1 Introduction

This document is a report on the activities of the European Association for Theoretical Computer Science (EATCS) during the period between ICALP 2017 and ICALP 2018. The main purpose of the document is to inform all EATCS members of the activities carried out by the association and about the issues to be presented and discussed at the General Assembly during ICALP 2018 in Prague.

2 Awards

In 2017–2018, the EATCS has sponsored the following awards:

- The **EATCS Award 2018** to Noam Nisan for his decisive influence on a range of areas in computational complexity theory and for algorithmic mechanism design, an elegant and rigorous computational theory that aptly informs economics. Noam Nisan has been a dominant intellectual force in theoretical computer science for nearly three decades. He has had pervasive, deep influence in computational complexity theory and is one of the creators and leaders of algorithmic mechanism design. His work has also had immense impact outside of the theoretical computer science community, e.g., in the economics, artificial intelligence, and data networking research communities, in the Google Ad Exchange and online ad auctions more generally, and in education on both the undergraduate and graduate levels. For all these reasons, the EATCS wants to celebrate Noam Nisan and his influential work, and is honored to award her with its most prestigious prize. The full citation for the award is available at https://eatcs.org/images/awards/eatcsaward/2018.pdf

- The **Gödel Prize 2018** to Oded Regev for his paper:


  The full citation for the award, which is presented jointly by ACM SIGACT and the EATCS, is available at https://eatcs.org/index.php/component/content/article/1-news/2670-2018-godel-prize

- The **Presburger Award 2018** for young scientists to Aleksander Mądry that has made several groundbreaking contributions to the theory of algorithms which have firmly established him as a leader in his field. Some of his most notable work is on the maximum flow problem in graphs and digraphs. Aleksander Mądry’s work is of exceptional standard and visibility, establishing as a leading researcher in his field. The full citation for the award is available at https://eatcs.org/images/awards/Presburger_Laudatio18.pdf

• The **Alonzo Church Award 2018**, awarded for outstanding Contributions to Logic and Computation is given to Tomas Feder and Moshe Y. Vardi for fundamental contributions to the computational complexity of constraint-satisfaction problems. Their contributions appeared in two papers:
  

  The full citation for the award is available at [https://eatcs.org/index.php/component/content/article/1-news/2685-the-2018-alonzo-church-award](https://eatcs.org/index.php/component/content/article/1-news/2685-the-2018-alonzo-church-award)

• The **EATCS Distinguished Dissertation Award** was established in 2014 to promote and recognize outstanding dissertations in the field of Theoretical Computer Science. The deadline for nominations was on 31st of December, 2017 and any PhD dissertation in the field of Theoretical Computer Science that had been successfully defended in 2017 was eligible. Three dissertations were selected by the committee for year 2017:
  
  - “High-Dimensional Similarity Search and Sketching: Algorithms and Hardness”, by Ilya Razenshteyn.
  - “Hardness of Approximation Between P and NP”, by Aviad Rubinstein.

• The **ICALP Best Papers Awards 2018** assigned as follows:
  
  - Track B: Dirk Nowotka and Aleksi Saarela. “An optimal bound on the solution sets of one-variable word equations and its consequences”.
  - Track C: Dariusz Kowalski and Miguel A. Mosteiro. “Polynomial Counting in Anonymous Dynamic Networks with Applications to Anonymous Dynamic Algebraic Computations”.

• The **ICALP Best Student Papers Awards 2017** assigned as follows:
  
  - Track A: Shashwat Garg. “Quasi-PTAS for Scheduling with Precedences using LP Hierarchies”.
  - Track B: Sarah Winter. “Uniformization problems for synchronizations of automatic relations on words”.

• The **ETAPS Best Paper Award 2018** for the best paper in Theoretical Computer Science at the European Joint Conferences on Theory and Practice of Software 2018, ETAPS’18, has been assigned to the following paper:
  
  - “Guarded Traced Symmetric Monoidal Categories”, by Sergey Goncharov and Lutz Schröde.

