

SOCIETY CONFERENCE

RAeS Flight Simulation Conference, 22 – 23 October 2024

PROGRAMME

Day one - Tuesday 22 October 2024 (UK time zone)

08:30 **Registration and refreshments**

09:00 **CHAIRMAN'S WELCOME & OPENING REMARKS**
Chris Hunter, RAeS Flight Simulation Specialist Group

SESSION: REGULATORY

09:05 **INTRODUCTION, REGULATORY SESSION**
Mark Dransfield, RAeS Flight Simulation Specialist Group

09:10 **KEYNOTE – A NEW STRATEGY FOR THE QUALIFICATION AND OVERSIGHT OF FLIGHT SIMULATION TRAINING DEVICES**
Francesco Gaetani, Head of Aircraft & Medical Department, Chief Pilot, EASA

09:25 **AVIATION AUTONOMY: A REGULATORY REVIEW**
Dr Connor Champ, Lawyer, Law Commission

09:45 **REGULATORY FRAMEWORK FOR RPAS FSTD**
Edwin Purnell, RPAS Principal Policy Specialist, UK CAA

10:05 **Break**

10:35 **EASA'S REGULATORY UPDATE, RMT.0196 – UPDATE OF THE FLIGHT SIMULATION TRAINING DEVICE REQUIREMENTS**
Matteo Arnoldi, Junior Expert, FCL Training Innovation, EASA

10:55 **FLIGHT SIMULATION TRAINING DEVICE (FSTD) QUALIFICATION AND THE INTEGRATION OF NEW AND EMERGING TECHNOLOGIES**
Larry McDonald, Senior Technical Specialist, Flight Simulation Systems, FAA

11:15 **SPECIAL CONDITIONS FOR QUALIFICATION OF NEW TECHNOLOGIES**
Christian Marty, Chief Technology Officer and Safety Manager, Loft Dynamics

11:35 **RESEARCH NEEDS FOR DEVELOPING QUALIFICATION STANDARDS FOR FLIGHT SIMULATION TRAINING DEVICES WITH HEAD MOUNTED DISPLAYS**
Dr Peter Zaal, Metis Technology Solutions Inc. at NASA Ames Research Center

11:55 **DISCUSSION PANEL**
Mark Dransfield, RAeS Flight Simulation Specialist Group & Keith Ross, Simulator Technical Inspector, UK CAA

12:20 **Lunch**

SPONSORS:  **LEONARDO**

THALES

CAE

TRU
SIMULATION™


SIM OPS
SOLUTIONS


ASTi



SESSION: VIRTUAL TEST ENVIRONMENTS AND DIGITAL TWINS

- 13:20 **INTRODUCTION – VIRTUAL TEST ENVIRONMENTS AND DIGITAL TWINS**
Adrian Alford, RAeS Flight Simulation Specialist Group
- 13:25 **DESIGNING AND MAINTAINING EFFECTIVE TEST ENVIRONMENTS – EXPERIENCES FROM FIVE LARGE-SCALE COMPANIES**
Torvald Mårtensson, Technical Fellow within System Integration Testing, Saab Aeronautics
- 13:45 **MODELLING AND SIMULATION VERSUS FLIGHT TEST FOR AIRCRAFT CERTIFICATION – WHERE CAN WE DRAW THE LINE?**
Bimal Aponso, Chief Scientific & Technical Advisor for Dynamic Systems & Gregory Thumann, FAA
- 14:05 **SIMULATION FOR QUALIFICATION TESTING (WITH A PARTICULAR EMPHASIS ON SHIP HELICOPTER OPERATING LIMITS [SHOL] AND THE RCAT2 PROGRAMME)**
John Goodby, Leonardo Helicopters UK
- 14:25 **ROTORCRAFT CERTIFICATION BY SIMULATION – SHORT INTRODUCTION TO THE PRINCIPLES AND PRACTICES**
Gareth Padfield, Emeritus Professor of Aerospace Engineering, The University of Liverpool
- 14:45 **VIRTUAL AND HYBRID TESTING TO SUPPORT PROTEUS**
Kieron Jay, Leonardo Helicopters UK
- 15:05 **DISCUSSION PANEL, VIRTUAL TESTING/QUALIFICATION/CERTIFICATION**
Adrian Alford, RAeS Flight Simulation Specialist Group
- 15:20 **Break**
- 15:50 **ED-247: A BUILDING BLOCK TOWARDS DIGITAL CONTINUITY – FROM DESIGN TO TRAINING**
Olivier Fourcade, Chair of the EUROCAE Working Group 97 in charge of the ED-247 Standard, Airbus Industries
- 16:10 **UK DIGITAL TWIN CENTRE: WHAT IS IT AND HOW CAN IT BENEFIT THE AEROSPACE, AVIATION AND SPACE ECO-SYSTEMS**
Ben Orcan, Digital Solutions Lead, Thales Training & Simulation UK
- 16:30 **DIGITAL TWINS AND THE DIGITAL TWIN FRAMEWORK, USES AND APPLICATIONS**
Fernando Petruzzello, Imagine4D, Canada
- 16:50 **HOW AIRBUS ENSURES SIMULATION SOFTWARE PACKAGE FIDELITY**
Jean-Baptiste Schneider, Aircraft Simulation (GO5) & Training Solutions, Airbus
- 17:10 **DISCUSSION PANEL, VIRTUAL TESTING/DIGITAL TWINS/TRAINING**
Adrian Alford, RAeS Flight Simulation Specialist Group
- 17:25-1730 **DAY ONE SUMMARY AND CLOSE**
Chris Hunter, RAeS Flight Simulation Specialist Group
- 18:00 **EDWIN A LINK LECTURE**
Group Captain Ruari Henderson-Begg, RAF Chief Modelling & Simulation Officer

