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# 学术报告

## Trends and Prospects in Process Modeling and Optimization



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### Abstract

Process Modeling is an important task in process engineering activities, such as process synthesis, process control system design, process safety analysis, process optimization, experimental design etc. The demand for models of varying detail and complexity is expected to steadily increase in the future due to the advances in model based process engineering methods. In the lecture the state of the art and current trends in computer-aided modeling will be presented. Aspects of minimizing the modeling error, minimizing the modeling effort, avoiding errors and effort in documentation and the encouragement and support of cooperative work will be discussed. Also, trends and prospects will be illustrated with the examples of chemical engineering process development and optimization. Specifically, MOSSAIC, a Web Based Modeling, Simulation and Optimization Environment, will be addressed. MOSAIC is characterized with the well-known concept of equation based modeling, use of symbolic mathematic language, and automatic code generation, and with additional support for advanced applications like experimental design.

### Biography

**Wozny** 教授现任柏林工大过程动态学及工业技术装备学科主任，在德国过程系统工程领域享有很高的声誉，他领导的研究所项目来自 **Bayer, Siemens, Linde, BASF, Volkswagen** 等 20 余个知名跨国集团，曾获 **Schering** 化学公司奖、**DAAD** 德国高等学校交流奖、**VDKF** 发电设备公司奖等奖项。