VOLUME 5 – ISSUE 3 SUMMER 2016

HAMTE Crossroads

The Official Newsletter of the Hoosier Association of Mathematics Teacher Educators

Message from the President

Dear HAMTE members, I hope you are wrapping up your spring semesters with success and making your transitions into interesting summer work and play. I'm looking forward to reading the pages of this newsletter to find out about all the good things happening in mathematics teacher education across our state. I, too, have some updates to report.

On March 18, the EMS Task Force (Rebecca Borowski, Betsy Berry, Jodi Frost, Doris Mohr, & Sheryl Stump) hosted, in partnership with MSD Washington Township, the first **HAMTE Mathematics Teacher Leadership Conference**. With Maggie McGatha as the keynote speaker, the conference attracted 110 participants, with another 10 on the waiting list after registration closed due to limits on seating capacity. In addition to the keynote presentation, six breakout presentations focused on specific issues related to elementary and middle school mathematics teacher leadership. Information about the conference, including the schedule with the list of presenters and a zip file with slides and handouts, appears at this website: https://hamte.org/resources/mtlc2016/

HAMTE members are moving forward in their work for the **Advocacy Task Force**. In February, Gina Yoder sent a survey to all HAMTE members to ascertain who was interested in pursuing work on issues of advocacy and if so, which issues were most pressing to them. Based on the survey responses, three advocacy teams were identified. Those teams and a summary of their preliminary work are listed below. The Advocacy Task Force welcomes new members. If you are interested in joining one of these advocacy teams, please contact the group's facilitator. *See the following page for advocacy team information.*

As always, if you have any issues you would like to bring to the attention of the HAMTE board, please let me know at sstump@bsu.edu.

-Sheryl Stump-

MTLC Conference (left to right): *HAMTE members Rebecca Borowski, Jodi Frost, Betsy Berry, Sheryl Stump, Doris Mohr, and MSD Washington Township's Jane Cooney.*

Inside This Issue:

Newsletter Editor:
Andrew Gatza,
Indiana University, IUPUI
agatza@iupui.edu

PRE K-12 CURRICULUM ADVOCACY TEAM

Facilitator: Gina Borgioli Yoder, gbyoder@upui.edu

Members: Nandini Bhowmick, Mike Daiga, Brooke Max, Doris Mohr, Sheryl Stump, and Jerry Woodward

Possible Action Items:

- Build on IDOE vertical articulation documents to create new documents that better support teachers' understanding of learning progressions.
- Design a session for teachers at the ICTM fall conference that engages teachers with understanding of learning progressions and the importance of curriculum mapping and vertical articulation documents (K-2, 3-5, 6-8).
- Design a discussion session for HAMTE members at the ICTM fall conference that is focused on work in these 3 advocacy subcommittees.
- Design a one-day workshop that engages teachers with understanding of a learning progression and how to align curriculum to the big ideas in that learning progression.
- Provide our recommendations for textbooks or digital curriculum, along with rationales.

MATHEMATICS TEACHER RECRUITMENT / SUPPORT FOR PUBLIC EDUCATION ADVOCACY TEAM

Co-Facilitators: David Feikes (dfeikes@pnc.edu) and Jill Newton (janewton@purdue.edu)

Members: Lizhen Chen, José Contreras, Robin Jones, Sue Ellen Richardson, and Kathy Shafer

Questions for Investigation:

- Which Indiana institutions prepare middle and high school mathematics teachers? How many teachers do they produce? What has been the history of those numbers over the past 10 years?
- Is there a current shortage of middle and high school mathematics teachers in Indiana? What is the evidence? Are these shortages more pronounced in particular geographical areas (e.g., north vs. south), types of districts (e.g., rural vs. urban), levels (middle vs. high school), and/or types of school (e.g., public vs. charter vs. private)?
- What types of data does IDOE collect about the state of mathematics teachers in Indiana (e.g., years of experience, shortages, certification, how long math teachers work as math teachers)? How do they see the extent of the problem of a mathematics teacher shortage? If they see a shortage, what strategies are they using to address it?
- What have Woodrow Wilson programs contributed in terms of numbers of mathematics teachers? How many of these teachers stay after their mandatory teaching commitment?

