Abstract:
Next-generation production and manufacturing plants create individualized products by automatically deriving production schedules from design specifications. However, because planning and scheduling are computationally hard, they must typically be done off-line using a simplified system model, and are consequently unaware of on-line observations and potential component faults. This leads to a self-assessment problem we call plan assessment: Given behavior models and current observations of the plant's (possibly faulty) behavior, how likely is it that partially executed manufacturing plans will still succeed? A previously developed self-assessment capability generates k most probable system behaviors as solutions of a constraint optimization problem. However, it only allows single products and doesn't scale well with the schedule length. In this work, we extend the capability towards multiple products and generate k most probable system behaviors only within a small, fixed time window, which is then moved to cover schedules longer than the time window. Experiments show the feasibility of this approximative approach.
KI Workshop on Self-X in Engineering

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Occurences:
- Einrichtungen > Fakultäten > Fakultät für Informatik > Lehrstühle der Informatik > Informatik 9 - Lehrstuhl für Bildverarbeitung und Mustererkennung (Prof. Cremers) > Emmy Noether-Nachwuchsgruppe (Dr. Sachenbacher) > 2010

entries: