

**SEA**  
**2020**

18th Symposium on Experimental Algorithms  
Catania, June 16-18, 2020



UNIVERSITÀ  
degli STUDI  
di CATANIA

**GNCS** Gruppo Nazionale per  
il Calcolo Scientifico


**INSAM** Istituto Nazionale di  
Alta Matematica F. Severi

# SEA 2020 PROGRAM

Dear colleagues,  
unfortunately, on March 2020, the situation surrounding COVID19 outbreak evolved rapidly, endangering the health and safety of everyone, which are for us among the highest priorities. Thus, based on the health situation in Italy and around the world, SEA 2020 conference leadership decided that the most prudent measure was to deliver the conference online to all registered attendees, rather than by a physical meeting.

Thus, we are implementing the meeting through the online [Microsoft Teams platform](#) that will provide our attendees around the world a new conference experience. Audio and video presentations to be linked to papers will be supported.

In this booklet you can find instructions for attending the event, the conference program, the complete list with the email addresses of authors and the list of the members of both the steering and the program committees.



To connect to a given conference session, please click on the session title or use the icon  just on the right of the session title. This will allow you to directly enter the session on Microsoft Teams.

Unless you are a session chairman, when you connect to a given conference session please disable your microphone and webcam in order to not overload the network.

Authors can present their paper either live or in pre-recorded mode.

In live mode, speakers will need to share their screen with slides during presentations, while pre-recorded presentations will be played directly by SEA 2020 organisers.



In the program reported in this booklet, live presentations are associated with the icon  while pre-recorder presentations are associated with the icon .

All papers are presented by one of the authors. The presenting researcher is underlined in the list of authors shown in this booklet. Even in the case of pre-recorded presentations, it is required that the speaker is connected to the event in order to answer the questions that will be raised at the end of presentations. Questions are to be asked in live mode.

Each talk will last 25 minutes. At the end of each talk there will be a 5 minutes question and answer session. In case you want to ask questions, please raise your hand (through the button set up by Microsoft Teams) and wait for the session chairman to give you the floor.







In the FILE tab in Microsoft Teams you can find the PDF files of the papers presented during the session.

Additionally, at the end of each session the presentation files will be available for download in the FILE tab of the channel. Specifically, for each paper, you will be able to download the video presentation in MP4 format and the slides in PDF format.







This booklet and the whole proceedings volume of SEA 2020 (LIpiCS vol.160, ISBN 978-3-95977-148-1) is available for download, in PDF format, in the FILE tab of the General Channel. In the same tab it is also possible to download the booklet of the paper abstracts.

Catania, June 13, 2020  
Simone and Domenico




## SESSION 1 - June 16, 2020 AM

8:30 - 9:00	<b>Wellcome</b>	
9:00 - 10:00	<b>Invited Talk</b> – <i>Chairman: Domenico Cantone</i> N. Prezza Indexing Compressed Text: a Tale of Time and Space	
10:00 - 10:15	<b>Virtual Tour of Catania</b> A virtual visit to venue of the conference: the Benedectine Monastery	
10:15 - 10:30	<b>Break</b>	
	<b>Contributed Talks - Group 1</b> – <i>Chairman: Oguzhan Kulekci</i>	
10:30 - 11:00	<u>M. Fonseca Faraj</u> , A. van der Grinten, H. Meyerhenke, J. Larsson Träff and C. Schulz High-Quality Hierarchical Process Mapping	
11:00 - 11:30	S. Fekete, <u>A. Hill</u> , D. Krupke, T. Mayer, J. Mitchell, O. Parekh and C. Phillips Probing a Set of Trajectories to Maximize Captured Movement	
11:30 - 12:00	K. Matsuda, <u>S. Denzumi</u> and K. Sadakane Storing Set Families More Compactly with Top ZDDs	
12:00 - 12:30	<u>D. Köppl</u> , S. Puglisi and R. Raman Fast and Simple Compact Hashing via Bucketing	

