

Agostino Bruzzone

Full professor

✉ agostino@itim.unige.it

☎ +39 3207982138

☎ +39 3901921945251

Education and training

1992

Mechanical Engineering in Genoa University

Study of Automated Systems for developing Innovative Handling Solutions in a Container Terminal by using Simulation Techniques - 110/100 summa cum laude

University of Genoa - Genova - IT

1984

Italian Naval Academy

3rd in Scientific Ranking 5 Ovr

Italian Navy - Livorno - IT

1983

Degree High School

NA - 60/60

Chiabrera Classic HighSchool - Savona - IT

Academic experience

2012 - 2015

Leading Scientist

NATO Science and Technology Organization Centre for Maritime Res - La Spezia - IT

Program Leader. Developing a New Research Track in Marine Simulation for NATO Science and Technology Organization

2017 - ONGOING

Membro del Consiglio Direttivo

SIMAV - Centro di servizio di Ateneo di simulazione e formazione - Genova - IT

Development of Simulation Solutions and Cooperation with other Groups in Geoa University

2004 - ONGOING

Genoa University Full Professor

Genoa University - Genova - IT

Research on Industrial Plants AI IA Simulation Models Innovative Technologies. Teaching on Logistics. Project Management Modeling

Simulation and Complex Systems

1996 - 2004

Research in Genoa University

Genoa University - Genova - IT

Research on Industrial Plants Business Process AI Techniques and Simulation Models

2018

Member

CIELI - Centro Italiano di Eccellenza sulla Logistica i Trasport - genova - IT
MS for Logistics

Work experience

1992 - 1996

Freelance Consultant

Self Employed - Based on Varazze (SV) Italy Operational in Europe/America - IT

Consulting for Improvements on Industrial Port Defence and Business Processes

1990 - 1991

Teacher for Technical HighSchool

Ministry of Education - Savona - IT
teaching

Language skills

English

Proficient

Italian

Mother tongue
Classic High
School in Italy
60/60

French

Independent

German

Basic
Very Basic

Spanish

Basic
Basic
Understanding

Portuguese

Basic
Basic
Understanding

Latin

Basic
Classic High
School in Latin
60/60

Ancient Greek (to 1453)

Basic
Classic High
School in Italy
60/60

No linguistic content

Independent
Genoese Language
(not listed in
combo box)

Teaching activity

Teaching:

Industrial Logistics, Project Management, Modeling and Simulation, High Level Architecture, Project Management in Simulation Programs, VV&A (Verification Validation and Accreditation)

Modules for International Master Program in Industrial Plant Engineering and Technologies on 'Service for Industrial Plants', 'Safety and Security', Babel Experience on Constructions, CELEBES Experience on Project Management, Industrial Plant Foundations, etc.

Periodically Teaching modules on Simulation, Modeling Biomedical Systems, Advanced Logistics Modules, etc.

Postgraduate research and teaching activity

Supervision of PhD students, residents and post-doctoral fellows

I am in charge of a quite significant number of PhD Students within DIMS Program (Doctorship in Simulation and Mathematical Engineering) of Genoa University, for instance just during 2018: Riccardo Di Matteo, Kirill Sinelshchikov, Valentina Bertella, Giovanni Luca Maglione, Paolo di Bella, Manlio Oddone; many of them are funded by Research Programs where I am in charge as Scientific Responsible

PhD committees membership

I am usually reviewer and member of Committees for PhD Defense around the world (e.g. TU Delft in Netherlands, SUSI/IDSIA in Switzerland, LSIS Universite' de Aix Marseille in France, Universite' de Bordeaux)

In Italy, I am member of the Council of PhD Program in Mechanical Engineering in University of Genoa since many years, and I served in defense committee in other Italian Universities (e.g. Perugia, Calabria)

Postgraduate (PhD) teaching activity

I teach courses for PhD students: Modeling and Simulation, HLA, Modeling Bio Medical Systems, Project Management in Simulation Program, VV&A (Verification, Validation and Accreditation)

Research interests

Industrial Plant Engineering & Technologies, Strategic Engineering, Mechanical Engineering, Management Engineering
Industrial Plants, Logistics, Supply Chain Management, Project Management, Construction, Safety & Security, Crisis Management
Autonomous Systems, UAV, AUV, UUV, UGV, USV, Robotic Process Automation, Heterogeneous Networks,
Data Analytics, Data Fusion, Design of Experiments, Operational Management

Artificial Intelligence, Artificial Neural Networks, Fuzzy Logic, Genetic Algorithms, Intelligent Agents, Knowledge Based Systems, Machine Learning Modeling and Simulation, Serious Games, Interoperable Simulation, Data Science, Innovative Solutions
Industrial & Business Process, Industry 4.0, Homeland Security, Defense, Joint Operations, Operational Planning, Education and Training, Operational Support
CIMIC, PSYOPS, Cyber Warfare, Hybrid Warfare, Crisis Management

Grants

2009 - 2012

CIMIC And Planning Research In Complex Operational Realistic Network

European Defense Agency Italian MoD DGA - IT

2000000 - Principal investigator

CAPRICORN is a EDA R&D Project devoted to develop capabilities in the complex and critical sector of Military Operation Planning, specifically for asymmetric warfare scenarios involving CIMIC and PSYOPS, by using CGF (Computer Generated Forces) based on Intelligent Agents (IAs) CGF (Computer Generated Forces)

