
SSS 2014 Program

Sunday, Sept. 28: Tutorial Day on Self-Organizing Physical Systems

- 8:00 - 9:00 am Registration
- 9:00 - 10:30 am **Tutorial 1:**
Andrea Richa, Arizona State University
Amoeba-inspired Self-organizing Particle Systems
- 10:30 - 11:00 am Coffee break
- 11:00 - 12:30 pm **Tutorial 2:**
Kay Römer, Technical University of Graz
Programmable Matter
- 12:30 - 2:00 pm Lunch
- 2:00 - 3:30 pm **Tutorial 3:**
Friedrich Simmel, Technical University of Munich
Self-organizing Molecular Systems
- 3:30 - 4:00 pm Coffee break
- 4:00 - 5:30 pm **Tutorial 4:**
Marco Dorigo, Universite Libre de Bruxelles and University
of Paderborn
Self-organizing Swarms
- 6:30 - 8:00 pm **Welcome Reception (Town Hall of Paderborn)**



Monday, September 29:

8:00 - 8:45 am Registration

8:45 - 9:00 am Conference Opening

9:00 - 10:00 am **Keynote 1:**

Nir Shavit, MIT

High Throughput Connectomics

10:00 - 10:20 am Coffee break

10:20 - 12:20 pm **Session 1: Cloud Computing, P2P, Self-organizing and Autonomous Systems**

Giang T. Nguyen, Mathias Fischer and Thorsten Strufe (**Best Paper**)
On the Resilience of Pull-based P2P Streaming Systems against DoS Attacks

Thim Strothmann, Mikhail Nesterenko, Christian Scheideler, Dianne Foreback and Andreas Koutsopoulos
On Stabilizing Departures in Overlay Networks

Marc Kühner, Johannes Hoffmann and Thorsten Holz
CloudSylla: Detecting Suspicious System Calls in the Cloud

Gil Einziger and Roy Friedman
Postman: an Elastic Highly Resilient Publish/Subscribe Framework for Self Sustained Service Independent P2P Networks

12:20 - 1:40 pm Lunch break

1:40 - 3:10 pm **Session 2: Self-Stabilization I**

Brahim Neggazi, Mohammed Haddad, Volker Turau and Hamamache Kheddouci
A self-stabilizing algorithm for edge monitoring problem

Karine Altisen, Alain Cournier, Stephane Devismes, Anais Durand and Franck Petit
Self-Stabilizing Leader Election in Polynomial Steps

Christian Glacet, Nicolas Hanusse, David Ilcinkas and Colette Johnen
Disconnected components detection and rooted shortest-path tree maintenance in networks

3:10 - 3:30 pm Coffee break

3:30 - 5:00 pm **Session 3: Ad-hoc, Sensor and Mobile Networks, Cyberphysical Systems**

Thomas Janson and Christian Schindelhauer
Self-Synchronized Cooperative Beamforming in Ad-Hoc Networks

Giuseppe Antonio Di Luna, Paola Flocchini, Sruti Gan Chaudhuri, Nicola Santoro and Giovanni Viglietta
Robots with Lights: Overcoming Obstructed Visibility Without Colliding

Gerry Siegemund, Khaled Maamra and Volker Turau
Brief Announcement: Publish/Subscribe on Virtual Rings

Barun Gorain and Partha Sarathi Mandal
Brief Announcement: Sweep Coverage with Mobile and Static Sensors

5:30 - 7:00 pm **Business meeting**

Tuesday, September 30:

9:00 - 10:00 am **Keynote 2:**

Christian Cachin, IBM Research Zürich
Separating Data and Control: Asynchronous BFT Storage with $2t+1$ Data Replicas

10:00 - 10:20 am Coffee break

10:20 - 12:20 pm **Session 4: Self-Stabilization II**

Fathiyeh Faghieh and Borzoo Bonakdarpour (**Best Student Paper**)
SMT-based Synthesis of Distributed Self-Stabilizing Systems

George Saad and Jared Saia
Self-Healing Computation

Gabriele Di Stefano and Alfredo Navarra
Optimal Gathering on Infinite Grids

Jordan Adamek, Mikhail Nesterenko and Sebastien Tixeuil
Brief Announcement: Designing Dining-Philosophers to Optimize Experimental Performance

Hadid Rachid, Mehmet Karaata and Vincent Villain
Brief Announcement: A Stabilizing Algorithm for Finding Two Node-Disjoint Paths in Arbitrary Networks

12:20 - 2:00 pm Lunch break

2:30 - 11:00 pm Excursion and Banquet (Schloss Corvey, UNESCO World Heritage)



Wednesday, October 1:

9:00 - 10:00 am **Keynote 3:**

Pierre Fraigniaud, CNRS and Universite Paris Diderot
On Proof-Labeling Schemes versus Silent Self-Stabilizing Algorithms

10:00 - 10:20 am Coffee break

10:20 - 12:20 pm **Session 5: Formal Methods, Safety, and Security**

Ehab Elmallah, Hrishikesh B. Acharya and Mohamed Gouda
Incremental Verification of Computing Policies

Laure Millet, Maria Potop-Butucaru, Nathalie Sznajder and Sebastien Tixeuil
On the synthesis of Mobile Robot Protocols: the case of ring gathering

Alex P. Klinkhamer and Ali Ebneenasir

Synthesizing Self-Stabilization through Superposition and Backtracking

Yue Qiao, Kannan Srinivasan and Anish Arora

Configuration Hopping : A Secure Communication Protocol without Explicit Key Exchange

12:20 - 1:40 pm Lunch break

1:40 - 3:40 pm **Session 6: Dependable Systems & Self-Stabilization**

Seda Davtyan, Kishori Konwar and Alexander Shvartsman

Dependable Decentralized Cooperation with the Help of Reliability Estimation

Shlomi Dolev, Ramzi Martin Kahil and Reuven Yagel

Stateless Stabilization Bootstrap

Oday Jubran and Oliver Theel

Brief Announcement: Introducing Recurrence in Self-Stabilization

Reza Hajisheykhi, Ali Ebneenasir and Sandeep Kulkarni

Brief Announcement: Tamper-Evident Stabilization

Jan Steffen Becker, Dilshod Rahmatov and Oliver Theel

Brief Announcement: Region-Adherent Algorithms - Bounding the Impact of Faults in Space

Shlomi Dolev, Sergey Frenkel and Marina Kopeetsky

Brief Announcement: Entropy Adaptive On-Line Compression

3:40 - 4:00 pm Coffee break

4:00 - 5:30 pm **Session 7: Self-Stabilization III**

Florence Leve, Khaled Mohamed and Vincent Villain

Snap-Stabilizing PIF on Non-Oriented Trees and Message Passing Model

Alexandre Maurer and Toshimitsu Masuzawa

Edge coloring despite transient and permanent faults

Hung Tran-The and Luis Rodrigues

Tight Bounds for Uniform Stabilizing Consensus in Mobile Networks

5:30 - 5:45 pm Closing