18th IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems (DPDNS 2013)

Message from the Steering and Program Committee Chairs

All research topics of IEEE Annual Workshop DPDNS 2013, for more than 17 years, have been stimulating and contributing to the creation of the foundation of the Dependable Parallel and Distributed Network/Cloud Computing area of the Information technology.

Now, dependability is becoming the major problem of operation of the Information Technology Industry over the Internet (Network/Cloud computing), which has a profound impact on the entire society.

In particular Cloud computing and Network infrastructures require new approaches for dependability and fault tolerance. This timely topic is addressed this year in the keynote by Tim Strayer, BBN, Cambridge, MA, USA, with specific regards to Communities for Ad Hoc Networks, as well as in all the workshop sessions.

This year we have received 14 submissions from 8 countries all around the world. Each paper was sent out to three Reviewers. Based on these reviews, 11 papers were selected for publication in DPDNS'13. They are grouped into four sessions dealing with network algorithms, Cloud computing, high performance/availability computing, and fault tolerance. The keynote talk at the beginning of the workshop completes the program.

We would like to take this opportunity to acknowledge the effort and valuable contributions provided by both the PC Members and the external Reviewers that had to work with tight schedule to ensure the success of DPDNS 2013. Our thanks go to the all authors for their valuable contributions and to the IPDPS 2013 organizers, especially to the IPDPS Workshop Chair Umit Catalyurek, for their support.
Our special acknowledgments are to the IEEE Computers Society for its sponsorship and the IEEE Computer Society Technical Committee on Distributed Processing (TCDP).

We wish all participants a successful experience in the spirit of a real workshop with lively and fruitful discussions.

Dimiter Avresky
Founder and Steering Committee Chair
IEEE DPDNS 2013

International Research Institute on Autonomic Network Computing, IRIANC, Boston USA/ Munich Germany

Erik Maehle
Steering Committee Co-Chair
IEEE DPDNS 2013

University of Luebeck, Germany

Salvatore Distefano
Program Chair
IEEE DPDNS 2013

Politecnico di Milano, Italy

978-0-7695-4979-8/13 $26.00 © 2013 IEEE
DOI 10.1109/IPDPSW.2013.294

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Keynote Speech

"CASCADE: Communities for Ad Hoc Networks"

Dr. Tim Strayer
(BBN, Cambridge, MA, USA)

Military dismounted communications, because they are so critical to the execution of the mission and safety of the soldiers, is generally strongly regimented and hierarchical. Certain situational awareness apps have been introduced, where data is exchanged between soldiers in a squad, but largely soldiers carry any needed content out with them and bring any collected content back to base, but they rarely share this content among themselves or with other squads, and any immediately needed content must be retrieved through an expensive reachback link back to base.
At BBN, we are developing CASCADE, a content-centric networking architecture that facilitates generation and dissemination of content based on soldiers' interests, both statically assigned (think speciality within the squad) and dynamically discovered (contextually derived). The key enabling abstraction within the network is the concept of community. This talk will explore the benefits of considering military MANETs as an overlapping collection of topological and interest-based communities.