

POM SIGMAA

Philosophy of Mathematics Special Interest Group of the MAA

Officers

Chair (through 1/23, after which he becomes Past Chair for one year)

Jeff Buechner, Rutgers University

buechner@rutgers.edu

Chair-Elect (through 1/23, after which he becomes Chair for 2 years)

Jason Douma, University of Sioux Falls,
jason.douma@usiuouxfalls.edu

Program Director

(through 1/24)

Tom Morley, Georgia Institute of Technology,

morley@math.gatech.edu

Secretary-Treasurer

(through 1/27)

Sally Cockburn, Hamilton College,

scockbur@hamilton.edu

Public Information

Officer (through 1/26)

Kevin Iga, Pepperdine University,

kiga@pepperdine.edu

At Large (through 2/23)

Bonnie Gold, Monmouth University (emerita),

bgold@monmouth.edu

.....
In this issue

- p. 1: From the Chair
- p. 2: POM at JMM 2023
- p. 3: CSHPM/BSHM meeting 2023

From the Chair

Jeff Buechner, chair, POMSIGMAA

The AMS SIGMAA POM sessions at this year’s AMS meeting In Boston will be extraordinary. Some of the best philosophers of mathematics in the world will present talks. Don’t miss Vann McGee (MIT); he will talk about how mathematics can be used in disciplines (such as engineering and business) in which the underlying concepts are vague. You’ll learn about an important idea for eliminating vagueness—supervaluations. Russell Marcus (Hamilton College) will deliver the SIGMAA POM keynote address. He proposes a new way of understanding mathematical truth—a new epistemology for mathematics. Any proposed foundation for mathematics will need (if Marcus is right) to take his proposal into account. Don Fallis (Northeastern) and Marc Lange (University of North Carolina at Chapel Hill) will examine the role of proofs in acquiring mathematical knowledge. Fallis wants to vindicate deductive proof, and Lange wants to excoriate probabilistic proofs. Juliet Floyd (Boston University) will examine the role of surveyability of mathematical proofs in an historical context that brings in Alan Turing and Ludwig Wittgenstein. Agustín Rayo (MIT) proposes a new way of looking at logical truths via his (new) idea of a transcendental truth. Peter Epstein (Brandeis) will consider the importance of visual reasoning in Euclidean geometry. Thomas Drucker (University of Wisconsin—Whitewater) will look at the historical roots of intuitionism. James Henderson (University of Pittsburg at Bradford) will apply Hempel’s paradox of the ravens (can confirming the contrapositive of an hypothesis show that the original hypothesis is also confirmed?) to Goldbach’s conjecture. Sheila Miller Edwards (University of New Mexico at Taos) will argue that the universe of sets and models of set theory can be conceptually unified by focusing on the idea of what it is to be a truth in set theory. Extraordinary talks—don’t miss them. The sessions are scheduled for Wednesday and Thursday and the keynote for Friday evening 6 – 7:30 PM. You’ll learn a lot about how philosophy can importantly (and sometimes in surprising ways) illuminate the practice of mathematics.



Joint Math Meetings Guest lecture Russell Marcus, Hamilton College

A Philosophical Account of Mathematics that Won't Make You Hate Philosophers

Friday, January 6, 2023, 6 - 7:30 p.m., Hynes Convention Center, Room 102

Abstract: It is commonly believed that our best ways of knowing about anything require sense experience. Mathematics, as our most secure and conclusive knowledge, seems to eschew sense experience. Thus, we should either revise our views about how we know or revise our confidence in mathematics. Revising our views about how we know (our epistemology) in ways that accommodate a natural objectivity in mathematics, especially by appealing to intuition, seems problematic. I show how to invoke intuition in mathematical epistemology unproblematically, and thus that we need not impugn our confidence in mathematics. I start by describing objectivity about mathematics as a constraint on a satisfying epistemology. Then, I characterize and defend a version of intuition that I call thin. Lastly, I present an epistemology for mathematics, called autonomy platonism, that should be satisfying for both mathematicians and philosophers.