TEACHER LICENSURE TESTING ADVOCACY TEAM

Facilitator: Liz Brown, Liz.Brown@indstate.edu

Members: Mark Creager, Jodi Frost, Rick Hudson, and Alan Zollman

IMERS 2016 Review

The mathematics education faculty at Indiana University Bloomington, Indiana University-Purdue University Indianapolis, Purdue University, and HAMTE hosted the fifth annual Indiana Mathematics Education Research Symposium on Friday, March 25, 2016 in Indianapolis. The symposium was designed to provide graduate students and new faculty with opportunities to share their research ideas and to network with colleagues.

Sue Ellen Richardson, Purdue University, debriefs with a group after her presentation on early childhood teachers.

Dr. Lateefah Id-Deen, University of Louisville, delivers the closing keynote talk at IMERS 2016.

This year featured 22 presentations by faculty and graduate students from a variety of institutions around the Midwest. Dr. Susan Gregson from the University of Cincinnati delivered the opening keynote talk, *Short Game, Long Game: Tensions of a Critical Mathematics Education Researcher*, and Dr. Lateefah Id-Deen from the University of Louisville delivered the closing keynote talk, *"Children should be seen not heard": Urban students' perspectives as a pathway to access their mathematics learning*.

Upcoming Events and Deadlines

- **TODOS 2016:** Ensuring Equity & Excellence in Math, June 23-25, Phoenix

- **Submit Proposals for HAMTE Sessions at ICTM 2016:**
  - Please consider submitting a proposal for a HAMTE session during the ICTM annual meeting to take place in Indianapolis Nov. 6-7.
  - Three types of sessions can be submitted:
    - Higher Education issues (HAMTE specific topic),
    - HAMTE Presentation (study research, initial findings, etc.),
    - HAMTE Discussion (Facilitator led discussion of a topic).
  - The submission deadline is July 1st. To submit a session go to http://ictm.onefireplace.org/event-2230352

Nominations Committee Update

Congratulations to **José Contreras**, Ball State University, who has recently been appointed to the nominations committee. He will begin working with **Rick Hudson,** University of Southern Indiana, to coordinate the 2016 HAMTE Board member nomination process.

Call for Nominations: HAMTE Secretary and President-Elect

Elections for HAMTE officers will take place during the 2016 annual meeting in November. We applaud **Past President** **Enrique Galindo** and **Secretary** **Craig Willey** for their dedicated service to our organization**.** The end of their terms marks the opportunity for you to **nominate or self-nominate for the positions of President-Elect or Secretary.** The President-Elect will serve a four-year term, including one year as President-Elect, two years as President, and one year as Past President. The Secretary is elected to a three-year term.

Duties of all HAMTE Officers can be found in the HAMTE Constitution and By-Laws accessible here: https://hamte.files.wordpress.com/2013/10/hamte-constitution-and-bylaws-11-10-2011.pdf. Any Regular member in good standing may self-nominate and any Regular, Student, or Emeritus member in good standing may be nominated by another member of HAMTE. Please consider yourself and others, and send nominations to Rick Hudson (rhudson@usi.edu) by August 15, 2016. Members of the 2016 Nominations and Elections committee include José Contreras from Ball State University and Rick Hudson from the University of Southern Indiana.

PME-NA Local Organizing Committee

Things are moving forward with HAMTE's hosting of the PME-NA conference at the **Crowne Plaza Indianapolis Downtown Union Station in October 2017**. Co-chairs **Enrique Galindo** (egalindo@indiana.edu) and **Jill Newton** (janewton@purdue.edu) 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). Additionally, based on the results of the interest survey to establish the local organizing committee (LOC), several HAMTE members have been contacted to request their help serving on the LOC. If you have not volunteered and would like to help with this conference please contact Enrique and/or Jill.

