

POM SIGMAA

Philosophy of Mathematics Special Interest Group of the MAA

Officers

Chair (through 1/21, after which she becomes Past Chair for one year)

Bonnie Gold, Monmouth University (emerita),
bgold@monmouth.edu

Program Director
(through 1/20)

Jeff Buechner, Rutgers University,
buechner@rutgers.edu

Secretary-Treasurer
(through 1/22)

Sally Cockburn, Hamilton College,
scockbur@hamilton.edu

Public Information Officer (through 1/21)

Kevin Iga, Pepperdine University,
kiga@pepperdine.edu

New officers (Feb. 2020)

Chair-Elect

Jeff Buechner, Rutgers University

Program Director

Tom Morley, Georgia Institute of Technology,
morley@math.gatech.edu

In this issue

p. 1: Tom Morley

p. 2: From the Chair

p. 2: POM at JMM 2020

Meet Program Director Tom Morley

POM SIGMAA's newly elected Program Director is Tom Morley (to take office February 2020). Tom Morley is an applied Mathematician and retired full professor at Georgia Tech. He is the author of over 75 papers on applied Mathematics, physics, electrical engineering, operations research and education. He has undergraduate minors in computer science and philosophy. Over the years he has taught a wide variety of courses including calculus of variations, game theory, philosophy of Mathematics, and even

a whole course on Rubik's cube. He plays at least a dozen musical instruments.



From the Chair

Bonnie Gold, chair, POMSIGMAA

At the upcoming joint winter mathematics meeting, we have, again, an active program: see elsewhere in this newsletter. But there will just be one more JMM that the MAA is co-organizing, in 2021. We will put in a proposal for a contributed paper session, and expect to have a guest speaker, as usual.

Meanwhile, in January at JMM2020, the POMSIGMAA officers will spend some time discussing how to handle the activities of POMSIGMAA once the MAA is no longer involved in the winter meetings. Of those who answered the April survey, half never attend MathFest, and this poses a problem for us. There will be a "Town Hall" on the future of JMM at the meeting, and several of us will attend it.

POMSIGMAA is among the SIGMAAs currently being reviewed by the Committee on SIGMAAs (each SIGMAA is reviewed every 4 years)—and I'll be joining that committee in January. Some of you participated in the survey of members which was done in April, and that, together with information about our activities is part of what informs the Committee on SIGMAAs' review process. I hope there will be a report on that review at or shortly after the JMM.

I tried for a while to get discussions more active on our listserv, but this fall I



From the Chair (cont.)

did a significant amount of travelling, and then had to deal with issues where I live. So I've let that slide—I'm sorry. I'll try to get things started again after JMM. On the member survey, there were several suggestions for other things POMSIGMAA could do other than at meetings, and we will start looking into these. Annotated bibliographies are a lot of work, but having at least a page or two with where to begin on several topics might well be do-able and helpful.

Meanwhile, I'd really like to get more members active in POMSIGMAA: so if you have any interest in contributing to development of our web page, communications, or activities, please let me know!

A Philosophy of Math guide to the Joint Math Meetings Denver CO, January 15-18, 2020

POM SIGMAA will again be at the **Joint Math Meetings in Denver**, January 15-18, 2020. As is our tradition, we have an invited speaker after our business meeting, and a contributed paper session.

Invited Speaker: Michael Huemer, University of Colorado–Boulder Possible and Impossible Infinities

Fri. Jan. 17, 6:15 p.m., Room 504, Colorado Convention Center

Abstract: The infinite gives rise to many paradoxes. Some are aptly resolved by declaring certain infinite quantities impossible. But which infinities are possible, and which are impossible? On an Aristotelian view, there can be no "actual infinities", only "potential infinities". This view is wrong; there are many obvious examples of actual infinities. I draw three distinctions: between cardinal numbers and magnitudes, between intensive and extensive magnitudes, and between natural and artificial magnitudes. I then propose a new theory of the impossible infinite: there are infinite cardinal numbers, extensive magnitudes, and artificial magnitudes, but there can be no infinite natural, intensive magnitudes. This view rules out most of the scenarios appearing in the paradoxes of the infinite.

We will have our **reception** at 5:30 pm, then a **business meeting** at 6:00 pm, followed by the **guest lecture** at 6:15 pm.