JMM Invited/Contributed Paper Session

Current Directions in the Philosophy of Mathematics

Wednesday, January 4 through Thursday, January 5, 2023, Hynes Convention Center, Room 207

This session, organized by POMSIGMAA, plays off on our very successful MAA Invited Paper Session at JMM 2012, when JMM was last held in Boston. At that session, taking advantage of the large number of philosophers of mathematics in the Boston area, we had six well-known mathematicians/ philosophers of mathematics share their work. Three of them have agreed to a return engagement, and we have invited several other philosophers of mathematics in the area as well. But an AMS Special Session differs a bit from an MAA Invited Paper Session in that we can have speakers beyond those initially invited. So we encourage anyone who has done some recent work related to the philosophy of mathematics to propose a talk for our session. These should be non-technical talks, aimed at a general mathematical audience (for technical work in foundations, there are ASL sessions, for example) but all topics in the philosophy of mathematics (including philosophical aspects of foundations) are welcome.

Organizers: Bonnie Gold and Kevin Iga

Day	Time	Presenter	Title
Wed. Jan. 4,	1:00 p.m. - 1:45 p.m.	Vann McGee	<u>Measuring Imprecisely Defined Quantities: Degrees of Truth and Classical Finitary and Infinitary Logic</u>
Wed. Jan. 4,	2:00 p.m. - 2:45 p.m.	Juliet Floyd	<u>Wittgenstein, Turing and 'Surveyability'</u>
Wed. Jan. 4,	3:00 p.m. - 3:45 p.m.	Jody Azzouni	<u>Speaking mathematics in natural and formal languages</u>
Wed. Jan. 4,	4:00 p.m. - 4:45 p.m.	Agustín Rayo	<u>Transcendence and Emptiness</u>
Wed. Jan. 4,	4:45 p.m. - 6:00 p.m.		Discussion among presenters, audience
Thur. Jan. 5,	8:00 a.m. - 8:45 a.m.	Marc Lange	<u>Why is Proof the Only Way to Acquire Mathematical Knowledge?</u>
Thur. Jan. 5,	9:00 a.m. - 9:45 a.m.	Peter Epstein	<u>A Priori Concepts in Euclidean Proof</u>
Thur. Jan. 5,	10:00 a.m. - 10:45 a.m.	Don Fallis	<u>What's So Special about Deductive Proof?</u>
Thur. Jan. 5,	11:00 a.m. - 11:45 a.m.		Discussion among presenters, audience

Thur. Jan. 5,	11:45 a.m. - 1:00 p.m.		Break
Thur. Jan. 5,	1:00 p.m. - 1:20 p.m.	Sheila Miller Edwards	Measurement and Truth in Set Theory
Thur. Jan. 5,	1:30 p.m. - 1:50 p.m.	James Henderson	Hempel's Ravens and the Goldbach Conjecture
Thur. Jan. 5,	2:00 p.m. - 2:20 p.m.	Thomas Drucker	Three Hundred and Sixty-Four, Of Course: Foundations from Philosophy to Program
Thur. Jan. 5,	2:30 p.m. - 3:15 p.m.		Discussion among presenters, audience

POM SIGMAA business meeting

We will have a virtual POM SIGMAA business meeting in late January over Zoom. Details to come later.

CSHPM/SCHPM meeting

The 2023 CSHPM Annual Meeting will be held as part of the Congress of the Humanities and Social Sciences at York University on May 28-30, 2023. Call for Papers at <http://www.cshpm.org/meeting/> with a deadline of February 1, 2023.

Calendar of upcoming events:

Jan. 4-7, 2023: [Virtual Joint Math Meetings](#)

Jan. 7, 2023: [POM SIGMAA Business Meeting](#)

May 28-30, 2023: [Joint BSHM-CSHPM/SCHPM Conference "People, Places, Practices"](#), University of St. Andrews, Scotland.