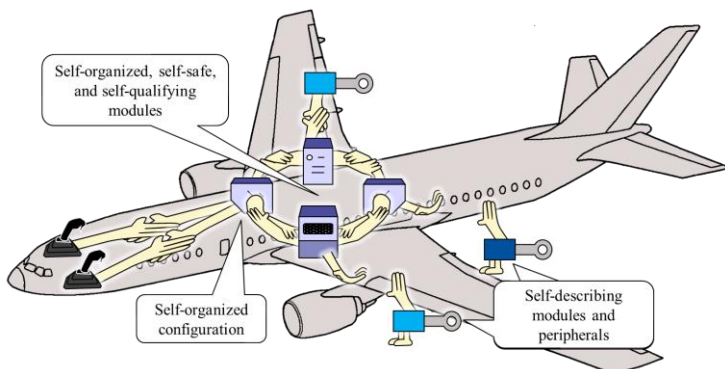


PhD/Doktorand*in
(Wissenschaftlicher
Mitarbeiter*in)



PROJECT PAFA-ONE

PhD: Self-Qualification of Plug & Fly Avionics

Current digital avionics systems are composed of standardized, distributed computers and are made operational by millions of configuration parameters. As they host safety-critical functions, the development, integration, and testing of the configuration is very time and resource intensive. A significant simplification can be achieved, if computers and peripherals organize themselves as so-called Plug&Fly Avionics. However, a system that establishes its operational state while relying on own decisions is contrary to current qualification rules and procedures. The goal of the project PAFA-ONE is the demonstration that self-organizing avionic that host safety-critical functions are technically feasible and can be in line with safety regulations. The challenge of the PhD is to develop a concept, a software architecture and algorithms that allow the computers itself to ensure and prove its correctness to the outside world, i.e. a self-qualification or virtual qualification authority. PAFA-ONE is a project with multiple PhDs and part of the project is the cooperation with aircraft certification authorities.

Offered is a full position payed according to the German tariff (TV-L 13). A self-controlled management of project duties, publications, and technical and scientific progress is expected.

Preferred Profile

- PhD-eligible diploma or master in aerospace engineering or computer science
- Background in aerospace safety and certification regulations and according processes
- Knowledge in automatic tests or runtime-verification as well as redundancy mechanisms

Application

Interested? Send your application including motivation, CV, and certificates to the email below. German or English both are fine.

Jun.-Prof. Björn Annighöfer

bjoern.annighoefer@ils.uni-stuttgart.de

www.ils.uni-stuttgart.de