

Marko Aleksić

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RESEARCH INTERESTS

- Design of integrated circuits for high-performance and low-power systems
- Noise analysis of integrated circuits

EDUCATION

Ph.D. in Electrical Engineering (in progress), University of California, Davis. Advanced to candidacy Mar '04. Expected graduation time: Dec '06. Dissertation title: *Jitter Analysis of Non-Autonomous MOS Current-Mode Logic Circuits*. Advisors: Prof. K. Wayne Current and Prof. Vojin G. Oklobdžija.

M.S. in Electrical Engineering, University of California, Davis, Mar '04. Project: *Jitter Analysis of Current-Mode Logic Frequency Dividers*. Advisors: K. W. Current and V. G. Oklobdžija.

Dipl.Ing. in Electrical Engineering, University of Belgrade, Serbia, Sep 2000. Thesis title: *Serial CORDIC Computer*. Advisor: Prof. Slavoljub Marjanović.

EXPERIENCE

Graduate Student Researcher at the ECE Dept., UC Davis (Fall '01–present) on projects:

- Analysis of jitter in MOS current-mode logic circuits (Fall '02–present), under Prof. K. Wayne Current and Prof. Vojin G. Oklobdžija
- Behavioral modeling and high-level optimization of mixed-signal ICs, under Prof. K. W. Current (Winter '03–Spring '04)
- Design and analysis of flip-flops and latches for high-performance microprocessors, under Prof. V. G. Oklobdžija (Fall '01–Fall '02)

Summer Intern at Fujitsu Labs of America, under the supervision of William W. Walker (summers of '02, '03, '04 and '05). The work involved:

- Jitter analysis of RF circuits
- Device modeling
- Design of ICs for RF frequency synthesizers
- High-level modeling of communication systems
- Noise analysis of RF ICs
- RF measurements

Assistant Instructor at the ECE Dept., UC Davis. Taught three upper division courses: Electronic Circuits and Systems, Electronic Circuits I, and Electronic Circuits II, in Summer '06, Winter '05, and Fall '03, respectively.

Teaching Assistant (Fall '01–present) for lower and upper division courses at the ECE Dept., UC Davis: Electronic Circuits and Systems (Spring '06), Circuits I (for 3 quarters '05–'06), Digital Systems I (for 5 quarters '01–'04), Assembly Language Programming (Fall '04), and Microcomputer-Based System Design (Fall '02).

Post Graduate Researcher (visiting scholar) at the ECE Dept., UC Davis, under Prof. Vojin G. Oklobdžija (Fall 2000–Fall '01). The work involved design and analysis of flip-flops and latches, and analysis of different clocking schemes for high-performance, low-power microprocessors.

PUBLICATIONS

- M. Aleksić, N. Nedovic, K. W. Current and V. G. Oklobdzija, “*A New Model for Timing Jitter Caused by Device Noise in Current-Mode Logic Frequency Dividers*”, Proceedings of the 15th International Workshop on Power And Timing Modeling, Optimization and Simulation, PATMOS, Leuven, Belgium, September 21-23, 2005.
- N. Nedovic, W. W. Walker, V. G. Oklobdzija and M. Aleksić, “*A Low Power Symmetrically Pulsed Dual Edge-Triggered Flip-Flop*”, Proceedings of the 28th European Solid-State Circuits Conference, Florence, Italy, September 24-26, 2002.
- N. Nedovic, M. Aleksić and V. G. Oklobdzija, “*Conditional Pre-Charge Techniques for Power-Efficient Dual-Edge Clocking*”, Proceedings of the International Symposium on Low-Power Electronics and Design, Monterey, California, August 12-14, 2002.
- N. Nedovic, M. Aleksić and V. G. Oklobdzija, “*Comparative Analysis of Double-Edge versus Single-Edge Triggered Clocked Storage Elements*”, 2002 IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002.
- N. Nedovic, M. Aleksić and V. G. Oklobdzija, “*Timing Characterization of Dual-Edge Triggered Flip-Flops*”, Proceedings of the International Conference on Computer Design, ICCD 2001, Austin, Texas, September 23-26, 2001.
- N. Nedovic, M. Aleksić and V. G. Oklobdzija, “*Conditional Techniques for Small Power Consumption Flip-Flops*”, Proceedings of the 8th IEEE International Conference on Electronics and Systems, Malta, September 2-5, 2001.

SKILLS

Computer Skills: HSPICE, Cadence, MATLAB, C/C++, Perl

Languages: English, Serbian, Russian, basic Spanish

MEMBERSHIPS

IEEE and Solid-State Circuits Society Student Member since 2001

REFERENCES

Available upon request