Girls STEM Institute at IUPUI

Dr. Crystal Morton will host the fourth annual Girls STEM Institute (*GSI*) summer enrichment camp at the IUPUI School of Education from June 13th – July 8th. Twenty-five to 30 girls will participate in this learning experience. *GSI* provides young ladies ages 9-18 an opportunity to develop an understanding of mathematics and other STEM concepts in a meaningful and culturally grounded context. The program aims to help young ladies develop more positive perceptions of mathematics and increase the flow of underrepresented groups to upper level mathematics courses and STEM related degrees and careers.

GSI is unique in that it focuses on the whole person through the integration of STEM learning with overall wellness and well being. *GSI* partners with various schools and programs within IUPUI, local businesses, and various community partners (i.e. Algebra Project, Always Making Progress) to serve young ladies. *GSI* is implemented as a four-week, two-week, or one-week summer enrichment program with year-round follow-up programming.

During *GSI*, young ladies participate in STEM explorations, mathematics literacy instruction, a community service project, college campus visits, and social, leadership, and college preparatory development opportunities. The program is structured so participants engage with a diverse group of professionals to help them see that STEM related careers are within their reach.

The curriculum for summer 2016 will focus on health and wellness (specifically food and nutrition, entrepreneurship and leadership development, and financial literacy). If you are interested in learning more about *GSI* or visiting with us this summer, please contact Dr. Crystal Morton at cranhill@iupui.edu.

GSI is funded by grants through the Central Indiana Community Foundation *Summer Youth Program Funds* and IUPUI's Office of the Vice Chancellor for Research. Other sponsors include IUPUI's Office of Diversity Equity and Inclusion, School of Education, School of Science, School of Technology and Engineering, Division of Student Affairs and the Mathematics Assistance Center.

Welcome New HAMTE Members!

The HAMTE Board would officially like to welcome the newest HAMTE members:

Sandra Baker, District Math Specialist at MSD Pike Township

Kim Matsouka, John Strange Elementary School in Washington Township

Experiencing Lesson Study with Elementary Math Teachers in China

By: Enrique Galindo—Indiana University, Bloomington

U.S. and Chinese teachers participate in a lesson study.

Last Fall I had the opportunity to visit math classrooms in elementary schools in China. During this time, I spent one week visiting the equivalent of a university elementary school, The Attached Primary School to Zhejiang Research Institute of Education Science in Hangzhou. I observed math lessons, talked to teachers and administrators, and experienced lesson study with the Chinese teachers.

During the first day we had a question/answer session with the principal, the assistant principal, and several math teachers and learned several things about the teaching profession. We learned that elementary school teachers are subject-matter specialists. At this school they had 14 math teachers, each teacher taught 2 classes per day, and the rest of the day is used for planning, collaboration, observing colleagues teach, professional development, and work on publications. Observing each other teach is a common activity. New teachers will teach an open lesson once a month and get feedback from their peers for the first two years. Experienced teachers will teach an open lesson each semester. All teachers need to complete a high number of teaching observations each year, with new teachers having to complete many more observations than experienced teachers.

Lesson study is another way in which teachers improve their teaching. They form research teams by grade level and go through a lesson study cycle once or twice per semester. Each member of the team is asked to plan the same lesson independently, and then they get together and collaboratively agree on how to teach the lesson. One member of the team is randomly selected to teach the lesson; the other team members will observe the lesson. The thinking is that by perfecting one lesson, everyone grows.

We asked if there was an official way to encourage teachers to continue learning and get better. They shared that each teacher has to complete 360 credits of training in 5 years; one credit is 1 hour of training. They can complete this training after school, or by going to teacher training school. At this school, math teachers received training every Thursday afternoon. They also recognize exceptional teaching with the title of Master Teacher. Every four years the education bureau will recognize some teachers with the title of Master Teacher, about 1 in 1000 teachers will receive this recognition. This recognition carries a 30% salary increase. Applicants need to show a record of good moral principles, excellent teaching, publications, and recognition by peers and administrators.

Students collaborate on a Venn diagram lesson.

I had the chance to experience some of their lesson study work and learned that this was common practice even between lessons taught the same day. We observed a math lesson early in the morning. In addition to the US teachers observing the lesson there were several Chinese teachers observing as well. After the lesson was taught we all met to debrief about the lesson. The team who had designed the lesson took many of the suggestions, revised the lesson, redesigned handouts and changed their choice of manipulative materials. At a later period we got to see the revised lesson taught to a different class. I certainly look forward to more visits to continue learning about teaching and the teaching profession in China.

