

Call for Papers SS08 – Skill Based Systems Engineering

Organized and co-chaired by
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+ FOCUS. Large product catalogues, a wide variety of configurations and an almost infinite number of possible combinations make the selection and dimensioning of automation components and their combination into systems and plants a very time-consuming and difficult task. Today, the engineering process is a trial-and error approach. Based on experience the sales engineer gives the customer a first solution which then in turns influences the customers' requirements. In several loops a possible solution is found. This process is neither efficient nor optimal as it changes the initial problem and leaves a solution-neutral description very early. However, a solution- and technology-neutral problem analysis is needed to avoid biased, suboptimal solutions and rather find optimal, albeit unconventional solutions.

This session strives to find technology independent and near optimal solutions that start with a problem description. The start will be given by a functional model to formulate the problem. With the use of e.g. AI-planning possible solutions based on a component library can be found. These different solutions then need to be optimized. Additionally, this continuous consideration of a functional model enables an uniform description over all stages within the customer journey. This also enables automatic code generation e.g. for commissioning and operation.

We welcome papers from industry as well as research.

Website: <http://www.etfa2019.org/ss08-skill-based-systems-engineering/>

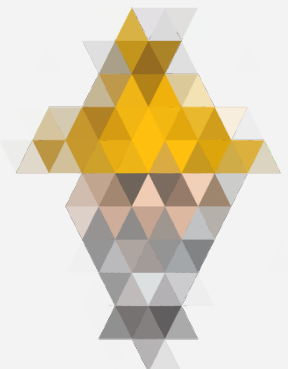
+ TOPICS

- Modelling of the automation application: Data modelling, modelling languages, knowledge graphs, rule engines, knowledge-based systems
- Finding possible components: Planning, Artificial Intelligence, Skill-Task-Matching, Knowledge Discovery
- Simulation of a proposed plan: Optimization, simulation techniques
- Derivation of PLC code: Automated code generation, model-based programming

+ AUTHOR'S SCHEDULE (2019)

❖ Regular and special sessions papers

Submission deadline	April 4	April 22
Acceptance notification	May 6	May 20
Deadline for final manuscripts	June 17	June 27



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