talentgal

Engineering & Technology

AI for Space Systems

Description

Application of Artificial Intelligence techniques to the design, operation and optimisation of next-generation space systems. The activities cover intelligent spacecraft subsystems such as attitude determination and control systems (ADCS), autonomous onboard decision-making, and in-orbit service capabilities, as well as AI-driven signal processing and communication technologies for satellite systems. The line combines expertise in spacecraft engineering, autonomous operations, advanced signal processing and smart antenna systems to develop intelligent space infrastructures capable of adaptive operation, efficient resource management and enhanced mission autonomy. Research topics include machine learning for spacecraft control, AI-assisted satellite communications.

Infrastructures

Small satellite mission development facilities (CubeSat platforms), Satellite mission simulation and control laboratories, Space systems engineering and mission analysis tolos, Software frameworks for spacecraft dynamics and control, Signal processing and wireless communications laboratories.

Keywords

Artificial Intelligence in Space | Onboard Intelligence | Satellite ADCS With AI | Space Communications

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