Connect with HAMTE!

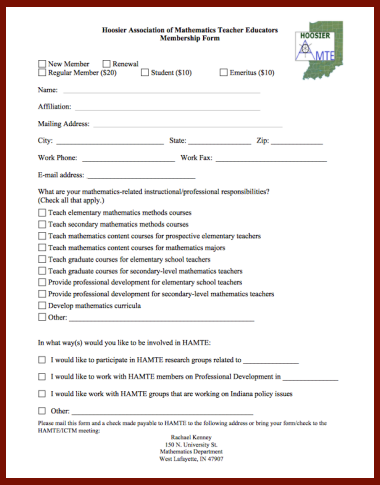
- The HAMTE Board will be accepting applications in the fall for ***Travel Grant Awards*** for doctoral students to attend either AMTE ($200) or ICTM ($100). *Please see the fall newsletter in September for more information* and consider applying if you meet the following criteria:
  - HAMTE member and doctoral student making steady progress toward your degree;
  - You have a presentation accepted for the conference;
  - You do not have other funding sources available, or these funding sources do not cover all expenses.

- ***Visit our website:*** www.hamte.org

- ***Submit an article and/or teaching methods or ideas 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 an Advocacy Team** to connect and collaborate with others across the state to address crucial issues in the field of mathematics education! See page 2 for advocacy team contact information.

BECOME A HAMTE MEMBER!



Hoosier Association of Mathematics Teacher Educators
Membership Form

☐ New Member ☐ Renewal
☐ Regular Member ($20) ☐ Student ($10) ☐ Emeritus ($10)

Name: _____

Affiliation: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Work Phone: _____ Work Fax: _____

E-mail address: _____

What are your mathematics-related instructional/professional responsibilities? (Check all that apply.)

☐ Teach elementary mathematics methods courses
☐ Teach secondary mathematics methods courses
☐ Teach mathematics content courses for prospective elementary teachers
☐ Teach mathematics content courses for mathematics majors
☐ Teach graduate courses for elementary school teachers
☐ Teach graduate courses for secondary-level mathematics teachers
☐ Provide professional development for elementary school teachers
☐ Provide professional development for secondary-level mathematics teachers
☐ Develop mathematics curricula
☐ Other: _____

In what way(s) would you like to be involved in HAMTE:

☐ I would like to participate in HAMTE research groups related to _____
☐ I would like to work with HAMTE members on Professional Development in _____
☐ I would like work with HAMTE groups that are working on Indiana policy issues
☐ Other: _____

Please mail this form and a check made payable to HAMTE to the following address or bring your form/check to the HAMTE/ICTM meeting:

Rachael Kenney
150 N. University St.
Mathematics Department
West Lafayette, IN 47907

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?

Ball State University

Kay Roebuck has been working with K-2 teachers from the MSD of Washington Township. Their partnership, "Putting the STEAM into STEM," is focused on increasing teachers' content knowledge, strengthening instructional practices, building capacity to design STEM/STEAM units of inquiry that are aligned with the Indiana Academic Standards, and improving student achievement scores.

Sheryl Stump and her colleague from the Ball State English Department, Lynne Stallings, have been working with grades K-8 teachers, instructional coaches, and principals in Warsaw Community Schools. Their 3-year partnership, "Mathematics: The Language of STEM," is focused on developing teachers' knowledge and skills for engaging all students, including English language learners, in doing mathematics.

New publications from faculty and graduate students:

- **Ann Leitze** with Melissa Aldy, Melissa Hess and Kristen Soots, provided the problems and solutions for Palette of problems in the April 2016 issue of *Mathematics Teaching in the Middle School*.
- Felger, J. & **Shafer, K. G.** (2016). An algebra teacher's instructional decision-making process with GeoGebra: An action research study. In M. Niess, S. Driskell, & K. Hollebrands (Eds.), *Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age* (pp. 493– 518). Hershey PA: IGI Global
- **Stump, S**., Bryan, J., & McConnell, T. (2016). Making stem connections. *Mathematics Teacher, 166*(8), 576–583.

