



HAMTE Crossroads

The Official Newsletter of the Hoosier Association of Mathematics Teacher Educators

Message from the President



Dear HAMTE members, I hope you all are having a great start to a happy and productive new year! As you can see in the pages of this newsletter, our organization has much to celebrate with the activities and accomplishments of its members. Thank you to Andrew Gatza for assembling this newsletter!

The HAMTE officers met in December and we discussed the following issues:

- We agreed to make monetary contributions to the AMTE STaR Fellows program and to the Indiana Mathematics Education Research Symposium.
- We reviewed recommendations from the AMTE Affiliate Webinar, in which Andrew Gatza, Travis Miller, and I participated in October.
- We considered ideas for new appointed positions (e.g., AMTE Representative) and new task forces (e.g., Advocacy).
- We discussed preliminary plans for a conference for Indiana mathematics specialists and coaches, proposed by the EMS Task Force.
- Enrique Galindo agreed to continue to serve as our Webmaster. Thank you, Enrique!

Since that December meeting, plans have progressed as the EMS Task Force has worked with Jane Cooney and Tim Blom at MSD Washington Township to organize the **Mathematics Teacher Leadership Conference (MTLC) 2016**. The goals of the conference are to generate energy around the issue of mathematics specialists and coaches in Indiana, to provide support for these hard-working mathematics teacher leaders, and to invite new members into HAMTE. The conference will be held at the MSD Washington Township Community and Education Center on Friday, March 18, 2016. The keynote speaker will be Maggie McGatha, from the University of Louisville, and breakout sessions will focus on specific issues related to mathematics teacher leadership in elementary schools and middle schools. Additional information and a registration form can be found [here](#). Please help spread the word!

If you are still making New Year's resolutions, I suggest that you align some of them to the [goals of HAMTE](#). For my own resolution, I'd like to combine some of these goals into an **Advocacy Task Force**. If you are interested in joining this task force, please contact me, sstump@bsu.edu.

I look forward to seeing many of you at the upcoming AMTE annual conference, January 28-30, in Irvine California. If you are going, please be sure to attend the **Breakfast and Affiliate Meetings on Saturday, 6:45-8:00 am in Salon C/D**.

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2015 HAMTE Business Meeting

The HAMTE board would officially like to welcome new members to the HAMTE organization. The new 2015 members include:

Lane Bloome, Purdue University

Jose Contreras, Ball State University

Robin Jones, Indiana University-Bloomington

Jinqing Lin, Indiana University-Bloomington

Debi Mink, Indiana University-Southeast

Christine Taylor, Indiana State University

Erol Uzon, Indiana University-Bloomington

Alan Zollman, Indiana University-Southeast

Xiaofen Zhang, Indiana State University



Then HAMTE President **Enrique Galindo** (left) awards a certificate to outgoing Newsletter Editor **Travis Miller** (right) for his service on the HAMTE board over the past three years.

Andrew Gatza was elected for the position of Newsletter Editor. **Sheryl Stump** begins her role as President after serving as President-Elect last year, and Enrique Galindo will now move to the position of Past-President.



Upcoming Events

- 20th Annual [AMTE](#) Conference, January 28-30, Irvine, CA
 - Mathematics Teacher Leadership Conference, March 18, Indianapolis
 - 5th Annual IMERS, March 25th, IUPUI Campus Center
 - [NCTM](#) National Conference: April 11-16, San Francisco
 - [TODOS](#) 2016: Ensuring Equity & Excellence in Math, June 23-25, Phoenix
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Mathematics Teacher Leadership Conference 2016

With support from the Indiana Council of Teachers of Mathematics, HAMTE will host its first Mathematics Teacher Leadership Conference on Friday, March 18, 2016, 8:30 am – 3:30 pm, at the MSD Washington Township Community and Education Center.

Invited are leaders in elementary and middle school mathematics education including –

- Elementary & Middle School Mathematics Coaches
- Elementary & Middle School Mathematics Specialists
- Elementary & Middle School Mathematics Curriculum Directors
- Middle School Mathematics Department Chairs
- Elementary & Middle School Principals
- Elementary & Middle School Mathematics Teacher Educators

Keynote Speaker Maggie McGatha, researcher and educator from the University of Louisville, will inspire and inform with her expertise in mathematics coaching and teacher leadership. Morning and afternoon breakout sessions will focus on specific issues related to mathematics teacher leadership in elementary schools and middle schools. A panel discussion will focus on the development of teachers' mathematical content knowledge.

Registration information can be found at this website: <http://hamte.org/resources/mtlc2016/>

IMERS Call for Proposals

The mathematics education faculty at Indiana University Bloomington, Indiana University-Purdue University Indianapolis, Purdue University, and HAMTE will be hosting the fifth Indiana Mathematics Education Research Symposium on **Friday, March 25, 2016**. The symposium will be held in the Campus Center on the IUPUI campus.

