



# COMPUTATIONAL COMPLEXITY FOUNDATION

## Proceedings of the 2019 Business Meeting

**Date:** July 18, 2019, 17:45 - 19:15

**Location:** Rutgers University, New Brunswick, NJ, USA

**Chair:** Venkatesan Guruswami, President of CCF.

**Scribe:** Ashwin Nayak, Secretary of CCF. Approved by the board.

### Agenda:

[CCC'19 PC Report and Awards](#)

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### Convention for attributing quotes:

C: Chair

S: Speaker for the topic (indicated if other than the Chair)

O: Other participant

# CCC'19 PC Report and Awards

Speaker: Amir Shpilka, Program Committee Chair for CCC'19

- Thanks to the PC members:  
Andrej Bogdanov, Irit Dinur, Yuval Filmus, Pavel Hrubeš, Valentine Kabanets,  
Gillat Kol, Troy Lee, Raghu Meka, Ramprasad Saptharishi, Amir Shpilka, Madhu  
Sudan

for a fantastic job!

- Overview of process
  - 101 submissions; 3 withdrawals; 5 assigned solely to chair, rest to 3 PC members
  - Each PC member was assigned 27 or 28 papers, except for the Chair, who was assigned 11
  - 124 distinct sub-reviewers employed. Thanks to the subreviewers!
  - PC discussion summary was added as a review.

Number of reviews for a paper	Number of papers
1	5
4	77
5	13
6	3

- Exactly 10 weeks from the submission deadline to the notification date
- 2½ days for paper bidding and 1½ days for paper assignment
- 6½ weeks for reviews/subreviews to be turned in
- 3 weeks for online discussions and gradual assignment of “accept/reject”
- 411 reviews and 565 comments entered into EasyChair
- Acceptance rate
  - Excluding withdrawals, 98 submissions, 32 accepted (33%)
  - Comparison with past years:

2018:	28 / 74	(38%)
2017:	33 / 98	(34%)
2016:	34 / 91	(37%)
2015:	30 / 110	(27%)
2014:	29 / 94	(31%)
2013:	29 / 90	(32%)
2012:	34 / 119	(29%)
2011:	30 / 83	(36%)

- Strong submissions, would have been nice to accept more papers
- Some papers with score around 1 were discussed and accepted

- Having only 3 days and wishing to have 30 minutes talks and two 1-hour invited talks limited number of acceptances
- Some thoughts
  - Relatively large number of submissions
    - Probably due to deadline being after STOC notification
    - Possible because conference date set to July, otherwise less than 10 weeks for the review process
  - Conference only 3 days
    - Having another half day would have allowed a more relaxed program and more accepted papers.
  - Many great submissions
    - Possibly because of the timing of the submission deadline. It is better for the community to have the submission deadline after the STOC notification date.
    - I think we had to reject papers that would have been accepted in other years
    - If deadline after STOC notification I think conference should last 3½ days
    - Alternatively, we can consider shortening talks and accepting more papers, but then program would be too dense
  - COI: I think we (as a community) are too strict with regard to COI
    - Makes finding suitable reviewers difficult.
    - Most COI policies require reviewers to declare COI when there is one.
    - Students or postdocs from the distant past, collaborators, members of the same institution, et al., need not automatically have a COI (in most cases) in my opinion.
    - I think COI should be declared only when reviewer feels s/he cannot be objective. We should trust reviewers!
- Submissions by topic (rough classification)

Boolean Circuit complexity	13	6	46%
Derandomization and Explicit Constructions (PRGs, Extractors)	12	5	42%
Algebraic complexity	11	4	36%
Algorithm related	11	4	36%
Communication complexity	11	3	27%
Quantum computation	11	3	27%
Proof Complexity	8	3	37%
PCP and other interactive proof systems	6	1	17%
Dichotomy	5	1	20%
Structural results	4	1	25%
Fourier/Polynomial/Other representations	4	1	25%
Inapproximability	3	1	33%
Coding theory	1	0	0%

- Submissions by country

country	authors	submitted
United States	105	52.03
Israel	17	7.75
India	15	4.15
Germany	12	3.2
China	9	2.52
Canada	8	5.62
UK	8	3.58
Russia	6	2.9
Australia	4	1.64
Japan	4	3
Netherlands	4	1.2
Sweden	4	1.37
Czech Rep.	3	3.2
France	3	1
Spain	2	1
Denmark	1	0.33
Greece	1	1
Hong Kong	1	0.5
Hungary	1	0.33
Italy	1	0.33
Singapore	1	0.5

