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Integrated Circuit and System Design

Power and Timing Modeling,
Optimization and Simulation

17th International Workshop, PATMOS 2007
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Proceedings

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Preface

Welcome to the proceedings of PATMOS 2007, the 17th in a series of international workshops. PATMOS 2007 was organized by Chalmers University of Technology with IEEE Sweden Chapter of the Solid-State Circuit Society technical co-sponsorship and IEEE CEDA sponsorship.

Over the years, PATMOS has evolved into an important European event, where researchers from both industry and academia discuss and investigate the emerging challenges in future and contemporary applications, design methodologies, and tools required for the development of the upcoming generations of integrated circuits and systems. The technical program of PATMOS 2007 consisted of state-of-the-art technical contributions, three invited talks and an industrial session on design challenges in real-life projects. The technical program focused on timing, performance and power consumption, as well as architectural aspects with particular emphasis on modeling, design, characterization, analysis and optimization in the nanometer era.

The Technical Program Committee, with the assistance of additional expert reviewers, selected the 55 papers presented at PATMOS. The papers were organized into 9 technical sessions and 3 poster sessions. As is always the case with the PATMOS workshops, full papers were required, and several reviews were received per manuscript.

Beyond the presentations of the papers, the PATMOS technical program was enriched by a series of speeches offered by world class experts, on important emerging research issues of industrial relevance. Jean Michel Daga spoke about “Design and Industrialization Challenges of Memory Dominated SOCs”, Davide Pandini spoke about “Statistical Static Timing Analysis: A New Approach to Deal with Increased Process Variability in Advanced Nanometer Technologies” and Christer Svensson spoke about “Analog Power Modelling”. Furthermore, the technical program was augmented by two industrial talks, given by leading experts from industry. Fredrik Dahlgren, from Ericsson Mobile Platforms, spoke about “Technological Trends, Design Constraints and Design Implementation Challenges in Mobile Phone Platforms” and Anders Emrich, from Omnisys Instruments AB, spoke about “System Design from Instrument Level down to ASIC Transistors with Speed and Low Power as Driving Parameters”.

We would like to thank the many people that worked voluntarily to make PATMOS 2007 possible, the expert reviewers, the members of the technical program and steering committees, and the invited speakers who offered their skill, time, and deep knowledge to make PATMOS 2007 a memorable event. Last but not least we would like to thank the sponsors of PATMOS 2007, Ericsson, Omnisys, Chalmers University and the city of Göteborg, for their support.

September 2007

Nadine Azemard
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