informatik-Kolloquium

Der Fachbereich Informatik der Johannes Kepler Universität Linz[1] lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

Topic: **Lithography Hurdles in Physical Design Automation**

Presenter: **Prof. Susmita Sur-Kolay**
Advanced Computing & Microelectronics Unit, Indian Statistical Institute, Kolkata, India

Datum: **Dienstag, 26. April 2016, 10:15**

Location: **Universität Linz, Science Park 2, S2 054**

Abstract: With the ubiquity of ICs in a plethora of application domains, and their soaring functionality, the feature size is diminishing to the limits of fabrication technology, especially by conventional optical lithography. In this talk, we present some of the approaches being pursued to address the issues in manufacturability. Lithographic techniques such as optical proximity correction and multiple patterning as well as next generation lithography techniques (NGLs) such as electron beam lithography, Extreme Ultra-Violet lithography, Nano-wires with directed self assembly (DSA) can improve the printability to ICs in the sub-14nm range. We then discuss the additional constraints posed by each of these techniques which need to be considered in the physical design phase, and the possible solutions.

Short Bio: Susmita Sur-Kolay received the B.Tech degree from Indian Institute of Technology Kharagpur and the Ph.D. degree from Jadavpur University India. She was a Research Assistant at Massachusetts Institute of Technology, post-doctoral fellow at University of Nebraska-Lincoln and Visiting Faculty at Intel Corp., USA. She is presently a Professor in the Advanced Computing and Microelectronics Unit of the Indian Statistical Institute, Kolkata, India. Her research contributions are in the areas of algorithmic CAD for VLSI physical design, fault modeling and testing, IP protection of VLSI design, synthesis of quantum computers, and graph algorithms. She has authored several technical papers in international journals and refereed conference proceedings and a chapter in the Handbook on Algorithms for VLSI Physical Design Automation. She was the Technical Program Co-Chair of VLSI Design Conference 2005, VDAT 2007, ISVLSI 2011, and has served on the program committees of several international conferences. She has also been on the editorial board of Proc. of IEE CDT, and an Associate Editor of the IEEE Transactions on VLSI Systems. She was a Distinguished Visitor of IEEE Computer Society (India), Senior Member of IEEE, Member of ACM, IET and VLSI Society of India. Two papers co-authored by her won best paper awards at two international conferences. Among many other awards, she was the recipient of the President of India Gold Medal (summa cum laude) at IIT Kharagpur and IBM Faculty Award.

Einladender: Univ.-Prof. Dr. Robert Wille
Institut für Integrierte Schaltungen
Abteilung Integrierter Schaltungs- und Systementwurf

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[1] Der Fachbereich (http://informatik.jku.at) besteht aus folgenden Instituten:
Application Oriented Knowledge Processing (FAW), Bioinformatics, Computational Perception, Computer Architecture, Applied Systems Research and Statistics, Computer Graphics, Formal Models and Verification, Networks and Security, Integrated Circuits, Pervasive Computing, Software Systems Engineering, System Software, Telecooperation, Signal Processing