We invite proposals that describe research studies at various stages - completed work, work-in-progress and studies currently under design. The symposium was designed to provide graduate students and new faculty with opportunities to share their research ideas and to network with colleagues. *If you are looking for a conference that will allow you to practice presenting your ideas and where feedback on design and works in progress is provided, IMERS is for you!*

Proposal Guidelines:

Completed Studies

Proposals should be no more than 1000 words (excluding references) including a description of the purpose of the study, theoretical framework, research design, findings and relevance of the study to mathematics education.

Work-in-Progress

Proposals should be no more than 500 words (excluding references) including descriptions of the purpose of the study, brief literature review, research questions, methodology (i.e. participants, data sources, methods of analysis) and preliminary findings (if applicable).

Work-under-Design

Proposals should be no more than 300 words (excluding references) including rationale for the study, brief literature review, research questions, and proposed methods.

Panel Discussion

Panel discussions are 45 minutes in length and are designed to provide insights from different perspectives on a single issue, idea, or activity in mathematics education. For example, a research group exploring children's conceptions of negative numbers could propose a collection of brief reports that illuminates various dimensions of the project or could describe how different frameworks might be used to explore children's conceptions. Proposals should be no more than 1000 words (excluding references) including a description of the purpose of the session, relevance to mathematics education, potential benefit to attendees, and a brief description of the 45-minute session. At least 15 minutes should be allotted for discussion and questions.

Proposal Submission:

Before submitting your proposal, be sure that it adheres to the guidelines for the session type selected.

Submit your proposal electronically (as a Word document) by **Monday, February 22, 2016** to skastber@purdue.edu.

- The email subject should be **IMERS Proposal**, followed by your last name (example: IMERS Proposal Kastberg)
- Use the following format to name your file:
 - **Lastname(lead author)_SessionType_2015**(e.g.:Kastberg_WorkInProgress_2016)
- A confirmation email will be sent within 7 days of the proposal submission.
- Notification of proposal acceptance will be sent out by March 4, 2016



HAMTE Hosts PME-NA 2017!

Things are moving forward with HAMTE's hosting of the PME-NA conference at the **Crowne Plaza Indianapolis Downtown Union Station on October 5-8, 2017**. Enrique Galindo and Jill Newton (co-chairs) have been meeting with the PME-NA Steering Committee and the Local Organizing Committee chairs from both Michigan State University (2015) and the University of Arizona (2016) and are feeling a bit overwhelmed; however, we are luckier than them because we will have the cast of characters from HAMTE on board to help us! **Soon you will be receiving a survey in which you will be asked to give us an indication of both your possible level of involvement in the planning as well as tasks that you might be interested in working on...**we are hoping to have representation of faculty and students from all HAMTE-affiliated institutions so it might be helpful to begin to have discussions among yourselves about which aspects of the conference you and your colleagues might be interested in working on – there will be no shortage of work, that's for sure! Once we've collected responses, we will be back in touch to make further plans. Thanks, in advance, for your help!

Connect with HAMTE!

Visit our website: www.hamte.org

Submit an article to the newsletter, *HAMTE Crossroads*. Email your submission to Andrew Gatza, Newsletter Editor, at agatza@iupui.edu. We publish in September, January, and May.

Join or chair a *working group* to connect and collaborate with others across the state!

At the last HAMTE business meeting, a few working groups were discussed, particularly on the topics of testing and teacher shortage issues. If you have interest in starting and/or chairing a working group, please let us know. See also the call for an *Advocacy Task Force* in the *Message from the President* section (page 1).

Attending AMTE 2016?

Wear your HAMTE shirt and join the conversation at the affiliate breakfast **Saturday, January 30th, from 6:45–8 a.m. in Salon C/D at table 20.**

AMTE's Affiliate Connection Services will present "CONNECTING AND BECOMING STRONGER ADVOCATES THROUGH AFFILIATES" on **Friday Jan 29th, 8:00 – 9:00 am in Shady Canyon**. Hear from Members of the Affiliate Connections Committee and meet/network with other Affiliate Leaders.

BECOME A HAMTE MEMBER!

Submit a completed membership form and \$20 (\$10 for students and emeritus faculty) to HAMTE Treasurer Rachael Kenney, 150 N. University St. Mathematics Department West Lafayette, IN 47907.

The membership year runs October 15 through October 15 (to coincide with our annual fall meeting).

What's the Word on Campus?

University of Indianapolis

Travis Miller and **Jean Lee** serve on AMTE's Affiliate Connections Committee. Jean Lee will serve as Chair of AMTE's ACC Jan 2016 - Jan 2017.

