

CURRICULUM VITAE

PERSONAL INFORMATION

Mehran Sarkarati

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Date of Birth 08.09.1977 | Nationality German

EDUCATION

Ph.D. Aerospace Engineering 2009
Berlin University of Technology
Dissertation Title: "A Generic Science Operations Planning System and its Implementation on the First ESA Lunar Mission, SMART-1"

M. Sc. Aerospace Engineering 2003
Berlin University of Technology/ Exchange at Arizona State University
Specialisation: Satellite Design, Data Handling and AOCS
Thesis Project at German Aerospace Centre (DLR) Institute for Remote Sensing
Thesis Title: A Flexible Telemetry Checkout System for Microsatellites

German Engineering Society (VDI) Award for distinctive graduation

M. Sc. Computer Sciences 2007
Berlin University of Technology/ Exchange at Arizona State University
Thesis project carried out at Fraunhofer Institute FIRST
Thesis Title: "Scheduling Optional Tasks in an Over-Constraint System of Dependent Unary Resources, Using COP Approach"

ROLES RELEVANT TO STANDARDISATION

2023 – 2024 Standardisation Manager for ESA Directorate of Operations
2018 – 2024 Co-Chair of ESA Board for Software Standardisation BSSC
2021 – 2024 Chairman of CCSDS Spacecraft Monitoring and Control WG
2015 – 2021 Chairman of CCSDS Mission Planning and Scheduling WG
2015 – 2019 Chairman of ECSS Agile Handbook
2013 – 2016 Member of CCSDS Telerobotic Working Group

WORK EXPERIENCE

Head of Ground Stations Division 01.09.2024
European Space Agency, ESA - Present
Responsible for design and engineering of ESA space communication and tracking network of ground stations

Senior Ground Systems Strategy and Commercialisation Manager 2023 – 31.08.2024
European Space Agency, ESA
Responsible for leading cross-cutting strategic department initiatives aimed at fulfilling the department, and ultimately, the directorate strategy.

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| <p>IT Business Partner for directorates of Operations, Human and Robotic Exploration, Telecommunication and Integrated Applications European Space Agency, ESA Coordination of strategic IT investments and needs of supported directors</p> | 2021- 2022 |
| <p>Head of Robotics and Applications Data Systems Section European Space Agency, ESA Section responsible for mission operations data systems of Robotic and Application missions and Data Systems of the ESA Space Safety Program Leading ESA Advance Ground Data System Application Lab (AGSA Lab)</p> | 2014-2020 |
| <p>Data System Manager, European Space Agency, ESA Data system Manager and Technical Responsible for development, deployment, and operational validation of mission data systems for European SSA programme and operational simulator of Lisa Pathfinder, MarsExpress, VenusExpress, Rosetta, MOIS automation system and R&D studies;</p> | 2007-2014 |
| <p>VEGA Group PLC, Contractor in SCI and TEC directors in ESA/ESTEC Design and Development of science operations planning system for SMART-1 mission; Planning and coordination of the activities of the SMART-1 scientific payloads</p> | 2005-2007 |
| <p>Young Graduate Trainee in Rosetta and SMART-1 SOC, ESA/ESTEC Development of simulation models for scientific payloads of the Rosetta mission;</p> | 2004–2005 |
| <p>German Aerospace Centre, DLR, Berlin Development of a web-based monitoring and control system for the DLR Satellite BIRD; Development of the AOCS simulator for the DLR satellite BIRD</p> | 2000–2004 |
| <p>Quality Park GmbH (EADS Supplier Company), Berlin, Hamburg, Toulouse Development of simulation models for the A/C0 simulation of the A380 aircraft; Involvement in the definition and implementation of the Airbus Procedure AP2633</p> | 2003–2004 |
| <p>Computing Centre of Berlin University of Technology Software applications and database development and administration Instructor of CAD, C++ and JAVA courses for students and employees of TU-Berlin</p> | 1999-2003 |
| <p>BMW Rolls-Royce AeroEngines GmbH, Dahlewitz Practical assembly experience on BR710 and BR 715 Jet-Engines; CAD design and preparation of assembly plans</p> | 1999-2000 |

