Towards a Tuscany agenda for the European ICT research

Embedded Electronics Systems

Research and Technology Transfer Activities

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Mission and Focus

KEYWORDS


MISSION & FOCUS

RESEARCH of innovative solutions within an international context (patents, publications on high IF journals, leading EU/national projects, Management of International Conference, Standards, Journal issues)

TRANSFER OF INNOVATIVE TECHNOLOGIES from research to industry (Big company and SME) in the field of HW-SW electronic systems

FOCUS on advanced research projects about methodologies, design and prototyping/testing of electronic systems and nano/microelectronics
Academic Collaborations

Universities
- RWTH Aachen, D
- TU Kaiserlautern, D
- University of California at Berkeley, at Santa Barbara US
- Technical University of Tampere, FI
- Politecnico di Torino, I
- Università di Trieste, I
- Politecnico delle Marche, I
- Politecnico di Bari, I
- Università di Catania, I

Research Centers/Agencies
- CERN, CH
- ESA / ESTEC, NL
- IMEC, BE
- ASI, IT
- CNR-TO, IT
- CNR-PI, IT
- INFN, IT

Networks of Excellence
- Newcom: NoE in Wireless Communications
- HiPEAC: NoE on High-Performance Embedded Architecture and Compilation
# Technology Transfer

<table>
<thead>
<tr>
<th>R&amp;D divisions of big companies</th>
<th>Small/medium sized enterprises</th>
<th>Government institutions &amp; agencies</th>
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<tr>
<td><strong>Telecom &amp; Multimedia</strong></td>
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<td><img src="image2" alt="EU" /></td>
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<td><strong>Healthcare</strong></td>
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<td><strong>Space, Military &amp; Defense, Nuclear physics</strong></td>
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<td><strong>Automotive &amp; Industrial</strong></td>
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Knowledge Acceleration and ICT  
Pisa, 20 Settembre 2013
From MP-SoC for RealTime MultiMedia..

.. HW-SW architectures..

Network on Chip (NoC) paradigm


8 patents on NI, Router, Link, metacompiler, ME

.. prototyping..

.. SoC design..

Knowledge Acceleration and ICT

Pisa, 20 Settembre 2013
..to Sensor ACQ/DSP & Networking..

Intelligent Multi-Sensor InterFace

From mixed A-D architecture ..

.. IEEE Trans. on - Industrial Electr., -on Instr & Meas. - on Aerospace and Electr. Syst,

.. to working system ..

.. to silicon ..
Digital control of Voice Coil Actuator for Robotized car gear management

E-LATCH for Advanced Mechatronic Door System

Multi-channel/Networked Power Supply for TLC & Networking Systems

Smart power for LED lighting, CAR alternator, DC/DC converter

..and Complex Systems

SiPM front-end & TDC for PET/MR Bio-Imaging

Intelligent Trackers for HEP

APS front-end, On-board data handling & SpW networking for Lightning Imager (METEOSAT 3G)

Recent/On-going Projects in Tuscany

- UAV Hyperspectral Smartcam -- FlyBY
- LI for METEOSAT 3G -- Selex ES
- ATHENIS 3D -- AMS
- SIMPLE -- IDS & Intecs
- ATENE -- GE Oil & Gas
- AMDS -- MAGNA
- STAR -- Intecs & Sitael
- DSPACE -- Intecs & Sitael
- EFESTO -- ISE