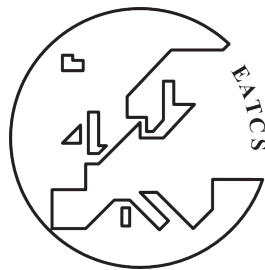


DISC 2017

The 31st International Symposium on Distributed Computing



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Program at a Glance

Monday, October 16

8:50 – 17:30	Workshop BTT (Room Edison II)
8:30 – 17:00	Workshop FRIDA (Room Edison I)
9:00 – 17:30	Workshop TPC (Room Newton)
18:30	DISC Welcome Reception at the Vienna Technical Museum

Tuesday, October 17 (Room Edison II+III)

8:30 – 8:40	Opening
8:40 – 9:40	Keynote by Anne-Marie Kermarrec (INRIA Rennes)
9:40 – 10:00	Coffee break
10:00 – 12:01	Session 1
12:01 – 13:20	Lunch break
13:20 – 15:33	Session 2
15:33 – 15:50	Coffee break
15:50 – 18:05	Yoram Moses Birthday Celebration
18:05	Business meeting

Wednesday, October 18 (Room Edison II+III)

8:30 – 9:30	Keynote by Christian Cachin (IBM Research Zurich)
9:30 – 9:50	Coffee break
9:50 – 11:58	Session 3
12:00 – 13:30	Lunch break
13:30 – 15:37	Session 4
15:37 – 15:57	Coffee break
15:57 – 17:47	Session 5
18:30	Conference banquet at Schönbrunn Castle

Thursday, October 19 (Room Edison II+III)

8:30 – 9:30	Keynote by Dana Randall (Georgia Tech)
9:30 – 9:50	Coffee break
9:50 – 12:03	Session 6
12:03 – 13:30	Lunch break
13:30 – 15:37	Session 7
15:37 – 15:57	Coffee break
15:57 – 17:30	Session 8
17:30 – 17:40	Closing of DISC

Friday, October 20

9:00 – 17:30	Workshop ADGA (Room Edison I)
9:00 – 17:30	Workshop CoDyn (Room Nobel)
9:00 – 18:30	Workshop HDT (Room Newton)

Detailed Program

Tuesday, October 17 (Room Edison II+III)

8:30 – 8:40	Opening
8:40 – 9:40	Keynote talk by Anne-Marie Kermarrec (INRIA Rennes) <i>Recommenders: from the lab to the wild</i>
9:40 – 10:00	Coffee break
	Session 1 (Distributed Models and Computation)
	Session Chair: Dahlia Malkhi
10:00 – 10:23	<i>Self-stabilizing Byzantine Clock Synchronization is Almost as Easy as Consensus</i> Christoph Lenzen and Joel Rybicki
10:23 – 10:46	<i>Feasibilities and Infeasibilities for Achieving Responsiveness in Permissionless Consensus</i> Rafael Pass and Elaine Shi
10:46 – 11:09	<i>Tight Bounds for Connectivity and Set Agreement in Byzantine Synchronous Systems</i> Hammurabi Mendes and Maurice Herlihy
11:09 – 11:32	<i>Which Broadcast Abstraction Captures k-Set Agreement?</i> Damien Imbs, Achour Mostefaoui, Matthieu Perrin and Michel Raynal
11:32 – 11:55	<i>On the Number of Objects with Distinct Power and the Linearizability of Set Agreement Objects</i> David Yu Cheng Chan, Vassos Hadzilacos and Sam Toueg
11:55 – 12:01	<i>Brief Announcement: Practical Synchronous Byzantine Consensus</i> Ittai Abraham, Srinivas Devadas, Kartik Nayak and Ling Ren
12:01 – 13:20	Lunch
	Session 2 (Dynamic and Overlay Networks)
	Session Chair: Yukiko Yamauchi
13:20 – 13:43	<i>Demand-Aware Network Designs of Bounded Degree</i> Chen Avin, Kaushik Mondal and Stefan Schmid
13:43 – 14:06	<i>Certification of Compact Low-Stretch Routing Schemes</i> Alkida Balliu and Pierre Fraigniaud
14:06 – 14:29	<i>Some Lower Bounds in Dynamic Networks with Oblivious Adversaries</i> Irvan Jahja, Haifeng Yu and Yuda Zhao
14:29 – 14:52	<i>Dynamic Analysis of the Arrow Distributed Directory Protocol in General Networks</i> Abdolhamid Ghodselahi and Fabian Kuhn
14:52 – 15:15	<i>Improved Deterministic Distributed Construction of Spanners</i> Ofer Grossman and Merav Parter
15:15 – 15:21	<i>Brief Announcement Concurrent Self-Adjusting Distributed Tree Networks</i> Bruna Peres, Olga Goussevskaia, Stefan Schmid and Chen Avin
15:21 – 15:27	<i>Brief Announcement: Lower Bounds for Asymptotic Consensus in Dynamic Networks</i> Matthias Függer, Thomas Nowak and Manfred Schwarz
15:27 – 15:33	<i>Brief Announcement: Compact Self-Stabilizing Leader Election for General Networks</i> Lelia Blin and Sebastien Tixeuil
15:33 – 15:50	Coffee break
15:50 – 18:05	Yoram Moses Celebration
18:05	Business meeting

