Course: Data Fusion Architecture — credits: 5

Course code	SEVM21DFA
Name	Data Fusion Architecture
Study year	2026-2027
ECTS credits	5
Language	English
Coordinator	M. Sedighi
Modes of delivery	Lecture Project-based learning
Assessments	Data Fusion Architecture - Assignment

Learning outcomes

At the end of this module the student:

- create data processing software for a sensor system which combines multi-sensor data into correct interpretations.
- analyse system requirements to identify applicable sensor fusion architectures.
- analyse data acquisition by a sensor system to construct a common representational format.
- adapt sensor system design to create correct temporal and spatial alignment and normalization of multi-sensor data.
- design interfaces for sensor system management.
- design and implement a system architecture using data stream management systems.
- design and implement mathematical data fusion models.

Content

The course covers the following topics:
sensor fusion architectures, common representational format, temporal and spatial alignment, error propagation analysis and device virtualization.

Included in programme(s)

Smart Systems Engineering

School(s)

Engineering, Life Sciences & ICT

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