<https://www.aerosociety.com/events-calendar/raes-flight-simulation-conference-2024/>

SPONSORS:



THALES

CAE

TRU
SIMULATION


SIM OPS
SOLUTIONS

ASTi

Day two - Wednesday 23 October 2024

08:30 **Arrival and refreshments**

09:00 **CHAIRMAN'S WELCOME TO DAY TWO**
Chris Hunter, RAeS Flight Simulation Specialist Group

SESSION: USE OF AI AND DATA IN PILOT TRAINING SESSION

09:01 **INTRODUCTION – USE OF AI AND DATA IN PILOT TRAINING**
Allyson Kukel, RAeS Flight Simulation Specialist Group

09:05 **PILOT TRAINING TOOLS: THE GOOD, THE BAD AND THE UGLY**
Captain Simon Wood & Captain Paul Field, EBT Foundation

09:25 **VRAI VR SIMULATION TRAINING AND DATA CAPTURE FOR RAPID AIRMANSHIP ASSESSMENT**
Niall Campion, Managing Director, VRAI

09:45 **ON APPROACH TO REALITY – RAF CENTRAL FLYING SCHOOL SATCE EXPERIMENTS**
Dr Jonathan Allsop, R&D Psychologist & Flt Lt Richard Keeling, RAF Central School of Flying

10:05 **Break**

10:35 **THE METAVERSE AND FLIGHT SIMULATION: DEAD OR RESTING?**
Andy Fawkes, Thinker Company Limited

10:55 **HUMAN-2-MACHINE LEARNING: MAKING A DIFFERENCE WITH AI**
Ian Henderson, AI Science Lead, Thales Training & Simulation UK

11:15 **COMPUTER-GENERATED FORCES TEAM BEHAVIOUR WITHIN AIR COMBAT SIMULATIONS:
CONCEPT AND AGENT STRUCTURE**
Philippe Ruther & Fabian Reinisch, University of the Bundeswehr, Munich

11:35 **USE OF SATCE WITH AI VIRTUAL INSTRUCTOR FOR THE NAVAL AVIATION TRAINING
COMMAND**
Neil Waterman, Commercial Aviation Director, ASTi

11:55 **DISCUSSION PANEL**
Allyson Kukel, RAeS Flight Simulation Specialist Group

12:20 **Lunch**

13:20 **FALCON 2 PROJECT**
Sam Leather, RAeS Flight Simulation Specialist Group

SESSION: NEW MODELLING & SIMULATION DEVELOPMENTS

13:40 **INTRODUCTION – NEW MODELLING & SIMULATION DEVELOPMENTS**
Dr Steve Hodge, RAeS Flight Simulation Specialist Group

13:45 **SOFTWARE ACCELERATION: ADOPTING COTS TECHNOLOGY FOR DEFENCE SIMULATION**
Jack Redfern, Simulation Engineer, Visual & Virtual Simulation, BAE Systems

SPONSORS:  **LEONARDO**

THALES

CAE

TRU
SIMULATION™


SIM OPS
SOLUTIONS


ASTi

- 14:05 **TRAINING THE NEXT GENERATION OF PILOTS WITH AI-POWERED ADAPTIVE LEARNING APPLICATIONS**
Mike Jones, Director of Engineering Services, Systems Technology Inc.
- 14:25 **EVOLVING FLIGHT TRAINING ENVIRONMENTS AND HOW FLIGHT TRAINING NEEDS TO ADAPT FOR AI IN THE COCKPIT**
Max Najork, Managing Director & Pau Garcia Sanz, Chief Product Officer, Data Machine Intelligence Solutions GmbH
- 14:45 **Break**
- 15:15 **THE DEVELOPMENT OF AUGMENTED REALITY ON THE FLIGHT DECK FOR SINGLE PILOT OPERATIONS**
Wen-Chin Li, Course Director on Safety and Human Factors in Aviation MSc, Cranfield Institute of Technology
- 15:35 **EXPLORATORY STUDY OF VR FLIGHT TRAINING DEVICE FOR UPSET PREVENTION AND RECOVERY TRAINING**
Filip Florek, Irish Rail
- 15:55 **APPLICATIONS OF VR SIMULATION TO IMPROVE GLOBAL AIRCRAFT SAFETY**
Tom Beers & Laurence Timmerman, TRU Simulation
- 16:15 **DISCUSSION PANEL**
Dr Steve Hodge, RAeS Flight Simulation Specialist Group
- 16:40-1645 **SUMMARY AND CONFERENCE CLOSE**
Chris Hunter, RAeS Flight Simulation Specialist Group

<https://www.aerosociety.com/events-calendar/raes-flight-simulation-conference-2024/>

SPONSORS:



THALES

CAE

TRU
SIMULATION



SIM OPS
SOLUTIONS



ASTi