Taylor University

The Mathematics Department hosted the second annual High School Math Field Day on March 17th. Taylor and Indiana Wesleyan Universities, who partnered with local high schools, sponsored the event jointly. Around 150 high school students from five area high schools participated in the all-day event, including lunch, a campus tour, a tote bag, and a free Math Field Day T-shirt for participants.

The Math Field Day provided a great opportunity for high school students to experience a slice of college life and learning, and an opportunity for the combined faculty and staff from IWU and Taylor to collaborate on a fun and meaningful event. The "college experience" was designed to promote positive dispositions about mathematics, to provide exposure to campus life, and to explore new mathematical ideas and applications in an enjoyable environment. The activities physically engaged students in doing mathematics embedded in novel contexts, as opposed to textbook exercises, and in performing problem-based tasks in cooperative teams and in competition. Activity venues included a Basketball Shoot Out (probability and statistics), The Steeplechase (logic and problem solving stations), and Drawing with Desmos (function/graph competency and art). The topics and tasks were intentionally chosen to be accessible to all ability levels as well as to engage students to go beyond traditional pencil and paper classroom work.

Students won prizes including trophies, miniature basketballs, fractal posters, polyhedral dice, and tangram and Tower of Hanoi puzzles. The response from HS students and teachers and college students and faculty was overwhelmingly positive which will likely lead to MFD 2017!

Indiana University - Bloomington

The IU Math Ed Family organized two celebrations of **Pete Kloosterman's** contributions to honor him because of his retirement. One celebration took place during the NCTM annual meeting in San Francisco, and the other one in Bloomington. Pete's work on student motivation and beliefs in mathematics, and interpreting results from the National Assessment of Educational Progress (NAEP) is internationally known. Pete has also made significant contributions to mathematics education in the State of Indiana and to HAMTE. Pete will be missed but fortunately he will continue residing in Bloomington and we are sure he will be a resource to those who ask for his expertise.

Four graduate students from IUB attended commencement this May. They are **Mark Creager**, **Erol Uzan**, **Serife Sevis**, and **Fetiye Aydenis**. All of them have jobs waiting for them and they will be defending their dissertations this Summer or Fall. We congratulate them on their accomplishments and are sure they will make important contributions to mathematics education.

Innovations in Mathematics Education (IME) is a new partnership between Indiana University Center for P-16 Research and Collaboration and Spencer Owen Community School and Richland Bean Blossom School Corporation. IME work will be directed by **Enrique Galindo** from IU Bloomington, collaborating with **Gina Borgioli Yoder** from IUPUI, and **Shabnam Kavousian** from the IUB Mathematics Department. The three-year professional development has several goals: Increase students understanding of and achievement in mathematics, improve teacher's knowledge of mathematics, strengthen their pedagogical skills, their knowledge of uses of technology to support mathematics learning, and their dispositions to collaborate to reflect on their practice and improve their teaching. IME will support teachers to learn to implement student-centered instruction that engages students in mathematics learning using technology tools and the mathematical practices. Furthermore, IME project staff will collaborate with 60 teachers in grades K-6 to help them create and nurture professional learning communities that will sustain project efforts after the grant ends.

Greene STEM SMAPP will continue professional development work this summer. The goal of this partnership is to enhance the quality of STEM instruction in grades 4-12 in all Greene County Schools (Bloomfield School District, Eastern Greene Schools, Linton Stockton School Corporation, MSD Shakamak and White River Valley School Corporation). More specific goals are: (1) Increase students' understanding of and achievement in STEM and (2) Improve teachers' knowledge across STEM content areas, strengthening their pedagogical and technology skills; and develop their reflective practice expertise. The work is led by **Enrique Galindo** and **Valarie Akerson** from IUB School of Education, and **Kevin Pilgrim** from the IUB Mathematics Department. Other faculty involved are: **Gayle Buck** (IUB), **Gina Borgioli Yoder** (IUPUI), **Jean Lee** (University of Indianapolis), **Marlies Gerber** (IUB Math), and **Shabnam Kavousian** (IUB Math).