Wednesday, October 18 (Room Edison II+III)

8:30 – 9:30	Keynote talk by Christian Cachin (IBM Research Zurich) <i>Blockchain Consensus Protocols in the Wild</i>
9:30 – 9:50	Coffee break
	Session 3: 9:50 – 11:58 (Distributed Graph Algorithms/Best Papers) Session Chair: Boaz Patt-Shamir
9:50 – 10:13	<i>Improved Distributed Degree Splitting and Edge Coloring (Best Paper Award)</i> Mohsen Ghaffari, Juho Hirvonen, Fabian Kuhn, Yannic Maus, Jukka Suomela and Jara Uitto
10:13 – 10:36	<i>Improved Deterministic Distributed Matching via Rounding (Best Student Paper Award)</i> Manuela Fischer
10:36 – 10:59	<i>Near-Optimal Approximate Shortest Paths and Transshipment in Distributed and Streaming Models</i> Ruben Becker, Andreas Karrenbauer, Sebastian Krinninger and Christoph Lenzen
10:59 – 11:22	<i>Simple and Near-Optimal Distributed Coloring for Sparse Graphs</i> Mohsen Ghaffari and Christiana Lymouri
11:22 – 11:52	<i>Three Notes on Distributed Property Testing</i> Guy Even, Orr Fischer, Pierre Fraigniaud, Tzlil Gonen, Reut Levi, Moti Medina, Pedro Montealegre, Dennis Olivetti, Rotem Oshman, Ivan Rapaport and Ioan Todinca
11:52 – 11:58	<i>Brief Announcement: Crash-tolerant Consensus in Directed Graph Revisited</i> Ashish Choudhury, Gayathri Garimella, Arpita Patra, Divya Ravi and Pratik Sarkar
12:00 – 13:30	Lunch break
	Session 4: 13:30 – 15:37 (Shared Memory) Session Chair: Dan Alistarh
13:30 – 13:53	<i>Reuse, don't Recycle: Transforming Lock-free Algorithms that Throw Away Descriptors</i> Maya Arbel-Raviv and Trevor Brown
13:53 – 14:16	<i>Recovering Shared Objects Without Stable Storage</i> Ellis Michael, Dan Ports, Naveen Sharma and Adriana Szekeres
14:16 – 14:39	<i>Recoverable FCFS Mutual Exclusion with Wait-Free Recovery</i> Prasad Jayanti and Anup Joshi
14:39 – 15:02	<i>Consistency Models with Global Operation Sequencing and their Composition</i> Alexey Gotsman and Sebastian Burckhardt
15:02 – 15:25	<i>Dynamic Reconfiguration: Abstraction and Optimal Asynchronous Solution</i> Alexander Spiegelman, Idit Keidar and Dahlia Malkhi
15:25 – 15:31	<i>Brief Announcement: Compact Topology of Shared-Memory Adversaries</i> Petr Kuznetsov, Thibault Rieutord and Yuan He
15:31 – 15:37	<i>Brief Announcement: A Persistent Lock-Free Queue for Non-Volatile Memory</i> Michal Friedman, Maurice Herlihy, Virendra Marathe and Erez Petrank
15:37 – 15:57	Coffee break
	Session 5: 15:57 – 17:47 (LOCAL/CONGEST model) Session Chair: Pierre Fraigniaud
15:57 – 16:20	<i>Quadratic and Near-Quadratic Lower Bounds for the CONGEST model</i> Keren Censor-Hillel, Seri Khoury and Ami Paz
16:20 – 16:43	<i>Symmetry Breaking in the Congest Model: Time- and Message-Efficient Algorithms for Ruling Sets</i> Shreyas Pai, Gopal Pandurangan, Sriram Pemmaraju, Talal Riaz and Peter Robinson
16:43 – 17:06	<i>Sublogarithmic Distributed Algorithms for Lovász Local Lemma with Implications on Complexity Hierarchies</i> Manuela Fischer and Mohsen Ghaffari
17:06 – 17:29	<i>Near-Optimal Distributed DFS in Planar Graphs</i> Mohsen Ghaffari and Merav Parter
17:29 – 17:35	<i>Brief Announcement: On Connectivity in the Broadcast Congested Clique</i> Tomasz Jurdzinski and Krzysztof Nowicki
17:35 – 17:41	<i>Brief Announcement: Towards a complexity theory for the congested clique</i> Janne H. Korhonen and Jukka Suomela
17:41 – 17:47	<i>Brief Announcement: A Local Algorithm for the Sparse Spanning Graph Problem</i> Reut Levi and Christoph Lenzen
	Social Event
18:30	Conference banquet at Schönbrunn Castle

Thursday, October 19 (Room Edison II+III)

