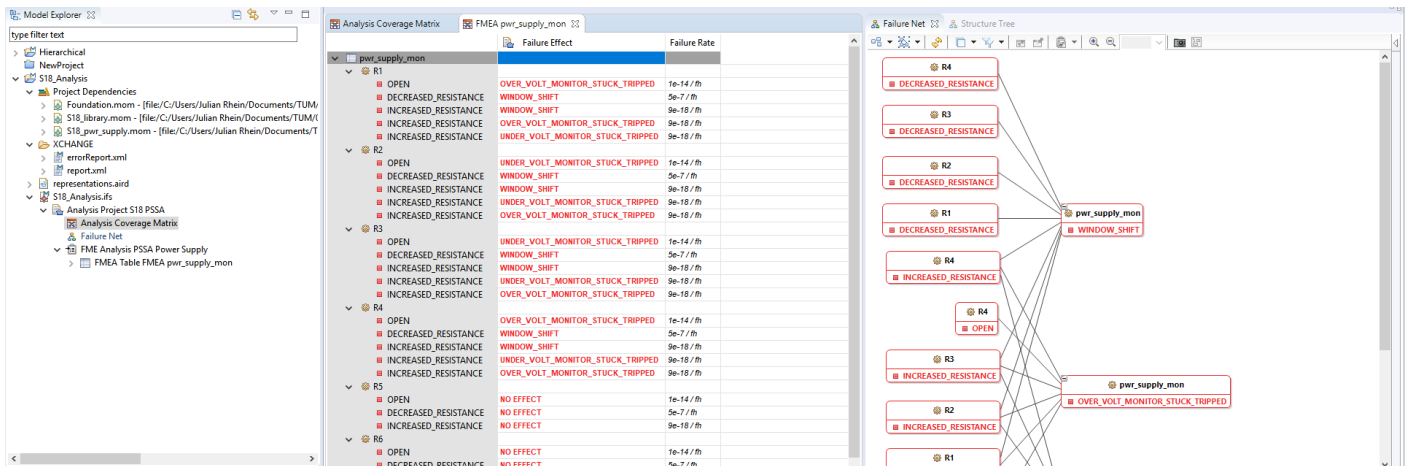


Student Assistant Position

Assistance in a Research Project on Model-Based Safety Assessment



Task Description:

Safety assessment requires an extensive analysis of causes and effects of failures. A current research project aims to develop a novel, innovative tool to derive such information (semi-) automatically from existing simulation models of aeronautical systems and components. In order to facilitate the process, a workbench for the interactive analysis of safety critical systems is to be developed with the core features:

- Import of system architecture models and requirements
- Navigation and analysis task specification in complex hierarchical system models
- Visualization of the model structure and coverage information
- Visualization of common safety assessment artifacts such as fault trees, FMEA tables and failure nets
- Visualization of fault propagation through the model

A prototype of the workbench has been implemented in Eclipse, which shall be extended in the scope of the student assistant position. The candidate will actively participate in the research project in close cooperation with the project partners, including participation in project meetings and presentation of her/his results.

Work Packages:

- Familiarization with Eclipse based modelling technologies such as the Eclipse Modeling Framework, Atlas Transformation Language and Eclipse Sirius
- Development of model transformation and analysis routines
- Conceptual design and implementation of the graphical user interface
- Testing and proof of concept in a case study
- Project documentation

Required Profile of Qualifications:

- Diligent and structured working methods and high level of commitment
- Strong programming skills in Java and initial experiences with Eclipse plugin development desirable
- Basic knowledge of functional safety assessment methods would be advantageous

Please apply via email by sending the usual documents.

Starting Date: As soon as possible.