



AALBORG UNIVERSITY  
DENMARK

## ACCAPT 2016, AALBORG UNIVERSITY

April 12-14 2016

### **Lecture Hall: Fredrik Bajers Vej 7A, room 4-108, Aalborg University**

The ACCAPT 2016 conference focuses on Applications of Algebraic Topology in Computer Science and Data Analysis. It is aimed at mathematicians and computer scientists working in or interested in these subjects. The aim of the conference is to exchange ideas and to initiate or expand research collaboration.

Special emphasis will be on Topological methods in Concurrency Theory.

- Topological Dataanalysis, TDA
- Topological methods in Concurrency
- Topological methods in Distributed Computing
- Directed algebraic topology

Conference Web site: <http://people.math.aau.dk/~fajstrup/KONFERENCER/ACAT2016/>

*Local organizers:*

[Lisbeth Fajstrup](#) and [Martin Raussen](#), Department of Mathematical Sciences

*Scientific Committee:*

[Neza Mramor-Kosta](#), University of Ljubljana, Slovenia.

[Primoz Skraba](#), Jozef Stefan Institute, Ljubljana, Slovenia.

[Lisbeth Fajstrup](#), Aalborg University.

[Martin Raussen](#), Aalborg University.

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- The European Science Foundation (ESF)
- The ACAT network
- The Department of Mathematical Sciences, Aalborg University

## Tuesday, April 12, 2016

09:20 – 09:30 Opening

09:30 – 10:10 Herbert Edelsbrunner: *Promises and Challenges of Topological Data Analysis*

10:20 – 11:00 Frederic Chazal: *A few statistical properties of persistent homology in Topological Data Analysis*

11:00 – 11:30 Coffee

11:30 – 12:10 Bertrand Michel: *Robust Topological Inference with the Distance To a Measure*  
*Joint works with F. Chazal, B.T. Fasy, F. Lecci, P. Massart, A. Rinaldo and L. Wasserman.*

12:10 – 13:30 Lunch (NOVI canteen, Niels Jernes Vej 10)

13:30 – 14:00 Christophe A.N. Biscio (Presenter) and Jesper Møller: *The accumulative persistence function—a useful functional summary statistic for topological data analysis*

14:10 – 14:50 Steve Oudot: *Structure and stability of the 1-dimensional Mapper*

14:50 – 15:50 Poster session & Coffee

19:15 – ? Dinner ([Restaurant Provence Aalborg](#))

## Wednesday, April 13, 2016

09:00 – 09:40 Maurice Herlihy: *Topological Impossibility Results in Distributed Computing*

09:50 – 10:30 Dmitry Feichtner-Kozlov: *Symmetry breaking labelings in standard chromatic subdivisions*

10:30 – 11:00 Coffee

11:00 – 11:40 Emmanuel Haucourt: *Control Flow Structures of Concurrent Programs are Higher Dimensional Mathematical Objects*

11:50 – 12:30 Krzysztof Ziemiański: *On the execution spaces of PV-programs*

12:30 – 14:00 Lunch (NOVI canteen, Niels Jernes Vej 10)

14:00 – 14:40 Jeremy Dubut: *The directed homotopy hypothesis*

14:50 – 15:30 Damien Imbs: *From general to iterated  $k$ -set agreement executions*

15:30 – 16:00 Coffee

## Thursday, April 14, 2016

09:00 – 09:40 Marian Mrozek: *Morse-Conley-Forman theory for sampled dynamical systems*

09:50 – 10:30 Claudia Landi: *An edit distance for Reeb graphs*

10:30 – 11:00 Coffee

11:00 – 11:40 Pawel Dlotko: *Introduction to neurotopology*

11:50 – 12:30 Hubert Wagner : *Topological Data Analysis with Bergman Divergences*

12:30 – 14:00 Lunch (NOVI canteen, Niels Jernes Vej 10)

14:00 – 14:40 Anton Nikitenko: *Expected Sizes of Poisson-Delaunay Mosaics and of Their Discrete Morse Functions*

14:50 – 15:30 My Ismail Mamouni: *String Topological Robotics*

15:30 – 16:00 Farewell coffee

**List of registered participants:**

Biscio, Christophe	Aalborg University
Botnan, Magnus Bakke	Technische Universität München
Chazal, Frederic	INRIA, France
Dlotko, Pawel	INRIA, France
Dubut, Jérémy	LSV, ENS Cachan, France
Edelsbrunner, Herbert	IST, Austria
Ermler, Marcus	University of Bremen
Fajstrup, Lisbeth	Aalborg University
Feichtner-Kozlov, Dmitry	ALTA, Universität Bremen
Haucourt, Emmanuel	LIX, École Polytechnique, France
Herlihy, Maurice	Brown University
Imbs, Damien	University of Bremen, Germany
Kalafatis, Manolis	University of Aegean
Landi, Claudia	Università di Modena e Reggio Emilia, Italy
Mamouni, My Ismail	CRMEF, Maroc
Michel, Bertrand	UPMC, France
Mimram, Samuel	LIX, École Polytechnique, France
Mramor-Kosta, Neza	University of Ljubljana, Slovenia
Mrozek, Marian	Jagiellonian University, Poland
Møller, Jesper	Aalborg University
Nigmatov, Arnur	Technische Universitaet Graz
Nikitenko, Anton	IST, Austria
Oudout, Steve	INRIA, France
Rausen, Martin	Aalborg University
Senge, Jan Felix	University of Bremen, Germany
Skraba, Primoz	Jozef Stefan Institute, Slovenia
Virk, Žiga	IST, Austria
Wagner, Hubert	IST, Austria
Ziemiński, Krzysztof	University of Warsaw, Polen