

Center for Embedded Systems

An NSF Industry/University Cooperative Research Center

Year 5: Industry Advisory Board (IAB) New Projects Meeting

May 16-17, 2013

Location: Drury Inn and Suites, 1118 Central Park Dr., O'Fallon, IL

Academic Host: Southern Illinois University Carbondale

Agenda

Revised: May 14, 2013

Objectives

- Provide a forum for NSF, CES IAB members, faculty, and students to interact and discuss research projects, areas of interest, and opportunities
- Deliver a brief update on Center activities, discuss and approve Year 5 projects
- Conduct IAB business meeting

Thursday, May 16, 2013

7:00 - 7:30 am	Registration Check-in and Light Breakfast , Drury Inn Breakfast Room
7:30 - 7:50 am	Welcome , Spyros Tragoudas Opening Remarks & Introductions , Spyros Tragoudas, Sarma Vrudhula
7:50 - 8:30 am	NSF Message , Rita Rodriguez, Alex Schwarzkopf
8:40 - 8:50 am	Agenda / Format Overview , Byron Gillespie, Intel Corporation; CES – IAB Chair
8:50 - 9:20 am (5 min presentations)	New Projects , year 5 proposals – GROUP 1 1.1 Concurrency and Scheduling Analysis of Real-time Embedded Software on Multi-core Processors, PI: Y. Lee, ASU 1.2 Feasibility Study for an RF-Based Proximity Sensor using Embedded Antennas in High Velocity Projectiles, PIs: C. Hatziaioniu, F. Harackiewicz, SIUC 1.3 Performance Optimal Control of a System of Interconnected Components Under Thermal and Energy Constraints, PI: S. Vrudhula, ASU 1.4 Multi-Partitioned Single Cores and Predictable Execution of Safety-Critical Tasks, PIs: D. Kagaris, H. Ramaprasad, SIUC 1.5 Parallelization of Embedded Control Applications on Multi-core Architectures: A Case Study, PIs: G. Fainekos, Y. Lee, ASU 1.6 An Effective Test Strategy Based on Coverage Driven ATPG, PIs: S. Tragoudas, T. Haniotakis, SIUC
9:20 - 10:50 am	Poster Session , year 5 projects – GROUP 1
10:50 - 11:30 am	Complete LIFE Forms online (20 minutes) , year 5 proposals – GROUP 1 LIFE Forms Feedback: Discussion (20 minutes) , year 5 proposals – GROUP 1
11:30 - 12:30 pm	LUNCH
12:30 – 1:00 pm (5 min presentations)	New Projects , year 5 proposals – GROUP 2 2.1 Registration and Fusion of EVS and SVS Runway Images for Embedded Systems, PI: L. Gupta, SIUC 2.2 All-optical Embedded Fiber-optic Up/down-links for Motor Controller, PI: M. Sayeh, SIUC

	<p>2.3 Achieving Energy-efficient Mobile Computing Through Explicit Data Communication and Global Power Management, PI: C. Wu, ASU</p> <p>2.4 Multicore Simulator Critical Path Analysis, PI: S. Tragoudas, SIUC</p> <p>2.5 Reliable Wireless Communications in Aircrafts and Other Challenging Environments, PI: X. Zhou, SIUC</p> <p>2.6 Improving Usability of Multi-core DSPs, PI: A. Shrivastava, ASU</p>
1:00 - 2:30 pm	Poster Session , year 5 proposals – GROUP 2
2:30 - 3:10 pm	Complete LIFE Forms online (20 minutes) , year 5 proposals – GROUP 2
	LIFE Forms Feedback: Discussion (20 minutes) , year 5 proposals – GROUP 2
3:10 – 3:15	Brief presentation from ASTC (invited company) , Pawel Potera
3:15 – 3:20 pm	Brief presentation from Dell (invited company) , Bert Sanders
3:20 – 3:50 pm (5 min presentations)	<p>New Projects, year 5 proposals – GROUP 3</p> <p>3.1 Towards Predictable Execution of Safety-Critical Tasks on Mixed-Criticality Multi-Core, PIs: H. Ramaprasad, D. Kagaris, SIUC</p> <p>3.2 Verifiable Firmware Update Mechanisms for Embedded Systems, PIs: N. Weng, S. Tragoudas, SIUC</p> <p>3.3 Visual Interface for Metric Temporal Logic Specifications, PIs: G. Fainekos, Yoshihiro, ASU</p> <p>3.4 Ground Work for Embedding a Field Oriented Motor Controller into a Single System on a Chip, PI: C. Hatziaodniu, SIUC</p> <p>3.5 Adaptive Compressive Sensing Techniques for Low Power Sensors, PIs: H. Wang, S. Tragoudas, SIUC</p> <p>3.6 Spintronic Threshold Logic Array, PI: S. Vrudhula, ASU</p>
3:50 - 5:20 pm	Poster Session , year 5 proposals – GROUP 3
5:20 - 6:00 pm	Complete LIFE Forms online (20 minutes) , year 5 proposals – GROUP 3
	LIFE Forms Feedback: Discussion (20 minutes) , year 5 proposals – GROUP 3
6:00 – 6:30 pm	Happy Hour at Drury Inn
6:30	Depart for dinner (Bella Milano, 455 Regency Park, O’Fallon, IL 62269)

Friday, May 17, 2013

8:00 - 11:00 am	IAB meeting (closed session)
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