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Teaching Council Accountability Report
Dr. Kristofer Jorgenson, Professor of Mathematics

I attended the International AMS-MAA (American Mathematical Society-Mathematical Association of America) Conference January 11-14, 2018 in San Diego, California.

I stayed in a hotel near the El Paso Airport Jan. 11 (for which I did not seek Teaching Council funds) and left on an early morning flight to San Diego on Friday Jan. 12. I left El Paso between 6 and 7 am Mountain Time and arrived in San Diego between 8 and 9 am Pacific Time. I would spend 2 days at the conference and 2 nights in San Diego before traveling back Sunday morning Jan. 14.

I wish to thank the Teaching Council for helping make this conference trip possible by agreeing to re-imburse me for $1318.62 for expenses related to this trip.

On Friday, I attended some lectures and volunteered as a judge for an undergraduate math student poster-board session since there were over 4 hundred entries and the judging coordinators had made clear prior to the conference that many judges were needed. The judging coordinators had the poster session judging very organized and I was delegated 3 student teams to judge. I met and talked with all 3 teams. One was a team of 2 male students, one entry I judged was a team of 2 female students, and one was a solitary female student. I talked to each team extensively about their poster board entry and filed my judgings for each team. The form I filed included a section for remarks to the students and a separate section for scorings not seen by the students but were used in the judging system to award winners.

One of the talks I saw in the early evening was a 1-hour program of comedic sketches mainly for the entertainment of math students and faculty called "Mathematically Bent Theater" presented by Colin Adams and the "Mobiusbandaid Players". This included Colin Adams and other math faculty who had delivered mock debates in the past called "Differentiation vs. Integration" and "Pi vs. e" which were both educational and enter-taining. I find such entertaining, comedic math discussions to inspire new or different ideas and methods to teach undergraduate mathematics.

The last talk I went to was part of the NAM (National Association of Mathematicians) lectures, which focused on high-achieving African-American mathematicians, such as Rudy L. Horne who was a math consultant for the 2016 movie "Hidden Figures" and who passed away in Dec. 2017 at the young age of 49. The main event was the Cox-Talbot lecture by Erica Walker, Teachers College, Columbia University. Her lecture was titled "Hidden in Plain Sight: Mathematics Teaching and Learning Through a Story-telling Lens".

On Saturday, Jan. 13, I attended the session that was the main reason for attending the AMS-MAA joint conference: the MAA Session on Teaching Abstract Algebra: Topics and Techniques, which was 8 am-12 pm. I attended the entire session taking notes to learn what methods other professors used to teach the senior course often called "Modern Algebra" or "Abstract Algebra", which is one I have taught at Sul Ross 6 times in the last 12 years (since 2006). These talks were all about 15 minutes in length with a 5-minute break in between. I gave my 15-minute lecture titled "Teaching Modern Algebra Through Applications" 9:40-9:55. Please see the photocopies of the schedule for this session on a separate page.

After 12 noon when the session ended, I talked to one of the organizers of the session and one of the attendees of the session about topics brought up in this special session.

11:20AM ► (2472) *Inquiry-Based Learning Problem Sets in an Outreach Program for High School Girls: Increasing Confidence and Strengthening Interest Among Underrepresented Groups.* Preliminary report.
Katrina Morgan* and **Francesca Bernardi**, University of North Carolina at Chapel Hill (1135-D5-3029)

11:40AM ► (2473) *Inquiry-based pathway to Calculus.* Preliminary report.
Stuart Boersma*, Central Washington University, and **Frank Savina**, The Charles A. Dana Center (1135-D5-2005)

MAA Session on Quantitative Literacy Across the Curriculum

8:00 AM – 10:55 AM   **Room 15B, Mezzanine Level, San Diego Convention Center**

Organizers: **Catherine Crockett**, Point Loma Nazarene University

John Curran, Eastern Michigan University

Andrew J. Miller, Belmont University

Victor Piercey, Ferris State University

9:00AM ► (2474) *Quantitative Literacy Across the Millikin University Campus.*
Paula R. Stickles, Millikin University (1135-O1-795)

9:20AM ► (2475) *Data Analytics Across the Curriculum: Rethinking Quantitative Literacy at Goucher College.*
Rachel Grotheer* and **Bernadette Tutinas**, Goucher College (1135-O1-2888)

9:40AM ► (2476) *Development of a Quantitative Reasoning Center at a Liberal Arts College.*
Justine Chasmar Stauffer, Goucher College (1135-O1-847)

10:00AM ► (2477) *Some Successful Ideas to Teach Statistics as a Quantitative Literacy Course.* Preliminary report.
Daniel G. Kim, Southern Oregon University (1135-O1-3173)

10:20AM ► (2478) *How much should I pay for my Airbnb rental?: Using Large, Real-World data in Math Classes across the Curriculum.*
Amanda E Francis, Carroll College (1135-O1-1254)

10:40AM ► (2479) *Guest-starring Mathematics: Building an Assignment Library to Highlight Quantitative Applications Across the Curriculum.* Preliminary report.
Andrew J Miller, Belmont University (1135-O1-3008)

MAA Session on Teaching Abstract Algebra: Topics and Techniques

8:00 AM – 11:35 AM   **Room 14A, Mezzanine Level, San Diego Convention Center**

Organizers: **Jessie Lenarz**, St. Catherine University

Kristi Meyer, Wisconsin Lutheran College

8:00AM ► (2480) *Using Galois Theory as a Motivation for Learning About Permutation Groups.*
Jeffrey W. Clark, Elon University (1135-E1-1666)

8:20AM ► (2481) *An Abstract Algebra Course Capstone.*
Silas Johnson, Northwestern University (1135-E1-2699)

8:40AM (2482) *Abstract Algebra based on Coding and Cryptography.*
Yevgeniy V. Galperin, East Stroudsburg University of PA (1135-E1-2834)

9:00AM ► (2483) *Gamifying Abstract Algebra.*
Joshua K. Lambert, Georgia Southern University (1135-E1-1775)

9:20AM ► (2484) *Graphs and Zero-Divisors.*
Joe Stickles, Millikin University (1135-E1-802)

9:40AM ► (2485) *Teaching Modern Algebra Through Applications.*
Kristofer D Jorgenson, Sul Ross State University (1135-E1-1580)

10:00AM ► (2486) *Learning to Read Math Papers: Two activities for an abstract algebra course.*
Elizabeth Wilcox, Oswego State University of New York (1135-E1-1073)

10:20AM ► (2487) *Hands-on group theory: worksheets and beyond.*
Ethan Berkove, Lafayette College (1135-E1-3157)

10:40AM (2488) *An Alternative Assessment Technique in Abstract Algebra Lowers Stress for All.*
Lauren Keough, Grand Valley State University (1135-E1-2752)

11:00AM ► (2489) *Oral Presentations as Assessment in Abstract Algebra.*
Jessie Lenarz, St. Catherine University (1135-E1-2429)

11:20AM (2490) *Teaching Abstract Algebra with Pre and Post Quizzes.*
Sarah Wolff, Denison University (1135-E1-1865)

MAA General Contributed Paper Session on Analysis, I

8:00 AM – 10:25 AM   **Room 28D, Upper Level, San Diego Convention Center**

Organizers: **Tim Comar**, Benedictine University

James Reid, University of Mississippi