• The **ESA Best Paper Award 2017** assigned to the following papers:
“Improving TSP tours using dynamic programming over tree decompositions”, by Marek Cygan, Lukasz Kowalik and Arkadiusz Soecla.

“Positive-instance driven dynamic programming for treewidth”, by Hisao Tamaki

- The **ESA Best Student Paper Award 2017** assigned to the following paper:

  “Counting restricted homomorphisms via Möbius inversion over matroid lattices”, by Marc Roth.

- The **MFCS Best Paper Award 2017** assigned to the paper *Eilenberg Theorems for Free*, by Henning Urbat, Jiri Adamek, Liang-Ting Chen and Stefan Milius.

- The **MFCS Best Student Paper Award 2017** assigned to the paper *Fractal Intersections and Products via Algorithmic Dimension*, by Neil Lutz.

3 Fellows

The EATCS Fellows Program was established in 2013 by the Association to recognize outstanding EATCS Members for their scientific achievements in the field of Theoretical Computer Science. The Fellow status is conferred by the EATCS Fellows-Selection Committee upon a person having a track record of intellectual and organizational leadership within the EATCS community. Fellows are expected to be “model citizens” of the TCS community, helping to develop the standing of TCS beyond the frontiers of the community.

In 2018 the EATCS Fellows-Selection Committee proposed that the following members receive the status of EATCS Fellow:

- Stefano Leonardi, Sapienza University of Rome, Italy
- Jiri Adamek, Technische Universität Braunschweig, Germany

In 2017 the EATCS Fellows-Selection Committee proposed that the following members receive the status of EATCS Fellow:

- Josep Diaz, Universitat Politecnica de Catalunya, Spain
- Marta Kwiatkowska, University of Oxford, UK
- Aravind Srinivasan, University of Maryland, College Park, USA
- Moti Yung, Columbia University, Computer Science, USA

In 2016 the EATCS Fellows-Selection Committee proposed that the following members receive the status of EATCS Fellow:

- the late Zoltan Esik, University of Szeged
- David Harel, Weizmann Institute of Science
- Giuseppe F. Italiano, University of Rome Tor Vergata
- Kurt Mehlhorn, Max-Planck-Institut für Informatik
- Scott A. Smolka, Stony Brook University

In 2015 the EATCS Fellows-Selection Committee proposed that the following members receive the status of EATCS Fellow:

- Artur Czumaj, University of Warwick
• Mariangiola Dezani-Ciancaglini, Università di Torino
• Thomas A. Henzinger, Institute of Science and Technology Austria
• Dexter Kozen, Cornell University
• Moshe Y. Vardi, Rice University

In 2014 the EATCS Fellows-Selection Committee proposed that the following members receive the status of EATCS Fellow:

• Susanne Albers, Technische Universität München
• Giorgio Ausiello, Università di Roma "La Sapienza"
• Wilfried Brauer, Technische Universität München
• Herbert Edelsbrunner, Institute of Science and Technology Austria and Duke University
• Mike Fellows, Charles Darwin University
• Yuri Gurevich, Microsoft Research
• Monika Henzinger, University of Vienna
• Jean-Eric Pin, LIAFA, CNRS and University Paris Diderot
• Paul Spirakis, University of Liverpool
• Wolfgang Thomas, RWTH Aachen University
4 Membership

The chart below shows the evolution of the membership of the EATCS, from ICALP’82 until today (not counting ICALP’18 registrations).