8:30 – 9:30	Keynote talk by Dana Randall (Georgia Tech) <i>Phase Transitions and Emergent Phenomena in Random Structures and Algorithms</i>
9:30 – 9:50	Coffee break
	Session 6: 9:50 – 12:03 (Distributed Randomization and Testing) Session Chair: Andrea Clementi
9:50 – 10:13	<i>Derandomizing Local Distributed Algorithms under Bandwidth Restrictions</i> Keren Censor-Hillel, Merav Parter and Gregory Schwartzman
10:13 – 10:36	<i>Neuro-RAM unit with Applications to Similarity Testing and Compression in Spiking Sigmoidal Networks</i> Nancy Lynch, Cameron Musco and Merav Parter
10:36 – 10:59	<i>How large is your graph?</i> Frederik Mallmann-Trenn, Varun Kanade and Victor Verdugo
10:59 – 11:22	<i>Fast plurality consensus in regular expanders</i> Colin Cooper, Tomasz Radzik, Nicolas Rivera and Takeharu Shiraga
11:22 – 11:45	<i>Error-Sensitive Proof-Labeling Schemes</i> Laurent Feuilloley and Pierre Fraigniaud
11:45 – 11:51	<i>Brief Announcement: Rapid Mixing of Local Dynamics on Graphs</i> Rmi Varloot and Laurent Massouli
11:51 – 11:57	<i>Brief Announcement: Black-box Concurrent Data Structures for NUMA Architectures</i> Irina Calciu, Siddhartha Sen, Mahesh Balakrishnan and Marcos Aguilera
11:57 – 12:03	<i>Brief Announcement: The Synergy of Finite State Machines</i> Yehuda Afek, Yuval Emek and Noa Kolikant
12:03 – 13:30	Lunch break
	Session 7: 13:30 – 15:37 (Transactional Memory and Communication Complexity) Session Chair: Jukka Suomela
13:30 – 13:53	<i>Cost of Concurrency in Hybrid Transactional Memory</i> Trevor Brown and Srivatsan Ravi
13:53 – 14:16	<i>Extending Hardware Transactional Memory Capacity via Rollback-Only Transactions and Suspend/Resume</i> Shady Issa, Pascal Felber, Alexander Matveev and Paolo Romano
14:16 – 14:39	<i>Dali: A Periodically Persistent Hash Map</i> Faisal Nawab, Joseph Izraelevitz, Terence Kelly, Charles B. Morrey, Dhruva Chakrabarti and Michael L. Scott
14:39 – 15:02	<i>Two-Party Direct-Sum Questions through the Lens of Multiparty Communication Complexity</i> Itay Hazan and Eyal Kushilevitz
15:02 – 15:25	<i>Interactive Compression for Multi-Party Protocols</i> Gillat Kol, Rotem Oshman and Dafna Sadeh
15:25 – 15:31	<i>Brief Announcement: A Note on Hardness of Diameter Approximation</i> Karl Bringmann and Sebastian Krinninger
15:31 – 15:37	<i>Brief Announcement: Towards Reduced Instruction Sets for Synchronization</i> Rati Gelashvili, Idit Keidar, Alexander Spiegelman and Roger Wattenhofer
15:37 – 15:57	Coffee break
	Session 8: 15:57 – 17:30 (Wireless Algorithms and Mobile Agents) Session Chair: Yuval Emek
15:57 – 16:20	<i>An Efficient Communication Abstraction for Dense Wireless Networks</i> Magnus Halldorsson, Fabian Kuhn, Nancy Lynch and Calvin Newport
16:20 – 16:43	<i>Asynchronous approach in the plane: A deterministic polynomial algorithm</i> Sbastien Bouchard, Marjorie Bournat, Yoann Dieudonn, Swan Dubois and Franck Petit
16:43 – 17:06	<i>Meeting in a Polygon by Anonymous Oblivious Robots</i> Giuseppe Antonio Di Luna, Paola Flocchini, Nicola Santoro, Giovanni Viglietta and Masafumi Yamashita
17:06 – 17:12	<i>Brief Announcement: Shape Formation by Programmable Particles</i> Giuseppe Antonio Di Luna, Paola Flocchini, Nicola Santoro, Giovanni Viglietta and Yukiko Yamauchi
17:12 – 17:18	<i>Brief Announcement: Fast Aggregation in Population Protocols</i> Ryota Eguchi and Taiske Izumi
17:18 – 17:24	<i>Brief Announcement: On the Parallel Undecided-State Dynamics with Two Colors</i> Andrea Clementi, Luciano Gualà, Francesco Pasquale and Giacomo Scornavacca
17:24 – 17:30	<i>Brief Announcement: Applying Predicate Detection to the Stable Marriage Problem</i> Vijay Garg
17:30 – 17:40	Closing of DISC

Welcome Reception and Social Event

The **welcome reception** will take place on Monday, October 16, at 18:30 in the grand hall of the Vienna Technical Museum, at Mariahilfer Straße 212, 1140 Wien (right next to the conference hotel). There will be the opportunity to attend a high-voltage demonstration at the end of the reception.

The **conference banquet** will start on Wednesday, October 18, at 18:30 in the “Apothekertrakt” of Schönbrunn Castle, which is a 20min walk from the conference hotel (see map below). We will meet at the reception desk at 18:00 to walk there as a group. As the main entrance to Schönbrunn Castle and the castle grounds will be closed later that evening, the venue will be exited towards the outside of the castle after the dinner.

