



Special Event for **I/ITSEC 2022**
Wed 30 Nov 2022, 1030h-1200h, W308C



M&S Emerging Technologies: Innovation Opportunities and Challenges

Event Lead Coordinator: Wim HUIISKAMP (NLD, TNO/ETSA)

Event Participants:

Andy SMITH (UK, ETSA)

Agatino MURSIA (ITA, Leonardo Company)

Luigi Capone (ITA, Leonardo Labs)

Simon SKINNER, David HEAD (UK, Thales)





Emerging Technologies for M&S



“Multi-agent Reinforcement Learning Using Simulated Quantum Annealing”



“Real Time Raytracing”



“Digital Twins”

“Cloud Based Simulation Services”

“Artificial Intelligence for Decision Support”
“Big Data”



IoT and Sensors for Military



“Real time data collection and analysis”

“Blockchain for data protection”

“High Performance Computing Clusters”

“5G for wearable simulations”



“Metaverse, beyond xR”



Special Event Objectives



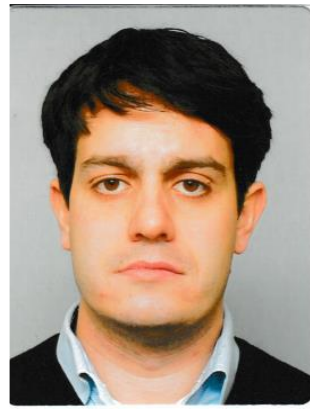
- Provide an overview of emerging technologies and innovations in the M&S domain from a European perspective.
- Discuss how the M&S Community of customers and suppliers can be more innovative and more rapidly transition from ideas to application.
- Discuss how to engage with ETSA (“The European Voice” of the MS&T community) and leverage its network and partnerships.



Agenda



- ETSA Overview – organization, membership and main activities
Andy SMITH (ETSA Chair)
- Emerging M&S technologies, state-of-the-art, evolution and mid-term opportunities
 - MSG-189 report on innovative technologies as opportunity or challenge for M&S.
Agatino MURSIA (ITA/Leonardo Company)
 - Innovation in M&S with a focus on Advanced Simulation, Cloud and HPC.
Luigi CAPONE (ITA/Leonardo Labs)
 - Digital Twin case study: AERALIS
Simon SKINNER, David HEAD (UK/Thales)
- Q&A to the panel of presenters, moderated by Wim HUIISKAMP





Session Chair



Wim HUISKAMP is Chief Scientist Modelling, Simulation and Gaming in the M&S department at TNO Defence Research in the Netherlands. He is member of the NATO Modelling & Simulation Group (NMSG) and served as NMSG Chairman (2013-2016) and before as Chairman of the NMSG M&S Standards Subgroup (MS3). Wim is liaison of the NMSG to the Simulation Interoperability Standards Organization SISO.

Wim HUISKAMP (ETSA Board)





Participant (1)



Andy SMITH is the ETSA Chairman and has been a simulation and training advocate for 35 years. As a publisher and event organizer for the Simulation and Training industries he has dealt with regulatory, learning and technology issues for most of his career. Andy launched Military Simulation & Training, the original title of MS&T, with Monch Publishing in 1983. He launched Halldale as a buyout in 1992 and started Halldale's USA operations in 2002.

Andy SMITH (ETSA chairman)





Participant (2)



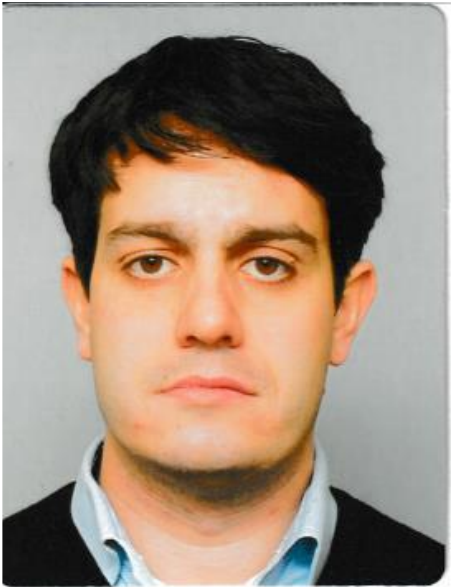
Agatino MURSIA, currently with Leonardo S.p.A. as coordinator of NATO/EDA/National Research Programs in the Investments & Technology Plan Governance Unit - CTIO Electronics Division, graduated in Electronics Engineering at the University of Padua in 1989. Since then he has been working in the industry, in different positions from Research and Development, Business Development and CTIO, in Italy and in the USA. Italian Industrial Member and former NMSG Chairman he has been promoting the use of M&S and related international simulation standards. Recently he has led the activities of the MSG-189 Specialist Team dedicated to the application of new emerging disruptive technologies to M&S and joined the MSG-ET-053 team dedicated to Digital Twin.

Agatino MURSIA (Leonardo Company ITA)





Participant (3)



Luigi Capone is a senior manager at Leonardo SpA leading the digital transformation through Big Data Analytics, AI and Advanced Computational Engineering, while leveraging on deep High Performance and Cloud Computing expertise for an effective exploitation of the newborn davinci-1 corporate facility. Previously, Dr. Capone worked at Accenture SpA as Technology Consulting Manager, Talent and Organization, Financial Services. Also, He spent twelve years overseas in different roles and countries, at Oak Ridge National Laboratory (TN, USA) as computational scientist, at Rolls Royce plc (Derby, UK) as senior computational fluid dynamics developer and at EDF R&D (Clamart-Chatou, Paris, FR) as post-doctoral industrial fellow. Luigi holds a PhD in Nuclear Engineering at Texas A&M University (TX, USA) and a M.Sc and B.Sc at Politecnico di Milano.

Luigi CAPONI (Leonardo Company ITA)





Participant (4)



Simon Skinner has 30 years' experience in the training and simulation industry and was for 11 years the CEO of XPI Simulation Ltd. (now a Thales group company). He is the Product Line Manager for Simulation Capabilities and Digital Twins for the worldwide Thales Training & Simulation business. Simon has an honors degree in Electronic Engineering, is a Chartered Engineer and Fellow of the UK Institution of Engineering Technology (FIET). As well as being a frequent author at I/ITSEC and a subcommittee member, he also serves on the Simulation Interoperability Standards Organization (SISO) Standards Activity Committee (SAC) and is appointed by UK Ministry of Defence (MOD) as a national member of the NATO Modelling and Simulation Group (NMSG).

Simon SKINNER (Thales UK)





Participant (5)



David Head has over 35 years' experience in the Simulation and Training industry. He is currently enjoying developing a role within the Thales Avionics UK Business as Head of Strategic Partnerships and Customer Marketing for Training Solutions having successfully concluded periods as Head of New Business and General Manager, Combat Air & Maritime Sector. In that role, he had responsibility for delivery, development, and support of domestic and international business for Combat Air and Maritime Training Solutions. This included leading a group of Project and Bid Managers, as well as joint venture company Directors to deliver compliant, timely, and cost effective projects and bids that meet both the needs of the Customer, as well as those of the Company. His current portfolio spans the entire range of Thales' synthetic training products and turn-key services, with an internationally diverse Customer base.

David HEAD (Thales UK)





Graphics



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