![Membership Chart]

Detailed membership figures from the last few years are reported in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Members</th>
<th>Young</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>882</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>678</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>724</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>858</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>787</td>
<td>17</td>
</tr>
<tr>
<td>2012</td>
<td>937</td>
<td>210</td>
</tr>
<tr>
<td>2013</td>
<td>832</td>
<td>343</td>
</tr>
<tr>
<td>2014</td>
<td>1146</td>
<td>396</td>
</tr>
<tr>
<td>2015</td>
<td>1067</td>
<td>575</td>
</tr>
<tr>
<td>2016</td>
<td>705</td>
<td>136</td>
</tr>
<tr>
<td>2017</td>
<td>907</td>
<td>212</td>
</tr>
<tr>
<td>2018</td>
<td>947</td>
<td>72</td>
</tr>
</tbody>
</table>
5 Financial Overview

EATCS: Financial overview  
June 30, 2017 - June 30, 2018

<table>
<thead>
<tr>
<th>June 30, 2017</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securities</td>
<td>54 280,00</td>
</tr>
<tr>
<td>Savings acc.</td>
<td>40 567,57</td>
</tr>
<tr>
<td>Cash acc.</td>
<td>110 836,85</td>
</tr>
<tr>
<td>Provision Dijkstra prize</td>
<td>-35 641,09</td>
</tr>
<tr>
<td>Provision RTA/FLoC</td>
<td>-1 766,96</td>
</tr>
<tr>
<td>Total</td>
<td>168 276,37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>June 30, 2018</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securities</td>
<td>0</td>
</tr>
<tr>
<td>Savings acc.</td>
<td>40 584,67</td>
</tr>
<tr>
<td>Cash acc.</td>
<td>161 643,94</td>
</tr>
<tr>
<td>Provision Dijkstra prize</td>
<td>-18 242,82</td>
</tr>
<tr>
<td>DISC contingency fund</td>
<td>-15 175,00</td>
</tr>
<tr>
<td>Provision RTA/FLoC</td>
<td>-1 766,96</td>
</tr>
<tr>
<td>Total</td>
<td>167 043,83</td>
</tr>
<tr>
<td>Balance</td>
<td>-1 232,54</td>
</tr>
</tbody>
</table>
### EATCS: Financial overview
**June 30, 2017 - June 30, 2018**

#### Income

<table>
<thead>
<tr>
<th>Source</th>
<th>€</th>
<th>(previous) €</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members</td>
<td>20 355,00</td>
<td>(11 398,95)</td>
</tr>
<tr>
<td>Springer</td>
<td>1 956,54</td>
<td>(-813,00)</td>
</tr>
<tr>
<td>Interest, capital gains</td>
<td>509,91</td>
<td>(-1 055,00)</td>
</tr>
<tr>
<td>Disc invited sp.</td>
<td>3 020,57</td>
<td>(0)</td>
</tr>
<tr>
<td>ICALP surplus</td>
<td>0</td>
<td>(2 510,70)</td>
</tr>
<tr>
<td>Dijkstra prize</td>
<td>35 641,09</td>
<td>(35 641,09)</td>
</tr>
<tr>
<td>RTA/FLoC</td>
<td>1 766,96</td>
<td>(1 766,96)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>63 250,07</td>
<td>(49 449,70)</td>
</tr>
</tbody>
</table>

#### Expenses

<table>
<thead>
<tr>
<th>Source</th>
<th>€</th>
<th>(previous) €</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulletins</td>
<td>4 686,40</td>
<td>(5 937,70)</td>
</tr>
<tr>
<td>Awards, EATCS sponsorships</td>
<td>5 767,82</td>
<td>(10 889,30)</td>
</tr>
<tr>
<td>Secretary office</td>
<td>11 000,00</td>
<td>(11 000,00)</td>
</tr>
<tr>
<td>Running charges</td>
<td>4 476,33</td>
<td>(6 452,030)</td>
</tr>
<tr>
<td>Taxes</td>
<td>346,71</td>
<td>(428,77)</td>
</tr>
<tr>
<td>Disc invited sp.</td>
<td>3 020,57</td>
<td>(0)</td>
</tr>
<tr>
<td>Provision DISC/Dijkstra</td>
<td>33 417,82</td>
<td>(35 641,09)</td>
</tr>
<tr>
<td>Provision RTA/FLoC</td>
<td>1 766,96</td>
<td>(1 766,96)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64 482,61</td>
<td>(70 175,26)</td>
</tr>
</tbody>
</table>

