giovannetti@edu.unige.it, Antonio.giovannetti@simulationteam.com*

*Personal Email: antoniogiovannetti@icloud.com*

*Present Position:*

- *Member of Simulation Team*
- *PhD Student in Strategic Engineering , DIEC,  Genoa University*
- *Consultant for Sim4Future*
- *Teaching assistant of Operations Management and Logistics for Management Engineering, Genoa University*
- *Teaching assistant of Strategic Programs for Strategic Engineering, Genoa University*
- *Research Advisor in MCG (Manzoni Consulting Group) Lab for R&D Projects on AI in Logistics, Genoa*

*Professional Experiences:*

*Assistant Researcher at Simulation Team, Genoa University*
*Consultant for SIM4Future in R&D Projects on Modeling & Simulation, Logistics, Industrial Plant and Defense*

*Education & Certificates:*

Antonio Giovannetti conducted his engineering studies at University of Roma Tor Vergata in Engineering and finalized his Master of Science in Electronic Medical and Bio-Engineering. He has acquired experience working on Medical Data Analytics, Applied Statistics and Artificial Intelligence, in which he used his skills in Matlab and Python. He published his thesis intitled "Deep-MEG: spatiotemporal CNN features and multiband ensemble classification for predicting the early signs of Alzheimer's disease with magnetoencephalography".

Thanks to these studies, he has gained experience in the use of Big Data and Modeling and Simulation, as well as the creation of predictive models by using Artificial Intelligence. In particular he performed some crucial activities in order to model problems: problem identification, design of experiment, data collection, data extraction, pre-processing, model setup, data analysis, model execution, machine learning.

He is part of MIPET (Master in Industrial Plant Engineering and Technology) Faculty as well as of STRATEGOS MSc.

He actively participated as teacher to Data Analytics and Complex System Module at the Joint Warfare Tactical Center of Qatar Defense for Simulation Team

He successfully completed the NATO M&S Course and Project Management Operational Module.

Professional & Scientific Experiences

He is active in researches on AI (Artificial Intelligence), M&S (Modeling and Simulation), UGV (Unmanned Ground Vehicles) and innovative XR (eXtendend Reality) applied to Logistics, Industrial Plants and Defense. He is participating in NATO MSG-189 and related Meetings on AI Augmented Immersive Simulation in Training and Decision Making Course of Actions Analysis, organized within NATO MSG (Modelling and Simulation Group)

He has been involved in project for the creation of virtual laboratories in order to manage TIM/TIC, CBRNe Crisis in Ports and Defense Scenario.

He has been involved in Laboratory activities at Santa Lucia in Rome in the field of Space Physiology: body weight relief systems, simulations of microgravity conditions through the use of Augmented Reality.

He developed with Sim4Future the first Cognitive Warfare Simulator For NATO ACT in Norfolk and currently he is involved in the development of PMESII, DIMEFIL Simulator for NATO ACT involving Cognitive Aspects. He developed with Simulation Team different modules of Human Behaviour Modeling (HBM), Intelligent Agents and Information spreading modelling for Cognitive Warfare.

He developed with Simulation Team different Wargames which he presented in WIN (Wargame Initiative) '23 in Rome and WIN '24 in Hamburg for Multi-Dimension (Underwater, Sea, Land, Air, Space, Cyber, Cognitive)  and Multi-Domain (Physical, Cyber, Cognitive) operations.

He presented the research projects on Cognitive Warfare in CASD (Centro Alti Studi per la Difesa) in Rome in 2024.

He's active in the field of AI and Gen-AI applied to Logistics Sector in MCG Lab in Genoa.

He developed with Simulation Team a UGV Simulator for Industrial Facilities in order to minimize costs and risks within hazardous environments and ensure that the system is easy to be operated and designed in order to fully meet the needs of the users who will be in charge operate, maintain and support the system.

He took part in SEE (Simulation Exploration Experience) Project organized by NASA, Johnson Space Center and Kennedy Space Center in relation to ARTEMIS Project for creating a Moonbase. In this framework he cooperated in creation and development of an interoperable federation for Extra Planetary Operations dealing with use of autonomous Systems.

Teams coordinated by him won the Best Project Award on ICAMES at Bogazici University, Istanbul in International Competition organized by Engineering Society.

He published and presented several papers in International Journals and Conferences such as I3M, ISM, CA2X2.

Research Interests

- Modeling and Simulation
- Machine Learning & Artificial intelligence
- Operations Management
- Big Data and Data Analytics
- Extended Reality

Scientific Pubblication & Book

- Deep-MEG: spatiotemporal CNN features and multiband ensemble classification for predicting the early signs of Alzheimer's disease with magnetoencephalography", May 2021, Neural Computing and Applications Journal
- "A deep CNN-based approach for predicting MCI to AD conversion: Developing topics", December 2020, Alzheimer's & dementia: the journal of the Alzheimer's Association
- "Strategic Engineering Applied to Complex Systems with Marine Environment", July 2021, Annual Modeling and Simulation Conference (ANNSIM)
- Published a Chapter in Digital Italy Summit Annual Report 2023 "Costruire la Nazione Digitale". "AI4OPS: Le opportunita' dell'Intelligenza Artificiale nel mondo dell'Industria",Gruppo Maggioli Editore
- "Interoperable Simulation for Space Logistics & Operations for a Moon Base", January 2021, The 20th International Conference on Modeling & Applied Simulation (MAS)
- "Reducing Dangers within Industrial Plants by Extended Reality", September 2021, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Autonomous System for Industrial Plants and Iron & Steel Facilities, September 2021, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Simulation as enabler for Engineering Future Smart Grids", September 2021, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Improving Efficiency and Safety for Heat Exchangers and Water Piping by Innovative Solutions, September 2021, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Sub-dermal battery-less wireless sensor for the automatic monitoring of cattle fever", August 2020, XXXIIIrd General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS)
- "Models for strategic decision makers during CBRN crisis in industrial and urban environment", September 2022, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Evaluation of risk awareness by Simulation and Extended reality in Industrial Plant", September 2022, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Serious Games, Simulation and IoT/IIoT for improving harbor performance, September 2022, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "UGV Digital Twin for garbage detection through AI", September 2022, International Multidisciplinary Modeling & Simulation Multiconference (I3M)
- "Strategic Engineering for enhancing efficiency and effectiveness of water management systems, September 2022, International Multidisciplinary Modeling & Simulation Multiconference (I3M)

Languages

Italian (Native Language)
English

Other Experiences

long experience in Judo at National Competitive Level. Experience on sailing as well as in sport driving on track.

Useful Links

www.strategos.simulationteam.com
www.sim4future.com
www.itim.unige.it

Date         *Last Update on September 17, 2024*