Contributed Paper Session: *Role of Explanation in Mathematical Proofs*

Saturday, January 18, 2019, Room 502, Colorado Convention Center

Organizers: Jeff Buechner, Sally Cockburn, and Kevin Iga

8:00 a.m. 1154-O1-487 [James Henderson](#), "Explanatory Proofs"

8:35 a.m. 1154-O1-2227 [Jeremy Case](#), "Mathematical Explanation as an Aesthetic"

9:10 a.m. 1154-O1-2672 [Paul Zorn](#), "Proofs that explain, proofs that don't, and proofs of the obvious"

9:45 a.m. 1154-O1-716 [Bonnie Gold](#), "What makes proofs explanatory? Let's look at some examples"

10:20 a.m. 1154-O1-2716 [Susan Ruff](#), "How logic is presented may obscure or enlighten"

11:00 a.m. 1154-O1-1421 [Jeffrey Buechner](#), "Are mathematical explanations interest-relative?"

In addition, there appear to be a number of sessions and talks that relate to philosophy of mathematics at the JMM. Without any guarantee of completeness, here are some we found:

MAA General Contributed Paper Session on Mathematics and Technology, History, and Logic

Wednesday January 15, 2020, 8:00 a.m.-10:55 a.m., Room 709, Colorado Convention Center

10:00 a.m. (1154-VD-1515) J. Lucero-Bryan, [Existence of Measurable Cardinals and Modal Logic](#).

10:15 a.m. (1154-VD-2614) Janine E. Janoski, [Axiomatic Systems](#).

10:30 a.m. (1154-VD-2770) Joshua Cole, [Finitely branching computable trees: a way to think about almost-solvable unsolvable problems](#).

10:45 a.m. (1154-VD-2680) Timothy Trujillo, [Infinite paralysis](#).

AMS-MAA Special Session on History of Mathematics, I

Friday January 17, 2020, 1:00 p.m.-5:50 p.m., Room 102, Colorado Convention Center

1:00 p.m. (1154-01-985) Jacqueline Feke, [Ancient Greek Mathematics as Philosophy](#).

1:30 p.m. (1154-01-2333) Abram Kaplan, [Erudition and Algebraic Practice at the End of the Sixteenth Century](#).

2:00 p.m. (1154-01-1778) Thomas Drucker, [Standing on the Shoulders of Scripture](#).

2:30 p.m. (1154-01-2571) Julia C Thomasson, How to "strain at a Gnat and swallow a Camel:" 'The Analyst Controversy' Reconsidered.

4:30 p.m. (1154-01-222) David E. Dunning, Notational Norms in Charles Sanders Peirce's Circle of Logicians.

AMS-MAA Special Session on History of Mathematics, II

Saturday January 18, 2020, 1:00 p.m.-5:50 p.m., Room 102, Colorado Convention Center

2:30 p.m. (1154-01-938) Rosie Lev-Halutz, Victorian London's Mathematical Culture: Non-Euclidean Geometry as a Case Study.

4:00 p.m. (1154-01-1648) Laura E. Turner, "Peculiarly accessible": Roles of postulate theory for different mathematical publics in E.V. Huntington's work.

CSHPM/SCHPM and BSHM joint meeting

The 2020 Annual Meeting will be held in conjunction with the [British Society for the History of Mathematics](#) at the [University of St Andrews](#) in Scotland on July 6-8, 2020. The theme of the conference is "People, Places, Practices." In addition, there will be an education strand on July 6-7 that will provide practical talks and workshops for those teaching students 15 years old or older.

News: The [Call for papers](#) is open. **The submission deadline has been extended to 1 January 2020.**

[Registration](#) is open. Early bird booking closes 31 March 2020.

The 'End' of Philosophy of Mathematics?

Conference at Princeton University

3-5 April 2020

Organized by John P. Burgess and Silvia De Toffoli

Details forthcoming

Calendar of upcoming events:

Jan. 1, 2020: submission deadline 2020 CSHPM/SCHPM/BSHM

Jan. 15-18, 2020: [Joint Math Meetings 2020](#), Denver, CO

Jan. 18-21, 2020: Fifth annual meeting of Association for the Philosophy of Mathematical Practice

April 3-5, 2020: The 'End' of Philosophy of Mathematics?, Princeton University

July 6-8, 2020: [2020 CSHPM/SCHPM and BSHM joint Meeting](#), University of St. Andrews, Scotland.

Any announcements?

The POMSIGMAA Newsletter comes out yearly in December, with possible other issues if there is anything to report. If you have an announcement you would like to place in the newsletter, contact the Public Information Officer Kevin Iga at kiga@pepperdine.edu.