

TIMETABLE
ELLIIT
WORKSHOP

NOVEMBER
11-12, 2010

LINKÖPING
UNIVERSITY

	THURSDAY NOVEMBER 11	FRIDAY NOVEMBER 12
	10:00-10:30 Coffee and registration	Session 1 in front of C4
	Session 1 in C4	09:00-10:00 Coffee and Poster Session
	10:30-10:45 Welcome and introduction Lennart Ljung	Session 2
	10:45-11:45 Plenary session: Wireless Communications IC:s trends for 3G and LTE Sven Mattisson	10:00-11:30 Area Sessions
		U4 Physical Layer Erik G. Larsson
		R37 Electronics Atila Alvandpour
		R42 Embedded Systems Karl-Erik Årzen
		R44 Software Systems Per Runesson
		S10 Autonomous Systems Patrick Doherty
		S11 Complex Systems Anders Ynnerman
	11:45-13:00 LUNCH at Kårallen	(For this session, see separate program for details)
	Session 2 in C4 Chairman: Patrick Doherty	11:30-12:20 LUNCH at Kårallen
	13:00-15:00 Area Presentations	Session 3 in C4 Chairman: Bo Bernhardsson
	Physical Layer Erik G. Larsson	12:20-13:00 Plenary session:
	Electronics Atila Alvandpour	Towards intelligent vision systems: the role of signal theory, statistical models, and learning.
	Embedded Systems Karl-Erik Årzen	Rudolf Mester
	Software Systems Per Runesson	
	Autonomous Systems Patrick Doherty	
	Complex Systems Anders Ynnerman	
	15:00-15:30 Coffee	13:00-14:55 Presentations by Industrial Board and Panel Discussions
	Session 3 in front of C4	<i>Moderator: Bo Bernhardsson</i>
	15:30-17:00 Poster Session	Shiva Sander-Tavallaey ABB
	(16:30-18:00 ELLIIT Board meeting, Systemet ISY)	Fredrik Hertzberg Axis
		Olle Viktorsson Ericsson
		Karin Ståhl-Gunnarsson SAAB
		Tony Sandberg Scania
		Henrik Nilsson Schneider Electric
		Claes Lundström Sectra
	19:30- Dinner at Nationernas Hus, Ågatan 55, Linköping	14:55 Closing: Lennart Ljung

FRIDAY NOVEMBER 12 SESSION 2 10:00-11:30

<p>Area 1 in U4 Physical Layer Erik G. Larsson</p> <p>10:00-10:10 T-REX Jonas Eriksson</p> <p>10:10-10:20 FP7-SAPHYRE Eleftherios Karipidis</p> <p>10:20-10:30 FP7-SENDORA Danyo Danev</p> <p>10:30-10:40 Multi-link modeling Ove Edfors</p> <p>10:40-10:50 Vehicular communication Maria Kihl</p> <p>10:50-11:00 FP7-MULTIBASE Ove Edfors</p> <p>11:00-11:30 Discussion</p>	<p>Area 3 in R42 Embedded Systems Karl-Erik Årzen</p> <p>10:00-10:15 Partitioning, Mapping and Scheduling for Reconfigurable Platforms Krzysztof Kuchcinski</p> <p>10:15-10:30 Application Mapping and Software Development for Massively Parallel Embedded Computers Jerker Bengtsson and Verónica Gaspes</p> <p>10:30-10:45 Reconfigurable Computing Research in the division of Computer Engineering at Linköping University Dake Liu</p> <p>10:45-11:00 Reconfigurable Architectures for Embedded Platforms Viktor Öwall</p> <p>11:00-11:15 Embedded Systems for Control Zebo Peng</p> <p>11:15-11:30 Control for Embedded Systems Karl-Erik Årzen</p>	<p>Area 5 in S10 Autonomous Systems Patrick Doherty</p> <p>General discussions about the activities within the Research Area. The projects within the area are the following:</p> <p>Project 5.1: Cooperative Cyber-Physical Systems</p> <p>Project 5.2: Navigation and Perception</p>
<p>Area 2 in R37 Electronics Atila Alvandpour</p> <p>10.00-10.20 Optimization of FFT processing Mario Garrido</p> <p>10.20-10.40 A Class-D Outphasing RF Amplifier with Harmonic Suppression in 90nm CMOS Jonas Fritzin</p> <p>10.40-11.00 Software Defined Radio Jerzy Dabrowski</p> <p>11.00-11:30 On Analog Power Consumption Christer Svensson</p>	<p>Area 4 in R44 Software Systems Per Runesson</p> <p>Information and discussions about the purpose, research procedures and expected results in the projects:</p> <p>Project 4.1: Feedback-based software project management in lean software testing</p> <p>Project 4.2: Tools and Languages for Modeling and Optimization</p> <p>Project 4.3: Trusted embedded systems and network infrastructure</p>	<p>Area 6 in S11 Complex Systems Anders Ynnerman</p> <p>10:00-10:15 Scalable Rendering and Visualization Michael Doggett</p> <p>10:15-10:30 Process Learning Mikael Norrlöf</p> <p>10:30-10:45 Future Vehicle Models Lars Nielsen</p> <p>10:45-11:00 Optimization and Identification in Distributed Systems Anders Hansson</p> <p>11:00-11:15 Recent Advances in Volume Rendering Timo Ropinski</p> <p>11:15-11:30 General discussion on ELLIIT collaboration on complex systems</p>