- Score distribution prior to discussions
  - Average score 3.0 no submissions
  - Average score 2.0...2.7 17/17 accepted
  - Average score 1.5...1.9 12/19 accepted
  - Average score 1.0...1.4 2/14 accepted
  - Average score 0.5...0.8 1/13 accepted
  - Average score 0.0...0.5 6 rejected
  - Average score -1.0...-0.1 19 rejected
  - Average score -3.0...-1.1 10 rejected
  
  - Median score 1 = "Weak Accept"
  
- Best student paper award: Josh Alman, MIT, for "*Limits on the Universal Method for Matrix Multiplication*". Congratulations!
- Many thanks to all the authors who submitted; the program committee; the sub-reviewers; the CCF Board of Trustees; the Local Arrangements Committee, especially its chair, Eric Allender; DIMACS for organizing the Tutorials Day; Dor Mintzer and Ran Raz for their invited talks; Michael Wagner, for the proceedings; And the attendees!

C: Thanks to Amir for serving as the PC chair!

## CCC'19 Local Arrangements Report

Speaker: Eric Allender, Local Arrangements Chair for CCC'19

- Thanks to the Local Arrangements Committee: EricAllender (chair), Swastik Kopparty, Periklis Papakonstantinou, Mike Saks, Shubhangi Saraf, Mario Szegedy, Rebecca Wright → Tami Carpenter
- Huge thanks to DIMACS staff (Tami Carpenter, Nicole Clark-Johnson, Walter Morris, Isha Deen-Cole, ...)
- Thanks to Rutgers CS, this lecture hall cost us nothing
- Attendance: 96 registered, of whom 45 are students (46 reported in business meeting, 45 as per final budget sheet). Comparison with past years:

Year	Total	Students	Location
'19	96	45	New Jersey
'18	80	47	San Diego
'17	81	23	Riga
'16	131	34	Tokyo
'15	84	40	Portland FCRC
'14	66	20	Vancouver
'13	106	52	Stanford
'12	57	10	Porto
'11	99	42	San Jose FCRC
'10	140	64	Boston STOC
'09	130+	36	Paris
'08	80	25	U. Maryland

- We tried to keep the registration fees low. Looks like we will still end up with a surplus.
- At one point, it looked like we would have to pay the Hyatt Hotel thousands of dollars for not being able to meet the required level of occupancy for the block of rooms held for CCC participants. To make a long story short: we (probably) will not have to pay them anything. This can serve as a cautionary tale for local arrangements in the future.
- Thanks again to DIMACS staff, to the student volunteers, and to everyone else who helped!

C: Thanks to Eric and the rest of the LA committee!

## CCC'19 Travel Awards

Speaker: Rocco Servedio, Chair of the CCF Awards Committee

- Overview:
  - Two sources of travel funding: NSF and DIMACS Special Focus on Lower Bounds in Computational Complexity (also funded by NSF).
  - Each provided significant travel support for the 2019 conference

- NSF Travel Awards
  - CCF applied to NSF CISE-CCF for US \$10K travel award in late 2018. Some years we have applied for \$15K; less this year because of location and CCF reserve
  - Proposal “*requests NSF support to assist students in traveling to attend the 2019 Computational Complexity Conference.*” Aim is to support
    - members of under-represented groups
    - student authors
    - students (grad/undergrad) who don’t have a paper
    - other students
  - Funds limited to travel support: economy class airfare, hotel at double occupancy for 4-5 nights, early registration fee, local ground transportation.
  - Funds available to students at US universities.
- Application process:
  - May 31 deadline, June 7 notification
  - Lightweight application: basic information, anticipated expenses, brief statement of interests, advisor statement
  - Applications from US institutions eligible for NSF funding were reviewed by 3-person committee of CCF board members
- Application outcomes
  - Applicants from US Institutions
    - 14 applications, 13 complete
    - All 13 complete applications were awarded funding (NSF)
    - 3/13 funded applicants are women/undergraduates/members of an under-represented group
    - 9/13 funded applicants have a paper at CCC 2019
  - Applicants from non-US Institutions
    - 4 applications, all complete
    - All 4 applications were awarded funding by DIMACS
    - 2/4 are women/undergraduates/members of an under-represented group
    - 2/4 have a paper at CCC 2019
- DIMACS travel awards
  - DIMACS support is for participants in the activities of its Special Focus on Lower Bounds in Computational Complexity, including the Day of Tutorials preceding CCC.
  - Support for students and postdocs attending the Day of Tutorials:
    - 8 awards, including 4 mentioned previously
    - 3 to postdocs
- Thanks to NSF (Tracy Kimbrel) for their generous support; DIMACS (Eric Allender and Tami Carpenter in particular) for its generous support; Nicole Clark (DIMACS) for on-site support; CCF secretary Ashwin Nayak for his technical help; and to the members of the CCF award selection committee!