## SESSION 2 - June 16, 2020 PM

	<b>Contributed Talks - Group 2</b> – <i>Chairman: Travis Gagie</i>	
15:00 - 15:30	D. Berend and <u>Y. Twitto</u> Effect of Initial Assignment on Local Search Performance for Max Sat	
15:30 - 16:00	<u>Y. Nakahata</u> , M. Nishino, J. Kawahara and S. Minato Enum. all Subgraphs under Given Constraints using Zero-suppressed Sentential Decision Diagrams	
16:00 - 16:30	L. Gottesbüren, <u>M. Hamann</u> , P. Schoch, B. Strasser, D. Wagner and S. Zühlendorf Engineering Exact Quasi-Threshold Editing	
16:30 - 17:00	<b>Break</b>	
	<b>Contributed Talks - Group 3</b> – <i>Chairman: Gabriele Fici</i>	
17:00 - 17:30	<u>L. Gottesbüren</u> , M. Hamann, S. Schlag and D. Wagner Advanced Flow-Based Multilevel Hypergraph Partitioning	
17:30 - 18:00	Z. Liptak, S. Puglisi and <u>M. Rossi</u> Pattern Discovery in Colored Strings	
18:00 - 18:30	<u>S. Kobayashi</u> , D. Hendrian, R. Yoshinaka and A. Shinohara Fast and linear-time string matching algorithms based on the distances of q-gram occurrences	







## SESSION 3 - June 17, 2020 AM →

9:00 - 10:00	<b>Invited Talk</b> – <i>Chairman: Simone Faro</i> S. Edelkamp: Algorithm Engineering for Sorting and Searching, and All That	
10:00 - 10:15	<b>Virtual Tour of Catania</b> At the top of Etna	
10:15 - 10:30	<b>Break</b>	
	<b>Contributed Talks - Group 4</b> – <i>Chairman: Nicola Prezza</i>	
10:30 - 11:00	<u>K. Hanauer</u> , M. Henzinger and C. Schulz Faster Fully Dynamic Transitive Closure in Practice	
11:00 - 11:30	<u>T. Maier</u> , P. Sanders and R. Williger Concurrent Expandable AMQs on the Basis of Quotient Filters	
11:30 - 12:00	J. Sauer, D. Wagner and <u>T. Zündorf</u> Faster Multi-Modal Route Planning with Bike Sharing Using ULTRA	
12:00 - 12:30	A. Kleff, F. Schulz, J. Wagenblatt and <u>T. Zeitz</u> Efficient Route Planning with Temporary Driving Bans, Road Closures, and Rated Parking Areas	

## SESSION 4 - June 18, 2020 AM →

9:00 - 10:00	<b>Invited Talk</b> – <i>Chairman: Andrea Marino</i> M. Aumüller Algorithm Engineering for High-Dimensional Similarity Search Problems	
10:00 - 10:15	<b>Virtual Tour of Catania</b> The seaside	
10:15 - 10:30	<b>Break</b>	
	<b>Contributed Talks - Group 5</b> – <i>Chairman: Christian Schulz</i>	
10:30 - 11:00	<u>A. Al Zoobi</u> , D. Coudert and N. Nisse Space and time tradeoffs for the k shortest simple paths problem	
11:00 - 11:30	<u>J. Trimble</u> An Algorithm for the Exact Treedepth Problem	
11:30 - 12:00	<u>F. Cooper</u> and D. Manlove Algorithms for new types of fair stable matchings	
12:00 - 12:30	D. Antypov, A. Deligkas, V. Gusev, M. Rosseinsky, P. Spirakis and <u>M. Theofilatos</u> Crystal Structure Prediction via Oblivious Local Search	

## SESSION 5 - June 18, 2020 PM →

<b>Contributed Talks - Group 6</b> – <i>Chairman: James Trimble</i>	
15:00 - 15:30	<u>K. Nakamura</u> , S. Denzumi and M. Nishino Variable Shift SDD: A More Succinct Sentential Decision Diagram 
15:30 - 16:00	<u>E. Kuthe</u> and S. Rahmann Engineering Fused Lasso Solvers on Trees 
16:00 - 16:30	R. Grossi, A. Marino and <u>S. Moghtasedi</u> Finding Structurally and Temporally Similar Trajectories in Graphs 
16:30 - 17:00	<b>Break</b>
<b>Contributed Talks - Group 7</b> – <i>Chairman: Martin Aumuller</i>	
17:00 - 17:30	<u>L. Barth</u> and D. Wagner Zipping Segment Trees 
17:30 - 18:00	<u>V. Buchhold</u> , D. Delling, D. Schieferdecker and M. Wegner Fast and Stable Repartitioning of Road Networks 
18:00 - 18:30	M. He and <u>S. Kazi</u> Path Query Data Structures in Practice 
<b>Closing</b>	

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