Balance: -1 232,54
6 ICALP Conferences

• ICALP 2017: The 44th International Colloquium on Automata, Languages took place from July 10 to July 14, 2017, in Warsaw, Poland. A detailed account of the scientific program and logistic organization was given at the annual meeting of the EATCS Council and at General Assembly during the conference. Our warm thanks go to the conference organizers Mikolaj Bojańczyk, Piotr Sankowski, Bartek Klin and Filip Murlak from the University of Warsaw as well as the program chairs Piotr Indyk (track A), Anca Muscholl (track B), and Fabian Kuhn (track C) for the excellent program and the high quality of the contributed papers. The participants enjoyed the invited talks given by Mikolaj Bojańczyk, Monika Henzinger, Ronitt Rubinfeld and Mikkel Thorup. The volume of the proceedings was published under the LIPIcs (Leibniz International Proceedings in Informatics) series published according to the principle of Open Access, i.e., they are available online and free of charge. The volume was available one week before the conference.

• ICALP 2018: This year’s ICALP conference will take place from July 9 to July 13, 2018, in Prague, Czech Republic. The conference is organized by Jiří Sgall, Andreas Emil Feldmann, Tomáš Masopstík, Michal Opler, Jiří Fiala and Jan Musilek from the Computer Science Institute of Charles University with the support of Anna Kotěšovcová from CONFORG. The scientific program is again divided into three tracks: Track A - Algorithms, Complexity and Games (chaired by Dániel Marx), Track B - Logic, Semantics, Automata and Theory of Programming (chaired by Donald Sannella), and Track C - Foundations of Networked Computation: Models, Algorithms and Information Management (chaired by Christos Kaklamanis). The complete program is ready and can be viewed in detail on the corresponding web site: https://iuuk.mff.cuni.cz/~icalp2018/programme.

ICALP 2018 received a very large number of submissions (502). All tracks received many submission of very high quality contributing to an excellent program. This year the program of ICALP also includes brief announcements of work in progress with substantial interest for the community. The invited talks will be given this year by Jaroslav Nešetřil, Alexander Schwarzmann, Sam Staton and Ryan Williams. The program of ICALP 2018 will also include presentation of the EATCS Award 2018 to Noam Nisan, the Gödel Prize 2018 to Oded Regev, the Presburger Award 2018 to Aleksander Mądry, and the EATCS Distinguished Dissertation Award to Bas Ketsman, Ilya Razenshteyn and Aviad Rubinstein.

ICALP 2018 will host six satellite events that will be held on 9 July, 2018: Modern Online Algorithms (MOLI), Game Solving: Theory and Practice, Parameterized Approximation Algorithms Workshop (PAAW), Infinity, Algorithmic Aspects of Temporal Graphs, and Constrained Recognition Problems. Additionally two summer schools will be organized. The Summer School on Algorithms and Lower Bounds organized immediately before ICALP during 6-9 July, 2018, with a follow-up workshop on Monday afternoon. The Summer School on Discrete Mathematics will be organized after the conference during 16-20 July, 2018. The school will be organized by the Institute of
Mathematics of the Czech Academy of Sciences and the Computer Science Institute of Charles University.

A detailed account of the scientific program and logistic organization will be given at the annual meeting of the EATCS Council and at General Assembly during the conference. Our warm thanks go to all the organizers and to the PC and workshop chairs.

- **ICALP 2019**: The organization of the 46th International Colloquium on Automata, Languages and Programming is progressing well. ICALP 2019 will take place from July 8 to July 12, 2019, in Patras, Greece. The conference chair will be Christos Zaroliagis and Sotiris Nikoletseas from the Department of Computer Engineering & Informatics of the University of Patras. In Prague, you will have the opportunity to see the first Call for Papers with the indication of the program committees.

