ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE PRESENTATION ABOUT THE WORK-PLACEMENT

Real Time Scheduler – First Steps to Formalize the Existing Information as Input for Automated Optimization Routines

Jessica Hautz | Universität Klagenfurt

Chaired by Philipp Hungerländer | Department of Mathematics

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ABSTRACT

My work placement took place at KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, which is an affiliated company of Infineon. I dealt with the topic concerning the scheduling of tasks within Infineon's qualification test laboratory. The quality requirements for semiconductor components have tremendously increased over time and thus, manufacturers are obliged to ensure highly reliable products. During its production cycle, a semiconductor chip undergoes several tests. At the end of the backend production, there are so-called qualification tests on the finished devices. During a qualification, the products are intensively tested under extreme circumstances before being distributed to the customers. The facilities performing these qualifications are commonly large laboratories with a lot of dependencies between the process steps and the equipment used. Hence, the process planning within such a laboratory is a

complex task. The underlying mathematical optimization problem belongs to the family of NP-complete scheduling problems.

We hope to see you there!