C: Travel support encourages participation by community members with limited resources.

## CCC'20 Program Committee

- PC chair: Shubhangi Saraf
- PC members: Per Austrin, Ronald de Wolf, Zeev Dvir, Prahladh Harsha, Toniann Pitassi, Noga Ron-Zewi, Avishay Tal, Salil Vadhan, Ryan Williams, Amir Yehudayoff

## CCC'20 Local arrangements

Speaker: Markus Bläser, Local Arrangements Committee Chair for CCC'20

- CCC'20 will be held in Saarbrücken
  - Venue: Saarland University Campus
  - Lecture hall of MPI for Software Systems
  - Local Arrangements: Markus Bläser (chair)
  - Regular conference fee: approx. 250 Euros, will include lunch and a social event
  - Dates: July 28 to 31, 2020
- Travel
  - Located in the southwest of Germany at the French border
  - Nearest big airports are Frankfurt and Paris
  - Small local airport
  - ICE connections to Frankfurt/Mannheim and Paris
  - Even easier to reach than Dagstuhl
- Accommodation
  - Many hotels in the city center
  - From 45 Euros to 120 Euros
  - Plenty of shops and restaurants nearby
  - It takes 10 - 15 minutes from the city center to campus by public transport.
- Activities
  - Most exciting place in Saarland
  - ☐ Warm and pleasant summers
  - Influenced by French "Savoir vivre"
  - Many very good restaurants of all kinds; great food region, with a Michelin 3-star restaurant
  - UNESCO world cultural heritage "Völklinger Hütte"
  - Great hiking region
  - French wine region "Alsace" right across the border
  - Luxembourg less than one hour away
- Hope to see you in Saarbrücken!

O: Could the 3.5-day program be used to accept more papers?

S: Possibly, also depends on the social event.

C,O: Would be good to keep that flexibility in the program.

O: Will there be a tutorial day?

C: This would be up to the local organizers.

## CCC'21 Bids and Discussion

### **Bid for Toronto, ON, Canada**

(University of Toronto / Fields Institute)

Speaker: Benjamin Rossman

- CCC 2002 was held in Montreal, CCC 2014 in Vancouver. This is the first bid from Toronto.
- Toronto has a long legacy of research in complexity theory. Recently hosted the “Symposium on 50 Years of Complexity Theory” at the Fields Institute, in May 2019.
- CCC 2021 in Toronto:
  - Venue: The Fields Institute, on the University of Toronto campus, in the heart of downtown
  - Local arrangements: Ben Rossman (chair)
  - Dates wide open for Summer 2021, venue available Monday-Friday
  - Estimated costs CA\$215 (= US\$165) per attendee
- The Fields Institute
  - Center for mathematical research
  - Hosts thematic programs and workshops
  - [Lecture Room](#) seats 100-110. If needed, there is an additional room for overflow
  - Close to many hotels, restaurants
- [Travel](#)
  - Pearson International Airport has direct flights from almost everywhere, is 45 minutes to downtown Toronto
  - Billy Bishop Airport in downtown Toronto has direct flights from Newark, Boston, DC, Chicago
- [Accommodations](#)
  - Nearby hotels: Kimpton Hotel, 4-star, 15 minute walk, CA\$260 + 17% tax; Chelsea Hotel, 3-star, 20 minute walk, CA\$230 + 17% tax (1 CA\$ = 0.75 US\$)
  - U of T dorm room (6 night minimum stay) \$45 + 12% tax
  - Many other nearby hotels and AirBnB options, within a 10-15 minute walk
- [Costs](#)
  - [CA\\$215 estimated regular registration fee](#)
  - No charge for space or equipment
  - The Fields Institute handles many logistics cost-free: registration, invitation letters, badges, etc.
  - Morning and afternoon coffee breaks: \$15 per person per day
  - Banquet dinner: \$45-80 (Faculty Club, Hart House)



- Option for catered lunch: \$25-30, but plenty of restaurants in nearby Chinatown or Kensington Market
- **Proposal**
  - Next submission date for proposals to the Fields Institute is in October 2019 (approval is virtually guaranteed)
  - Proposal may include a funding request, typically around CA\$6000, for travel support
- Hope to see you in Toronto!

O: Would people from China or India be able to get a Canadian visa easily?