POSTER PRESENTATIONS

Area 1 Physical Layers	
Title	Authors
Low Latency Wireless Communications	J. Eriksson, R. Moosavi, TVK Chaitanya, E. G. Larsson, Danyo Danev, Yi Wu, M. Kihl, F. Tufvesson, J. Kåredal, K. Bur, B. Bernhardsson, E. Uhlemann
Resource and infrastructure sharing in wireless networks	E. Karipidis, J. Lindblom, E. Axell, S. Shalmashi, D. Danev, E.G. Larsson
Characteristic Mode Based Tradeoff Analysis of Antenna-Chassis Interactions for Multiple Antenna Terminals	Hui Li, Yi Tan, Buon Kiong Lau, Zhinong Ying, Sailing He
Achievable rates of Gaussian data symbols on the non-coherent MIMO block fading channel	F. Rusek, A. Lozano, N. Jindal
Resource efficient high speed wireless networking	V. Angelakis, Scott Fowler, Ulf Körner, Michal Pioro, Di Yuan
Computational resource allocation for signal processing algorithms	D. Persson, M. Ciricic, E. G. Larsson
Very large MIMO systems	F. Rusek, D. Persson, E. G. Larsson, O. Edfors, F. Tufvesson, B. K. Lau
Area 2 Electronics	
Title	Authors
Predistortion of a radio frequency power amplifier	Ylva Jung, Jonas Fritzin, Martin Enqvist, Atila Alvandpour
Digital interfaces for high-speed DACs	Jacob Wikner, Reza Sadeghifar, and Nadeem Afzal
Digital Transmitter	Jonas Lindstrand, Henrik Sjöland, Jonas Fritzin, Atila Alvandpour
Wake up radio	Emil Nilsson, Christer Svensson, Atila Alvandpour
A Class-D Outphasing RF Amplifier with Harmonic Suppression in 90nm CMOS	Jonas Fritzin, Christer Svensson, Atila Alvandpour
A 2.4 GS/s, 4.9 ENOB at Nyquist, Single-channel Pipeline ADC in 65nm CMOS	Timmy Sundström, Christer Svensson, Atila Alvandpour
Power efficient Power Amplifier based on Digital Controlled Oscillator	Dake Liu, Andreas Ehliar, and Qamar-ul Wahab
Area 3 Embedded Systems	
Title	Authors
Quality Optimization for Distributed Control Systems	Soheil Samii, Petru Eles, Zebo Peng, and Anton Cervin
Event-Based Estimation and Control	Anton Cervin, Toivo Henningsson, Erik Johannesson, Karl Johan Åström
Tools and Techniques for Control and Computing Codesign	Anton Cervin, Karl-Erik Årzén
Computer Architectures and languages Group at CERES	Zain Ul Abdin, Jerker Bengtsson, Verónica Gaspes, Essayas Gebrewahid, Shashi Kumar, Tomas Nordström, and Bertil Svensson
Reconfigurable Array Architecture for Real-time Multi-task Applications	Chenxin Zhang, Per Andersson, and Viktor Öwall
Reconfigurable Computing (RC)	Andreas Ehliar, Joar Sohl, Magnus Pettersson, and Dake Liu
Mapping CAL Applications to Processor Array Platforms Embedded System Design Lab	Per Andersson and Krzysztof Kuchcinski

Area 4 Software Systems	
Title	Authors
Simulation-Based Evaluation of Software Quality Assurance Techniques in the Development Life-Cycle	Dietmar Pfahl
Assessing the Software Process with Lean Visualization and Measurement Tools	Kai Petersen
Language-Based Semantic Services	Görel Hedin, Emma Söderberg
Improving virtual machine security through detection elimination	Christopher Jämthagen, Martin Hell, Thomas Johansson, Ben Smeets
Modeling Kernel Language (MKL) - A Formally Defined Extensible Language for Equation-Based Modeling and Simulation	David Broman
Automatic Parallelization for Equation-Based Simulation Languages	Kristian Stavåker, Peter Fritzon, Per Östlund
ModelicaML – A UML/Modelica Profile for Systems Engineering	Wladimir Schamai and Peter Fritzon
Area 5 Autonomous Systems	
Title	Authors
Indoor robot localization	Karl-erik Årzen et al.
On-Line Structure and Motion Estimation based on an Novel Parameterized Extended Kalman Filter	S. Haner, A. Heyden
Optimizing Visual Vocabularies Using Soft Assignment Entropies	Y. Kuang, K. Åström, L. Kopp, M. Oskarsson, M. Byröd
Torchlight navigation	M. Felsberg, F. Larsson, H. Wang, A. Ynnerman, and T. Schön
Multibody motion classification using the geometry of 6 points in 2d images	K. Nordberg and V. Zografos
The LinkQuad - A Versatile Micro Aerial Vehicle Platform	P. Doherty et al.
Area 6 Complex Systems	
Title	Authors
Efficient Visibility Encoding for Dynamic Illumination in Direct Volume Rendering	Joel Kronander, Daniel Jönsson, Joakim Löw, Patric Ljung, Anders Ynnerman, Jonas Unger
Some Implementation Aspects of Iterative Learning Control	Johanna Wallén, Svante Gunnarsson, Mikael Norrlöf
Observer-based ILC Applied to the Gantry-Tau Parallel Kinematic Robot	Johanna Wallén, Isolde Dressler, Anders Robertsson, Mikael Norrlöf, Svante Gunnarsson
Dynamic modeling of the Gantry-Tau parallel kinematic robot	Johanna Wallén, Isolde Dressler, Anders Robertsson, Mikael Norrlöf, Svante Gunnarsson
Decentralized Optimization in Control	Anders Hansson, Anders Rantzer
An Advanced Vehicle Dynamics Testbed	Lars Nielsen, Kristoffer Lundahl

C-Huset Campus Valla

The ELLIIT Workshop conference rooms are highlighted

The parallel Area Sessions Friday 10:00-11:30 are as follows:

- U4** Physical Layer
- R37** Electronics
- R42** Embedded Systems
- R44** Software Systems
- S10** Autonomous Systems
- S11** Complex Systems