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.

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 Knowl**e**dge 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 (Phase I) they have conducted three iterative, after school design experiments with cognitively diverse middle school students. In the third year (2015-2016, Phase II), they have been analyzing student thinking and learning, as well as the functioning of differentiated instruction, in these experiments.

During the 2015-2016 school year they have also led a Teacher Study Group (TSG) with 15 middle school mathematics teachers from around the state (Evansville, Bloomington, Ellettsville, Indianapolis, and Hammond). 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. They will complete their study group with a workshop in June in which teachers present their lessons to the group.

Finally, they are also preparing for the last two years of the project (Phase III), in which Amy will co-teach with four classroom teachers from the TSG to study how to differentiate instruction in classrooms, as well as to study how teachers learn to differentiate instruction.

This July they will present from the project at the International Congress of Mathematics Education in Hamburg, Germany.

Purdue University - West Lafayette

Early this spring, Purdue faculty **Jill Newton** and **Rachael Kenney** organized their first Purdue Curriculum Day. Forty teachers, graduate students, and student teachers joined presenters Jim Mamer and Chris Mikles to engage in the middle school curriculum CMP and the high school CPM curriculum. It was a great day of learning and professional development!

This Spring, Purdue faculty and graduate students also participated in several research-sharing events. In April, the Purdue Math Ed program was invited to travel to Urbana-Champaign to collaborate with the Math Ed group at the University of Illinois. Faculty and graduate students spent an afternoon in a symposium sharing research and building connections between our universities. In March, several students presented their work at IMERS in Indianapolis. The following day, many of these same students presented posters on their work at Purdue's Annual Graduate Student Educational Research Symposium (AGSERS) symposium. Mathematics Education graduate student **Andrew Hoffman** won an award for his poster.

In addition, two graduate students were awarded highly competitive awards from the College of Education. **Tuyin An** received the Bilsland Dissertation Fellowship, and **Andrew Hoffman** was awarded the Dean's Doctoral Scholarship for 2016. Four students: **Sherri Farmer**, **Betsy Kersey**, **Sue Ellen Richardson**, and **Brooke Max**, also received the Mike Keedy award this year.

Indiana University - Purdue University Indianapolis

Craig Willey and colleague, Paula Magee, have begun work on their project "Building a Coalition of Urban Teacher-Researchers: Science-Mathematics Mentorship and Action Research for Teaching (SMMART)." This study examines a model of urban teacher development that positions elementary teachers as researchers of their own practice. In particular, Craig and Paula will work with classroom teachers, who will likely serve as mentor teachers during the student teaching experience, to develop action research projects that focus on science and mathematics instruction with students in urban schools as it pertains to 1) the use and development of classroom discourse and 2) adult-child relationships. Teachers will utilize discourse analytic tools to critically reflect on how learning is socially organized and instructional practices mediate (in)equitable learning outcomes. Critical reflection in collaboration with university researchers will facilitate a re-mediation of science and mathematics learning and instruction necessary for engaging urban youth and ensuring their success.

Crystal Morton will host the fourth annual Girls STEM Institute (*GSI*) summer enrichment camp at the IUPUI School of Education. See page 5 for more details.

Erik Tillema and **Andrew Gatza** (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 they 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 they conducted two teaching experiments. The teaching experiments were run with pairs of 10^{th} and 8^{th} grade students in order to understand how the quality of student generalizations develop over time and support their learning. Year three of the project will then include two design experiments with 8^{th} and 10^{th} graders, respectively, each over the course of a semester.

They will present work from the GAMMA project at the International Congress of Mathematics Education in Hamburg, Germany in July.

New publications from faculty and graduate students:

- **Tillema, E. S.,** & **Gatza, A.** (July, 2016). A quantitative and combinatorial approach to non-linear meanings of multiplication. *For the Learning of Mathematics.*

University of Indianapolis

Jean Lee was promoted and tenured to associate professor.

The Department of Mathematics & Computer Science is pleased to welcome **Dr. Clay Roan** as their new Instructor of Mathematics Education. Clay has an extensive teaching record at both the college and high school levels in Indiana and Illinois.