PERSONAL INFORMATION

Daniel Fischer

✉ Daniel.Fischer@esa.int

Sex Male | Date of birth 11/06/1980 | Nationality German

WORK EXPERIENCE

01/11/2023-present

Head of Ground Segment System and Cybersecurity Engineering
European Space Agency
Ground Systems Engineering and Innovation Department

- Supporting ESA programmes through the management of end-to-end ground segment systems and cybersecurity engineering activities in support of the overall ESA matrix organisation.
- Security engineering management for the Directorate and contributing to its cybersecurity strategy.
- Leading the system engineering and cybersecurity-related technology and standardisation strategies
- Management of R&D developments as part of the ESA technology programmes.
- Serving as CCSDS MOIMS Area Director

01/04/2021-31/10/2023

Head of the Applications and Robotics Data Systems Section
European Space Agency
Ground Systems Engineering and Innovation Department

- Providing end-to-end system and application engineering services to a diverse range of customers, including ESA's Space Safety Programme and Human and Robotic Exploration programme.
- Developing and validating key CCSDS standards related to security
- Together with CNES and NASA/JPL developing and demonstrating though a prototype for IOAG mission interoperability at application layer.

01/10/2018-31/03/2021

Senior Strategy Officer
European Space Agency
Strategy and Transformation Office

- Supervision of innovation management for the directorate
- Management of Mission Operations Infrastructure (MOI) strategic planning, monitoring, and reporting of MOI plan execution, and provision of the secretariat for the MOI investments governance
- Coordination of the OPS contributions to ESA-wide initiatives related to cybersecurity and participation to cybersecurity activities relevant to the Directorate, including standardisation

01/12/2016 – 30/09/2018

Head of the Ground Segment Engineering Support Section
European Space Agency
Ground Segment Engineering Support Office

Provision of functional and integrated support in ground segment engineering within the Directorate of Operations, other ESA Directorates, as well as to third parties
- Provision of (model-based) system engineering expertise, methodologies, and tools
- Leading cybersecurity standardisation initiatives within ESA and in international forums such as ECSS and CCSDS
- Managing the space situational awareness standardisation needs in the context of CEN/CENELEC

01/07/2014 – 30/11/2016 **Data System Manager**

European Space Agency
Ground Segment Engineering Support Office

- Provision of cybersecurity support services within and outside the Directorate of Operations
- Acquisition and management of R&D activities in the domains of system engineering and cybersecurity tools in line with the ESA strategic vision
- Leading cybersecurity standardisation initiatives within ESA representing ESA in CCSDS and ECSS security groups.
- Managing the development and integration of the mission control system for the Copernicus Sentinel-2A and Sentinel-5P missions

15/09/2009 – 30/06/2014 **Data System Manager**

European Space Agency
Application Missions & Special Projects Data Systems Section
Directorate of Human Spaceflight & Operations

- Definition and technical management of major contracts for the overall system engineering and architectural design of ESA's space situational awareness programme
- Definition and management of mission data systems development activities and associated support to OPS mission operations teams (mainly Sentinel 2A mission)
- Active involvement in international and ESA internal standardisation activities related to cybersecurity
- Execution of R&D activities and presentation of results at international conferences
- Provision of cybersecurity support services to other areas inside the Agency

08/09/2005 – 14/09/2009 **Researcher / Security Support Engineer**

Université du Luxembourg
6, rue Richard Coudenhove-Kalergi, L-1359 Luxembourg, Luxembourg

- Applied Research activity, composed of two responsibilities:
  - Researcher and Ph.D. Candidate, Duty Station: Université du Luxembourg
  - Cybersecurity Support Engineer, Duty Station: ESA/ European Space Operations Centre

RELEVANT DEGREES

08/09/2005-11/01/2010 **Ph.D. in Computer Science**   EQF Level 8

Université du Luxembourg
2, Avenue de l'Université, 4365 Esch-sur-Alzette, Luxemburg, Luxembourg

- Ph.D. Thesis: Topology Dynamics and Secure Routing for Spacecraft Networks

ADDITIONAL INFORMATION

Relevant publications

- SEC_LAB: A Secure Communications Testbed for Space Missions (Space Operations – Beyond Boundaries to Human Endeavours, Springer 2022)
- Making space-link security work: Auxiliary services to enable the CCSDS Space Data-Link Security Protocol (AIAA Space 2016)
- SpaceSecLab: A modular environment for prototyping space-link security protocols (Spaceops 2016)
- Finalizing the CCSDS Space Data Link Layer Security Protocol: Setup and Execution of the Interoperability Testing (AIAA Space 2015)
- Standardizing and Implementing Secure Software at ESA (AIAA Space 2015)
- Ready for secure software: Secure Software Engineering for space missions (Spaceops 2014)
- The last line of defence – Secure Software Engineering for Space Data Systems (Spaceops Workshop 2013, upon invitation)
- Predictable Mobile Routing for Spacecraft Networks (IEEE Transactions on Mobile Computing (Volume 12, Issue 6, 2013)