Jean Lee presents at AMTE, Thursday, Jan 28, 3:30-4:15pm on "RIGOR, RELEVANCE, AND RELATIONSHIPS: PREPARING PRESERVICE TEACHERS FOR PROJECT-BASED LEARNING (PBL)."

Indiana University - Bloomington

Amy Hackenberg and a team of graduate students continue to work on project IDR²eAM, <http://www.indiana.edu/~idream/>. IDR²eAM stands for **I**nvestigating **D**ifferentiated Instruction and **R**elationships between **R**ational Number Knowledge and **A**lgebraic Reasoning in **M**iddle School and is funded by the National Science Foundation.

The purposes of this 5-year project are to investigate how to differentiate mathematics instruction for middle school students at different levels of reasoning and to understand how students' rational number knowledge and algebraic reasoning are related. In the first two years of the project we have conducted three iterative, after school design experiments with cognitively diverse middle school students. We are currently analyzing student thinking and learning, as well as the functioning of differentiated instruction, in these experiments.

We are also continuing to meet monthly via Zoom with 15 middle school mathematics teachers from around the state (Evansville, Bloomington, Ellettsville, Indianapolis, and Hammond) in a Teacher Study Group (TSG). The purposes of the TSG are to learn together about the nature of differentiating mathematics instruction for middle school students and for teachers to experiment with differentiating instruction in their classrooms.

In 2016 we will have presentations from the IDR²eAM project at the Research Conference of NCTM in San Francisco in April and at the International Congress of Mathematics Education in Germany in July.

Amy Hackenberg and co-authors Andy Norton and Robert Wright have a book for teachers in press, *Developing Fractions Knowledge*, to be published by SAGE in July 2016. This 13-chapter book is intended to help upper elementary and middle school math teachers use research-based methods to assess and support their students' construction of fractional knowledge. The book is a continuation of the series of four books published by Robert Wright and colleagues to support students' construction of whole number knowledge.

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Purdue University - West Lafayette

Purdue hosted the first annual Indiana STEM Education Conference on January 14, 2016, sponsored by the College of Education, the Center for Advancing the Teaching and Learning of STEM (CATALYST), the Indiana Department of Education and the Indiana Commission for Higher Education. More than 600 people from across the state attended the event that aimed to provide a platform to circulate the best practices of STEM teaching and learning as well as to establish better communication among STEM schools in Indiana. Plans have already begun for next year's conference scheduled for January 12, 2017.

Purdue's math education faculty and graduate students were well represented at PME-NA on November 5-8, 2015, including 15 presentations representing the faculty, 10 graduate students (i.e., **Murat Akarsu, Tuyin An, Lane Bloome, Andrew Hoffman, Hyunyi Jung, Betsy Kersey, Brooke Max, Alexia Mintos, Sue Ellen Richardson, Elizabeth Suazo**, and two undergraduate students (**Nicole Lisy** and **Nick Montan**).

New publications from Purdue faculty and graduate students include:

- **Bofferding, L., Kastberg, S., & Hoffman, A.** (2016). Family mathematics nights: An opportunity to improve preservice teachers' understanding of parents' roles and expectations. *School Science and Mathematics*, 116(1), 17-28.
- **Jung, H., Mintos, A., & Newton, J.** (2015). Preparing secondary mathematics teachers: Focus on contexts and modeling. *The Mathematics Educator*, 24(1), 44-71.
- **Max, B., & Newton, J.** (2015). Teaching University Mathematics: One Mathematician's Contribution. *Notices of the American Mathematical Society*, 62(09), 1062.

Indiana University - Purdue University Indianapolis

As of the 2015-2016 academic year, a new STEM concentration option, including a new mathematics problem solving course taught by **Crystal Morton**, was added to the elementary education program. The purpose of this new concentration is to attract minoritized populations to STEM.

Erik Tillema and **Andrew Gatz** (graduate student) continue to work on the project Generalization Across Multiple Mathematical Areas (GAMMA), a project funded by the National Science Foundation. GAMMA is a 3-year multi-site project that is investigating the kind and quality of generalizations that middle grades through collegiate level students make in the domains of combinatorics, algebra, geometry, and advanced algebra, and the instruction necessary to support these generalizations. Erik is the PI for the Indianapolis site. In the first year of the project we interviewed 32 middle and high school students four times each in order to determine the kind and quality of generalizations that students made. During the 2015-2016 school year we have begun one of two teaching experiments that we will run. The teaching experiments will be run with pairs of 10th and 8th grade students in order to understand how the quality of student generalizations develop over time and support their learning. Andrew Gatz's work on the project has focused on developing an integrated framework to study student generalizations, mathematical identity, and racial identity in order to look at connectedness between micro and macro level tensions.

In 2016, they will have presentations from the GAMMA project at the Research Conference of NCTM in San Francisco in April, the TODOS Conference in June, the International Congress of Mathematics Education in Germany in July, and the PME Conference in Hungary in August.