2015 - 2017

MALICIA

Leonardo - IT

100000 - Principal investigator

Model of Advanced pLanner for Interoperable Computer Interactive Simulation

MALICIA is a constructive simulation derived from PANOPEA and devoted to analyze Maritime Interdiction Scenarios including anti piracy, illegal immigration patrolling and block operations. The simulator considers boarding operations as well as inspections operating with multiple Assets (i.e. MPA, Vessels, AUV, Helicopters, RHIB, USV, AUV, Submarines). The model uses Web services to collect data and interact with Tactical Naval Situation and it is open for supporting dynamic Operational Planning and Optimization considering Efficiency, Risks and Costs of the whole aspects within scenarios where false alarms and intense commercial traffic is present

2016 - 2017

FASOLT

PW - IT

80000 - Principal investigator

FASOLT

Foremost Autonomous Solutions for Operations in industrial plant Simulation Team and PW cooperated jointly in development of Innovative Solutions for Industrial Plants based on Autonomous Systems, Artificial Intelligence and Modeling & Simulation. The Project addresses mainly the Safety within Industrial Plants and it generated very interesting results on several issues including among others:

- Safety in Industrial Plants
- Efficiency Improvements
- Effectiveness Improvements
- Availability and Reliability
- Man-Machine Collaboration
- Innovative Supervision
- Autonomous Capability Development

2012 - 2015

SIMCJOH

Italian MoD - IT

600'000 - Pricipal investigator

Simulation of Multi Coalition Joint Operations involving Human Modeling - Virtual Interoperable Simulation & Virtual Interoperable Commander

The SIMCJOH (Simulation of Multi Coalition Joint Operations Involving Human Modeling) is a MS2G (Modeling & Interoperable Simulation and Serious Game) project for Strategic Decision Making.

SIMCJOH is lead by Genoa University and provides an HLA interoperable immersive framework for the Commander and his staff within critical decision making over Joint and MultiCoalitions scenarios, considering a strong impact of human factors. Simulation Team Models on Population and Human Behavior Modeling are the Core of SIMCJOH Project.

The experimentation faces issues related to strategic decision making over complex scenarios. The SIMCJOH VIS & VIC have been created by Simulation Team (DIME, MSC-LES, Cal-Tek and MAST,) and successfully tested and integrated in SIMCJOH Federation using Simulation Team IA-CGF. The SIMCJOH Federation includes also Selex ES SGA, CAE GESI.

The SIMCJOH project was created to demonstrate the use of these elements in a HLA Federation, the project was co-sponsored by Teledife, Italian MoD and demonstrated in Italian M&S Centers and NATO M&S Center of Excellence through a joint partnership under the leadership of DIME Genoa University and involving: MSC-LES, Cal-Tek, MAST, Finmeccanica Land and Naval Defence Electronics Division, CAE. An Interactive Presentation and

Demonstration of SIMCJOH has been organized for Italian MoD in Rome in cooperation with M&S COE in January 28, 2016

2017 - ONGOING

W-Artemys

IANIL - IT

114.000 - Participant

Wearable augmented reality for employee safety in manufacturing systems

2016 - 2017

SISOM

INAIL - IT

55.000 - Participant

Sistemi Intelligenti Sicurezza Operatore Macchina

2013 - 2015

DIEM-SSP

MIUR PRIN - IT

54.000 - Participant

Disasters and Emergencies Management for Safety and Security in industrial Plants

Publications

I am Member of the Editorial Board in International Journals such as:

Simulation

Advances in Production Engineering & Management

Simulation Notes

In addition I served as Guest Editor in several Special Issues of International Journals:

IJSPM

IEEE Transactions on ENGINEERING MANAGEMENT

Journal of Computational Science

Assignments abroad

I served in several roles such as:

-Project Leader of a new Research Track, NATO Science and Technology Organization, Centre for Maritime Research and Experimentation, La Spezia, Italy

-General Director of M&S Net (Excellence Network with 34 Centers Worldwide)

-General Director of the McLeod Institute of Simulation Science (over 20 center worldwide in Universities)

-Director of Technical Chapter on SIMulation applications in Management, PLanning & forEcaSTing for SCS

-Executive Vice President of Society for Computer Simulation International
www.scs.org

-Member of the Board of Directors for Society for Computer Simulation International
www.scs.org

Other professional activities

As Scientific Leader I coordinated many research programs with Industries and Agencies

- Ricerca finanziata: Grande Industria (i.e. Ansaldo, Gruppo Finmeccanica)
- Ricerca finanziata: Grande Distribuzione (i.e. COOP)
- Formatore: Ministero delle Infrastrutture Albo Autotrasporto
- Promotore: SEE Simulation Exploration Experience, coordinato da NASA
- Valutatore PhD: University College Cork, ENSAM, Ecole Supérieure d'Ingénieurs de Luminy, Polytech'Marseille, Université de Bordeaux
- Allievo ufficiale: Accademia Navale di Livorno
- Esperto AICO, IODA

Experiences:

- Speaker for the Concept Meeting for Bio Cyber War Game, Operation Session, title "Cyber Attacks - Red Team" November 30th 2016, Executive Conference Center 4075 Wilson Blvd, Suite 200 Arlington, VA 22203, upon invitation from Dr. Joseph Rosen, Dartmouth College
- NMSG Washington DC US
- Beth Israel Deaconess Medical Center Harvard Medical School Boston US
- The Charles Stark Draper Lab. Cambridge MA U
- S Joint demo US JFCOM ITEC'10 London
- General Director M&S Net 34 Centers
- Charles Sturt Univ. Bathurst Australia
- SEED, Naval Postgraduate School Monterey US
- Institute for Security Technology Studies Dartmouth College Hanover
- US General Director McLeod Institute of Simulation Science 28 Centers
- Vice-President Member of the Board of the SCS US