

Center for Embedded Systems

An NSF Industry/University Cooperative Research Center

Year 4: Industry Advisory Board (IAB) New Projects Meeting
June 12 – 13, 2012
Southern Illinois University at Carbondale, IL

Agenda

Revised: June 8, 2012

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

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 4 projects, and update on Year 3 projects
- Conduct IAB business meeting

Tuesday, June 12, 2012

7:00 – 7:30 am	Registration Check-in and Breakfast , Drury Inn Breakfast Room
7:30 – 7:50 am	Opening Remarks & Introductions , Drury Inn Conference Room, Spyros Tragoudas (SIUC), Sarma Vrudhula (ASU), and John Warwick (CoE Dean, SIUC)
7:50 – 8:30 am	NSF Message , Rita Rodriguez, CISE Program Director, NSF CISE/CNS and Alex Schwarzkopf, NSF ENG/OAD
8:30 – 9:50 am (8 min presentations + 2 min LIFE forms each)	New Projects, year 4 – group 1 1.1 Temporal Logic Testing for Stochastic Cyber-physical Systems, PI: G. Fainekos, ASU 1.2 Adaptive Compressive Sensing Techniques for Low Power Sensors, PIs: H. Wang and S. Tragoudas, SIUC 1.3 Parallelization of Embedded Control Applications on Multi-core Architectures: A Case Study, PIs: G. Fainekos and K. Chatha, ASU 1.4 Pilot Study of Energy Harvesting Devices towards the Development of a Prototype, PIs: C. Hatziaioniu, F. Harackiewicz, and P. Chu, SIUC 1.5 High Quality Power-Aware Testing Methodologies for Integrated Circuits, PI: S. Tragoudas, Presenter: A. Mysore, SIUC 1.6 Improving Usability of Multi-core DSPs with Scratch Pad Memories, PI: A. Shrivastava, ASU 1.7 Survey and Assessment of Smart Materials for Haptics Applications, PI: J. Qin, SIUC 1.8 All-optical Embedded Fiber-optic Up/down-links for Motor Controller, PI: M. Sayeh, Presenter: M. Tafazoli, SIUC
9:50 – 10:35 am	Poster Session , year 4 new projects – group 1
10:35 – 11:00 am	LIFE Forms Feedback: Discussion , year 4 new projects – group 1
11:00 am – 12:00 pm	Lunch / Break

12:00 pm	Reconvene
12:00 – 1:10 pm (8 min presentations + 2 min LIFE forms each)	New Projects, year 4 – group 2 2.1 Resolver Sensor Conditioning Size Reduction, PIs: C. Hatziaioniu and H. Wang, SIUC 2.2 Feasibility of Integrating Memristors and Threshold Logic for Compact, Low Power Digital Circuits, PIs: H. Barnaby and S. Vrudhula, ASU 2.3 Trustable Access Mechanisms for Embedded Systems, PIs: N. Weng and S. Tragoudas, SIUC 2.4 Curriculum Development: Embedded System Design using Atom-based Platforms, PIs: H. Wang and N. Weng, SIUC 2.5 Development of Electronic System-level Hardware-Software Co-synthesis Approach, PI: K. Chatha, ASU 2.6 Towards Predictable Execution of Safety Critical Tasks on Mixed-Criticality Multi-Core Platforms, PIs: H. Ramaprasad and D. Kagaris, SIUC 2.7 Object Identification and Tracking for Embedded Systems, PI: L. Gupta, SIUC
1:10 – 1:55 pm	Poster Session, year 4 new projects – group 2
1:55 – 2:15 pm	LIFE Forms Feedback: Discussion, year 4 new projects – group 2
2:15 – 2:45 pm	Break
2:45 – 3:45 pm (8 min presentations + 2 min LIFE forms each)	New Projects, year 4 – group 3 3.1 Critical Path Analysis of Multicore Systems using BDDs, PI: S. Tragoudas, Presenter: L. Pierce, SIUC 3.2 Design of an Optimal Closed Loop Controller and its Implementation in an OS Scheduler for Dynamic Energy Management in Heterogeneous Multi-Core Processors, PI: S. Vrudhula, ASU 3.3 Ultra-low Power Sensor Wake-up Techniques, PIs: H. Wang and S. Tragoudas, SIUC 3.4 Augmented Virtualization for Real-time Embedded Systems, PI: Y. Lee, ASU 3.5 Development of Fast Grain Quality Measurement System (Phase III), PI: A. Chen, SIUC 3.6 The Fundamental Research Project (FRP), PIs: S. Tragoudas (SIUC), S. Vrudhula (ASU), and H. Wang (SIUC)
3:45 – 4:30 pm	Poster Session, year 4 new projects – group 3
4:30 – 4:50 pm	LIFE Forms Feedback: Discussion, year 4 new projects – group 3
5:30 – 6:30 pm	Happy Hour (all), Drury Inn
6:45 pm	Dinner (all), Olive Garden, 25 Ludwig Drive, Fairview Heights, IL

Wednesday, June 13, 2012

7:00 – 7:30 am	Breakfast, Drury Inn
8:00 – 11:00 am	IAB meeting – (closed session), Drury Inn Conference Room