## **Bid for Boston, MA, USA**

(Northeastern University)

Speaker: Chin Ho Lee, on behalf of Emanuele Viola

- **CCC 2021 in Boston**
  - Venue: The Interdisciplinary Science and Engineering Complex, Boston
  - Local arrangements: Emanuele Viola (chair)
  - Past relevant experience: Co-organizer of CCC 2010 (Harvard)
  - Regular conference fee: rough estimate US\$240 = \$30k costs/125 attendees
  - Breakfast and refreshments included, other meals on your own
  - Lodging: We do not have hotel quotes yet. Many options: “Fancy” hotels close by at around \$300/night; cheaper options \$200/night or lower
  - Dates: Monday June 21<sup>st</sup>– 25<sup>th</sup>, 2021. Later weeks might work too.
- **Venue**
  - The Interdisciplinary Science and Engineering Complex has been won an award for the most beautiful building of Boston of the last 10 years
  - Very well connected; is in downtown Boston. Distances (Google maps data):
    - To commuter rail, T (subway), bus hub: 0.2 miles/5 min walk
    - To Amtrak Train station: 1.1 miles/22 min walk (or take the T)
    - To Boston Logan airport: 5.1 miles by car (or take the T)
    - Several other options
- **Activities**
  - Boston June weather average: 77° F high / 59° F low
  - Walking distance to Boston attractions: Restaurants, Museum of Fine Arts, Symphony, Parks, etc.
- Research opportunities with nearby institutions: Harvard, MIT, Microsoft Research, Boston University, Northeastern
- Hope to see you in Boston!

O: Would later dates be feasible, to accommodate a submission deadline after STOC notification?

S: Probably, but would have to confirm.

## Straw Poll

By show of hands

- 8 votes for Boston
- 42 votes for Toronto

## CCC Proceedings and LIPIcs

- In 2014, after a careful review, CCC picked LIPIcs to publish its proceedings. CCC'15-'19 were published by LIPIcs. The contract is now up for renewal.
- Many positives include:
  - Open access: free download form DROPS
  - No page limits
  - Indexed by DBLP, Google. Has ISBN.
  - Nice LaTeX style file
  - Publish many theory conferences (ICALP, APPROX, RANDOM, STACS, FSTTCS)
  - Helpful editors/scientific staff
  - Ongoing efforts to improve
  - Dieter van Melkebeek soon to join their editorial board
- Positive feedback from recent PC chairs
  - Excellent experience; very responsive scientific staff at Dagstuhl publishing
  - The product is good, their archiving is good, and it seems that the simple course of action of continuing with them is probably best.
  - Manageable workload for PC chair
- Any feedback from the perspective of authors or readers, or other comments/questions?

There were no further comments.

## ToC Advocates Program and Discussion

- This presentation is based on slides used by Martin Farach-Colton at the STOC business meeting. I will focus largely on two aspects (the advocates program and the code of conduct).
- The Ad hoc committee to Combat Harassment and Discrimination in the Theory of Computing Community was appointed by the leaders of TCMF (FOCS), SIGACT (STOC,JACM), EATCS (ICALP), and SIAM (SODA,SICOMP).
- Their charge was
  - Draft a proposal for joint ToC measures to combat discrimination, harassment, bullying, and retaliation, and all matters of ethics that might relate to that.
  - Proposed measures may include, but are not restricted to, coordinating policies and guidelines, and setting community-wide institutions for reporting and

oversight. The primary goal should be a determination to deter and root out such behavior in the theory community. The issues of false reporting and due process should be taken into account. The committee is expected to conduct the necessary research on existing practices. The committee will submit a report to the appointing organizations by September 30, 2018.

- Summary of Recommendations
  - Adopt a code of conduct for conferences.
  - Recruit and train a group of advocates to provide confidential support to people who have experienced harassment at conferences.
  - Every conference and journal should provide a mechanism for authors to confidentially declare a conflict of interest without having to be openly specific about the reason.
  - Provide educational materials to the community at large.
- The full report is available at: [https://www.ics.uci.edu/~irani/ToC\\_SH\\_report.pdf](https://www.ics.uci.edu/~irani/ToC_SH_report.pdf)
- Recommendation for Code of Conduct:
  - Adopt a code of conduct for the conference.
  - There should be a clearly marked link to the code of conduct on the call for papers and conference web page. In addition, a pop-up window at the time of registration should require participants to indicate that they understand the code and agree to abide by it. Conference organizers should also remind attendees about the code of conduct before the first talk of the conference and at the conference business meeting.
- The CCF Bylaws include a code of conduct:

The open exchange of ideas and the freedom of thought and expression are central to the aims and goals of the Foundation. These require an environment that recognizes the inherent worth of every person and group, that fosters dignity, understanding, and mutual respect, and that embraces diversity. In particular, the Board is committed to providing an environment at the Conference that is free of discrimination and harassment, and expects all participants to honor that commitment.
- Recommendation for the advocates program:
  - Recruit and train a group of advocates to provide confidential support to people who have experienced harassment at conferences.
  - At least one advocate should be present for the duration of every conference. The contact information for the attending advocates should be provided as part of the registration process and should also be listed on the conference web page.
  - The role of ToC advocates would include:
    - Providing measures to ensure safety if the individual feels unsafe. This might include walking the person back to their hotel room or helping the person switch rooms or hotels.
    - Providing contact information for hotel security or local police.
    - Providing information about available resources, such as counseling.
    - Helping the person figure out how to navigate professionally tricky situations, such as how to decline an unwanted invitation.
    - Informing the person about available means of filing an official complaint if they decide to do so.
- Enforcement of the code of conduct is complicated; due process is essential! Options for moving forward:

- Remain in a purely advisory role and point the complainant towards their options for filing a formal complaint with the home institution of the accused (or IEEE or ACM in case of conferences sponsored by those organizations)
- Provide advice and templates for each conference to form an ethics committee that can receive formal complaints, conduct investigations, and impose consequences in response to harassment incidents.
- Form a single ethics committee to serve any conference not sponsored by the IEEE or ACM. With pooled resources, this group could receive training and access to legal counsel. This group would be able to track repeated incidents at different conferences.
- Recommendations regarding Conflict of Interest:
  - Every conference and journal should provide a mechanism for authors to confidentially declare a conflict of interest without having to be openly specific about the reason.
  - The instructions to every program committee chair and editor-in-chief should contain specific language to take these declarations seriously. In order to prevent abuse of the system, a program chair could contact one of the trained advocates for confidential verification if he or she has reason to suspect the claim is not valid.
- Community Education: Provide educational materials to the community at large, covering
  - Exactly what types of behavior constitute harassment?
  - How should I respond in the moment if someone is making me uncomfortable?
  - How should I respond in the moment if I believe someone else is being harassed?
  - How should I respond in the moment if I observe inappropriate comments or discussion?
  - How can I, as a research advisor, prepare my students for attending conferences?
  - What is the best way to support a colleague or friend who has experienced harassment?
- The ad hoc committee had an advisory role. They have filed their report, and we will stay tuned for further progress.

O: Will a professional be hired to serve as an advocate? Will the registration fee go up?

C: Advocates are volunteers from the community.

O: Would they be from the CCF board?

C: Possibly, or from the LA committee, or the larger community.

O: Would be better if they are not from the LA committee.

O: Have other conferences adopted the advocates program? How is it working?

C: It is in place at STOC.

O: Crypto / IACR have also adopted the program.

- C: We ought to participate; to what extent is to be decided.
- O: Even if poor conduct is not a widespread problem, since the number of women in the community is small, it is a significant matter. Having an explicit code of conduct sends an important message: that we take this matter seriously.
- C: Regarding COI, there is a concern that the mechanism for declaring COI would be misused.
- O: The probability of misuse is low, this shouldn't be a consideration.
- O: It's worth trying it out. Can send email to the PC chair directly about a COI.
- C: NSF has a COI policy; can use that as an example.
- O: If the PC chair gets an email about a PC member, what would we do?
- O: We ought to handle matters as they arise. It is difficult to predict all possible scenarios.

## CCF Treasurer's Report

Speaker: Shachar Lovett, Treasurer of CCF  
(All amounts in US\$)

- Balance on reserve fund
  - September 28, 2018: \$58911, after closing the books on CCC 2018
  - July 18, 2019: \$58123, not including CCC 2019 income and expenses
- Income and expenses
  - Income: \$25 from interest on bank balance
  - Expenses:
    - \$55 NJ fees for non profit status
    - \$754 Liability insurance

C: Need some cushion to function as a non-profit organization, but can spend a part of the balance for the good of the community.

## Changes to the CCF Board

- Outgoing committee chairs
  - Awards chair: Rocco Servedio
  - Budget chair: Ryan O'Donnell
  - Both will serve on board as past chairs till the next CCC
- Incoming board members:
  - Awards chair: Ryan Williams, appointed by the board

- Budget chair: Michal Koucky, elected by CCF members
- Outgoing board members:
  - Dieter van Melkebeek, Sevag Gharibian, Boaz Barak
- Thanks to all for their service and welcome to the new members!