PUBLICATIONS

- **“A Generic Science Operation Planning Concept for Planetary Missions and its Implementation on the First ESA Lunar Mission SMART-1”**, Dissertation Thesis, Institute of Aerospace Engineering, Berlin University of Technology, April 2009
- **“Scheduling Optional Tasks in an Over-Constrained System of Dependent Unary Resources, Using a COP Approach”**, Master Thesis, Department of Software Engineering and Theoretical Computer Science, Berlin University of Technology/ Fraunhofer Institute for Computer Architecture and Software Technology, March 2007
- **“Design and Implementation of a Flexible Telemetry Checkout System for Micro-Satellites”**, Master Thesis, Institute of Aerospace Engineering, Berlin University of Technology/ DLR Remote Sensing Technology Institute, 2003
- **“Modelling Gravitational Measurement Instruments and the Associated Drag Free Attitude Control Systems.”**, The 10th International Conference on Space Operations, SpaceOps 2008
- **“CCSDS Mission Planning and Scheduling Services Opening Door for Cross-Agency Interoperability”** The 16th International Conference on Space Operations, SpaceOps 2020
- **“Mission Operations as a Service: Cloud Computing for Space Missions beyond Infrastructure as a Service (IaaS)”**, The 14th International Conference on Space Operations, SpaceOps 2014
- **“SOPS: The Science Operations Planning System for the First ESA Lunar Mission SMART-1”**, The 9th International Conference on Space Operations, SpaceOps 2006
- **“Rosetta Payload Modelling for Science Operations: Resource Management and Conflict detection”**, Co-Author, 9th International Conference on Space Operations, SpaceOPS 2006
- **“Introducing Intuitive MBSE for the Ground Segment, Starting with the Euclid Mission”**, Co-Author, Ground Software Architecture Workshop, GSAW 2019
- **“An Example of Scheduling Optional Tasks in an Over-Constrained System of Dependent Unary Resources”**, 17th International Conference on Automated Planning and Scheduling, ICAPS 2007
- **“Design and Implementation of a New Generic Planning Software System for the Science Operations of ESA Planetary Missions”**, 56th International Astronautical Congress of the International Astronautical Federation, IAC 2005
- **“Living in a Virtual Moon Habitat: Augmented and Virtual Reality Techniques for Space Missions, Astronaut Training and Rover Operations”**, International Conference on Artificial Intelligence and Robotics, 2019
- **“Augmented and Virtual Reality for Space Mission Operations, Astronaut Training and preparations for a Future Moon Habitat”**, 3rd International Conference on Virtual Reality, ICVR 2017
- **“SIMCLOUD: Running Operational Simulators in the Cloud”**, Simulation and EGSE for Space Programmes, SESP 2015
- **“How To Plug-in Your Rover into a Space Mission to Moon or Mars, Standardised METERON Telerobotics Services“**, The 6th International Conference on Automation, Robotics and Applications, ICARA 2015
- **“METERON CCSDS MO Compliant Telerobotic Services Talk DTN”**, The 14th International Conference on Space Operations, SpaceOps 2014

- **“METERON Operational Environment and Robotic Services”**, Ground Software Architecture Workshop, GSAW 2013
- **“Cloud-Based Architectures in Ground Systems of Space Missions”**, Ground Software Architecture Workshop, GSAW 2013
- **“How to do SOA right? – An SOA Governance Framework for the ESA SSA Preparatory Programme”** The 12th International Conference on Space Operations, SpaceOps 2012
- **”When The Space Gets Cloudy – A Systematic Assessment Of Cloud Computing Application Domains for ESA Ground Data Systems”**, The 12th International Conference on Space Operations, SpaceOps 2012
- **“Intrinsic Interoperability of Services - A Dream Or A Key Objective For Mission Operation Systems”**, The 12th International Conference on Space Operations, SpaceOps 2012
- **“Leveraging Advanced Software Technologies for Implementing the European Space Situational Awareness Ground Data Systems”**, The 11th International Conference on Space Operations, SpaceOps 2010
- **“Advanced Software Technologies for the European Space Situational Awareness”**, Ground System Architectures Workshop, GSAW 2010
- **“How to Pick Your Perfect Match in a SOA Speed Dating Party?”** Gartner SOA & Application Development and Integration Summit
- **“Software-in-the-loop Simulation of the Attitude Control System of the DLR Satellite BIRD”**, Master Thesis (Studienarbeit), Institute of Aerospace Engineering, Berlin University of Technology/ DLR Remote Sensing Technology Institute, 2001
- **“Round Trip Engineering for Legacy Space Data Systems Based on a Model Driven Architecture Approach”**, The 10th International Conference on Space Operations, SpaceOps 2008
- **“A Web-based Modular and Flexible Data Acquisition and Telemetry Monitoring System for Micro-satellites”**, 5th IAA Symposium on Small Satellites for Earth Observation
- **“VR in Support of Space Weather Forecasting”**, Co-Author, he 17th International Conference on Space Operations, SpaceOps 2021
- **“The World Upside Down (Ground First, Space Second): OPS-SAT's solution to low cost ground and space system development”**, Co-Author, AIAA SPACE 2015 Conference and Exposition Pasadena, California
- **“SMART-1 Science Operations Planning System”**, Co-Author, ILEWG 9 International Conference on Exploration and Utilization of the Moon, ICEUM9/ILC2007
- **“ESA’S SMART-1 Mission: Lunar Science Results After One Year”**, Co-Author, 37th Annual Lunar and Planetary Science Conference, 2006
- **“Coverage And Pointing Accuracy of SMART-1/AMIE Images”**, Co-Author, 39th Annual Lunar and Planetary Science Conference, March 13-17, 2008
- **“Moon SMART-1 Impact: Predictions and Observation Campaign”**, Co-Author, First International Conference on Impact Cratering in the Solar System, 2006
- **“SMART-1 Payload Operations During the Cruise and at the Moon”**, Co-Author, The International Lunar Conference , ILC 2005

- **“SMART-1 Long And Medium Term Planning for the Extended Mission”**, Co-Author, The International Lunar Conference , ILC 2005
- **“SMART-1 Moon impact on 3 Sept 2006: predictions and observation campaign”**, Co-Author, Geophysical Research Abstracts, Vol. 9, 10608, 2007, SRef-ID: 1607-7962/gra/EGU2007-A-10608
- **“Smart-1 Mission Highlights”**, Co-Author, 38th Lunar and Planetary Science Conference, (Lunar and Planetary Science XXXVIII), 2007