- **ICALP 2020**: The 47th International Colloquium on Automata, Languages and Programming will be hosted in Beijing (China).

7 Other Conferences

There are three categories of conferences in which the EATCS is involved. The first category, where the EATCS is the only responsible institution, consists only of ICALP, as our main conference and the most important instrument to recruit new members.

In the second category, there are some conferences that have “closer ties” to the EATCS, collect EATCS membership fees and provide a reduced conference fee to EATCS members. In the second category we have:

- **ESA** - The Annual European Symposium on Algorithms,
- **MFCS** - The International Symposium on Mathematical Foundations of Computer Science, and
- **DISC** - The International Symposium on Distributed Computing.

In the third category, there are the rest of the “sponsored conferences”. In some cases, the EATCS has sponsored “best paper awards” or offered student scholarships, but mainly the sponsoring was confined to advertising the events. During the period under consideration, the EATCS has sponsored the following events in this category:

- **CIAC 2017** - 10th International Conference on Algorithms and Complexity
- **CiE 2018** - 14th conference of Computer Science Models of Computation in Context
- **ETAPS 2018** - 21st The European Joint Conferences on Theory and Practice of Software
- **RP 2018** - 12th International Workshop on Reachability Problems, London UK
- **COMPLEXIS 2018** - 3rd International Conference on Complexity, Future Information Systems and Risk
- **CSR 2018** - 13th International Computer Science Symposium in Russia
• MODELSWARD 2018 - 6th International Conference on Model-Driven Engineering and Software Development

8 Young Researchers School

Beginning in 2014, the European Association for Theoretical Computer Science (EATCS) established a series of Young Researcher Schools on TCS topics.

For 2018 EATCS will co-sponsor the 2nd Summer School on Foundations of Programming and Software Systems (FoPSS), together with ETAPS, ACM SIGLOG, and ACM SIGPLAN. Information on the school is available here: http://fopss18.mimuw.edu.pl/.

9 Publications

During the reporting period, the main publication activities of the EATCS have been as follows:

The Bulletin (Ed. K. Iwama). Numbers 123, 124 and 125 have been published since October 2017, containing a variety of contributions, including technical papers, reports from conferences, and news, as well as the following regular columns:

• The Algorithmics Column - Gerhard Woeginger (Eindhoven, NL)
• The Concurrency Column - Nobuko Yoshida (London, UK)
• The Computational Complexity Column - Vikraman Arvind (Chennai, India)
• The Distributed Computing Column - Stefan Schmid (Berlin, Germany)
• The Education Column - Juraj Hromkovic (Zurich, Switzerland)
• The Formal Language Theory Column - Giovanni Pighizzini (Milano, Italy)
• The Logic in Computer Science Column - Yuri Gurevich (Microsoft, USA)

Since issue 90 the EATCS Bulletin is freely accessible on-line through the EATCS website, and since issue 101 the Bulletin is fully electronically published using the Open Journal System.

Since issue 111 the EATCS Bulletin production is decoupled from its editorship. Starting from the October 2013 issue, the BEATCS will be produced, printed and shipped by our Secretary Office in Greece.

To promote the work of young researchers, the EATCS Bulletin publishes abstracts of recently awarded PhD thesis in Theoretical Computer Science.

ICALP Proceedings. This year the proceedings of ICALP have been published under the LIPIcs (Leibniz International Proceedings in Informatics) series according to the principle of Open Access, i.e., they are available online and free of charge.
**EATCS series of books.** There are two series of books in which the EATCS is involved and which are published by Springer: *Monographs in Theoretical Computer Science* and *Texts in Theoretical Computer Science.*

During the reporting period, the editorial board of these book series has consisted of: Monika Henzinger, Juraj Hromkovic, Mogens Nielsen, Grzegorz Rozenberg and Arto Salomaa.

The following title has been published in the last 12 months by Springer in the two EATCS series Monographs and Texts in Theoretical Computer Science.


