



April 2012 Issue

TC-ECBS newsletter is produced as a focal point for news concerning the (related) activities of the IEEE Computer Society Engineering of Computer-Based Systems technical committee. If you have any items for the next issue please contact ecbs-news@computer.org.

19th Annual ECBS Conference



TC Chair's Column

Following our successful 18th Annual ECBS conference in Las Vegas, AZ, USA in April 2011; ECBS returned to Europe for 2012 and for the 2nd time in our history to Eastern Europe (the 11th edition was hosted in Bruno, Czech Rep. in 2004). Our colleagues under the leadership of Miroslav Popovic had successfully established the 1st Eastern European Regional Conference (ECBS-EERC) in Novi Sad during 2009 and the steering committee decided it was time to bring the "mother ship" back to Eastern Europe in their capable hands. I would like to take this opportunity on behalf of the whole community to thank Miroslav and the local organizing committee for all their hard work. I would also like to thank Bernhard Schätz and all the programme committee for their time and expertise in ensuring an excellent programme. Last but not far from least many thanks to all the authors, presenters and participants for making ECBS 2012 once more such an enjoyable and productive venue to share our research.

Roy Sterritt, chair ECBS-TC
r.sterritt@ulster.ac.uk
18th April 2012

IEEE 2011 TC-ECBS Awards

Long Term Service to the TC Award

- Stephanie White
- Jerzy Rozenblit

TC-ECBS on Facebook
<http://www.facebook.com/pages/Tc-Ecbs/209610865774174>

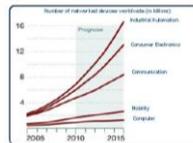
#ECBS-2012 and on Facebook
<https://www.facebook.com/groups/165705416849708/>

Previous newsletter is available at:
<http://tab.computer.org/ecbs/newsletter/last.html>

2011 Annual Report to Members

<http://tab.computer.org/ecbs/reports/2011-TC-ECBS-ANNUAL-REPORT-TO-MEMBERSHIP.pdf>

ECBS 2012 was the 19th formal IEEE sponsored meeting dedicated to formulating and advancing methods, techniques and tools for the engineering of computer-based systems (or cyber-physical systems).



Drivers for cyber-physical systems

- Smart Embedded Devices:** Computing power + interconnectivity
- Business Web:** Service-based processes, cloud computing
- Web 2.0:** Cooperative networks, end user integration

Fig. Cyber-Physical Systems-Drivers of Change

Our long-term held belief that CBS is a different discipline has been vindicated by the recent main stream adoption of the cyber-physical systems as a field. We see the terms CBS and CPS as interchangeable.

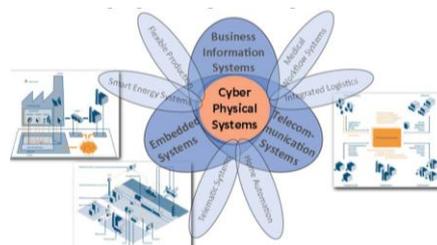


Fig. CPS-Merging of Engineering Domains

The conference is devoted to the analysis, design, development, deployment, and evolution of complex systems whose behaviour is largely determined or controlled by computers. Such systems – also called cyber-physical systems – are characterized by functional as well as dependability requirements that mandate the tight integration of information processing and physical processes. Therefore, ECBS integrates several disciplines, including software, hardware, and communication into a

complete systems engineering approach – as is needed for CPS.

The submission stats for 2012 can be seen in the figures below. Note that although we had a 50% acceptance rate – that includes PhD/Graduate & poster acceptance in the figures – many other conferences don't include these as "acceptances" so have a lower figure.

• 72 submissions, 36 accepted

Topic	Submissions	Accepted
Distributed Systems Design & Architecture	12	4
Domain-Specific Modeling	12	6
Verification & Validation	11	5
Model-based System Development	11	5
Adaptive Computing & Autonomic Systems	10	5
Embedded Real-Time Software Systems	10	7
ECBS Infrastructure (Tools, Platforms)	9	4
Reengineering & Reuse	8	4
Model-based Simulation & Validation	8	2
Evolution & Change	4	2

Fig. 2012 Stats

As was expected, the majority of submissions were from our host country. On a wider scale, the global economic conditions are obviously affecting our numbers but we will also have to work harder on the themes and workshops to encourage participation.

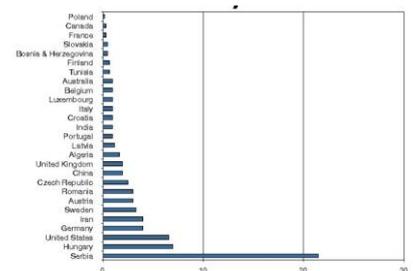


Fig. 2012 Submission by Country

We had an excellent keynote from Prof Hartmut Schmeck on Organic Computing for Smart Energy and Electric Mobility, which fitted well with the conference themes.

Many thanks to Bernhard Schätz for the figures, extracted from his 2012 PC Chair report.



TC-ECBS newsletter



Snapshots of ECBS-2012

<http://tab.computer.org/ecbs/2012/>



Keynote on Organic Computing by Professor Hartmut Schreck



SEE MORE SNAPSHOTS @

facebook



Please 'like' the ECBS-2012 FB page and upload your own pictures from ECBS-2012 and Novi Sad



CDSL



Xplore

2012 19th IEEE ECBS Proceedings available soon... CDSL & Xplore

<http://www.computer.org/csdl/proceedings/ecbs/index.html>

<http://ieeexplore.ieee.org/xpl/conhome.jsp?punumber=1000272>

Join the Technical Committee on ECBS or Renew for 2012 online

Details can be found at the web site <http://www.computer.org/tandc>

where you can sign-up to TC-ECBS and three others free <http://www.computer.org/portal/web/tandc/tclsi>

If you have already signed up, manage your membership at: <http://www.computer.org/services/teca>