10 Relationships with other Societies

In order to encourage double registration, the EATCS has established reciprocity agreements offering a discount to members of sister associations: EACSL, SIGACT, SIGLOG and SIGecon members can join EATCS for €25 per year.

The EATCS is also offering some modest support to the Computational Complexity Foundation Inc., which runs the annual Computational Complexity Conference.

11 EATCS Secretary Office

During the reporting period, the EATCS Secretary office extended the services offered by the website of the association by integrating the PayPal online payment system. The EATCS members are now able to renew their membership using all major credit/debit cards and/or via their PayPal account.

**EATCS Fellows Poster.** We have prepared a poster advertising the EATCS Fellows class 2018. The poster was printed in A2 dimensions and displayed at ICALP 2018.

**Springer Reading Room.** In cooperation with Springer, the members of the EATCS are allowed to access the past proceedings of ICALP via the *internal members area* of the EATCS web site.

**Young Researchers.** A total of 148 announcements were made on the *young researchers internal area* mostly related to post-doctoral positions and job announcements. These announcements have been distributed also via Twitter and LinkedIn.

**Membership Expiration Reminders.** Membership expiration reminders have been streamlined during the reported period. Three times (August 2017, December 2017 and April 2018) we have queried the database and informed members of the expiration of their membership.

**GDPR.** Preparations of conformity with GDPR have started in cooperation with the Computer Technology Institute & Press (CTI).
12 Organization structure of EATCS

The legal status of EATCS requires certain changes to address new Belgian law and EU regulations related to the operation and statute of non-profit organizations. The legal approach to carry out all the necessary changes has been discussed continuously during the previous years. During the annual council meeting that took place at ICALP 2017 a working group was appointed by the council to elaborate a proposal for the implementation of all the necessary changes to the legal status of EATCS in order to comply with the new regulations. The working group was composed by the former treasurer (Dirk Janssens), the treasurer (Jean-Francois Raskin), the secretary (Ioannis Chatzigiannakis) and the president (Paul Spirakis). In Prague, we will have the opportunity to discuss the proposal and decide on the actions that will be taken to address the problem.

During the annual council meeting that took place at ICALP 2017 the financial situation of EATCS was discussed extensively as a result of the deficit in the finances during the period 2016-2017. The difference from the previous years is mainly due to the losing the sponsorship from Springer-Verlag (about 10K). The council decided that the treasurer (Jean-Francois Raskin) in collaboration with the secretary (Ioannis Chatzigiannakis) and the president (Paul Spirakis) would conduct a careful examination of the financial aspects of the association and create a proposal to overcome the problem and guarantee the sustainability of the association. In Prague, we will have the opportunity to discuss the proposal and decide on the actions that will be taken to address the problem.

On January 2018 a working group was appointed by the council meeting to elaborate a proposal for the formation of a Steering Committee (SC) for ICALP. The working group was composed by A. Czumaj, J. Esparza, T. Husfeldt, A. Muscholl, L. Ong and J. Sgall. During the council meeting in Prague we will have the opportunity to discuss the limitations of the current system, the benefits of a SC, the interactions between SC, EATCS Council and Conference Chair, and the proposed status of the ICALP SC.

13 Acknowledgements

On behalf of the EATCS, I would like to thank our Treasurer Jean-Francois Raskin, our Secretary Ioannis Chatzigiannakis and Efi Chita for their precious and punctual help, as well as the whole team that is supporting the EATCS Secretarial Office at CTI in Patras. Moreover, I would like to express my gratitude to Kazuo Iwama for his work as EATCS Bulletin editor.

I also thank the following institutional sponsors for their welcome financial support:

• CTI Patras,
• CWI Amsterdam,
• MADALGO Aarhus,
• Microsoft Research UK and
• Springer-Verlag.
Last, but by no means least, I thank all the members of the EATCS for their contribution to our organization.

Paul Spirakis
EATCS President