# Andrews University

Fall 2013 Volume 10, Issue 1 K. M. Johnson-McWilliams, Editor

# MATH@ANDREWS









## 2013 Named Scholarship Winners

The yearly Mathematics Award ceremony took place on April 26, with **Andrew Kutzner** (Biology/Math Studies) [top with Dr. Meredith Jones Gray] receiving the Harold T. Jones Scholarship, **Jonathan Wheeler** (Physics, Math Studies) [middle with Dr. Joon Kang] receiving the Edward J. Specht Scholarship, and **Brandon Baptist** (Math Ed) [bottom with Dr. Robert Moore] receiving the Louis Ulloth Scholarship.

The student receiving the most awards was **Ye Lim Seo** (Mathematics/pre-dentistry), who transferred to Andrews in Fall 2012 from the University of Toronto. She received three

awards for excellence: Calculus

II, Introduction to Linear Algebra, and Differential Equations. A total of 41 students received awards, 8 of whom received more than one award. [See complete list on p.8.]

President Andreasen opened the ceremony with a humorous tale of his stint as a mathematics teacher, and Dr. Meredith Jones Gray (Professor of English) presented the award in honor of her father, Harold T. Jones.



Summer REU

Senior BS Mathematics and BS Physics major William Tritch (PME) [top row, center in white shirt] participated in a summer National Science Foundation-funded Research Experience for Undergraduates (REU) entitled "Stability of a Nonlinear Wave Equation" at the University of Nebraska-Lincoln for eight weeks from June 3 -July 26, a project involving partial differential equations, an area of particular interest to William. While at Lincoln he and a group of four other undergraduates, under the direction of professors Daniel Toundykov and George Avalos and graduate student Thomas Clark, studied the stability properties of a 1-dimensional wave equation with degenerate damping by using a finite element scheme, which approximates the partial differential equation with an algebraic system and then solves the latter numerically.



**Service Award Winners** 

Senior mathematics major Janna (DeWind) Quetz and her new husband Atniel (BSE Engneering, 2013) were 2 of the 13 Andrews students to receive the *Heart and Soul* award from the Michigan Campus Compact (a consortium of 40 Michigan public and private colleges and universities) for service activities on campus and in the local community.



## **MATH@ANDREWS**

## **2013 Graduates**

Danielle Burton (2008 BA English Literature, Math Studies; 2013, MS Mathematics & Science, J N Andrews Scholar, Phi Kappa Phi, PME) received funding from a PEER (Program for Excellence and Equity in Research) fellowship in order to begin her PhD program in mathematics at the University of Tennessee, Knoxville, this fall.

Luis Garibay (2013, BS Chemistry, Am. Chem. Society, BS Mathematics, member of the J N Andrews Honor Program, PME) is working on his PhD in physical chemistry at the University of California, Davis. This summer he worked at Stanford's synchrotron.

Christopher Greenley (2013, BS Physics, Math Studies, Sigma Xi) is studying experimental physics (high energy) in a PhD program at Louisiana State University, Baton Rouge.

Kevin Leonor (2013, BS Mathematics) is an IT technician for a company in St. Joseph, MI, helping non-profits. He plans to study for and take the actuarial exams, then find a job as an actuary.

Andrew Moll (2013, BBA Finance, BS Accounting, Math Studies, Delta Mu Delta, PME) is working for Adventist Risk Management (ARM) in Silver Spring, MD, as a staff accountant, hoping eventually to do actuarial work.

John Mussleman (2013, BS Math Ed., Sec. cert., PME) is teaching mathematics at Bridgman High School in Bridgman, Michigan.

Styves Romain (2013, BS Math Ed., Sec. cert.) is teaching integrated algebra and geometry at Greater New York Academy (SDA).







## Who's Who Nominations

Page 2 of 8

Included in Andrews' nominations for 2012-13 for Who's Who Among Students in American Universities & Colleges were several mathematics majors and minors: Bryan Bankhead (2013, BSE Engineering, mathematics minor), Bethany Conrad (senior BSELED, BS Math Ed.), John Musselman (2013, BS Math Ed.), and William Tritch



## Alumni Updates

Dejean Brown (2012, BS Mathematics) is working as an analyst and Leader in Training in Procurement for

Wakefern Food Corp. He is taking actuary tests and plans to start

graduate school next September.

Peter Hutauruk (2012, MS Mathematics & Science, PME) has taken a job teaching mathematics for Dakota Adventist Academy in Bismarck, ND, after teaching mathematics for the past year at Spring Valley Academy in Ohio.



In October 2012 Laura Mack (2006, BS Mathematics, PME) married Graeme McHale in Scotland at an old castle/manor house called Lennoxlove House, the ancestral home of the Duke of Hamilton. Also brother David

(2003, BS Mathematics); his wife, Emily, and daughter, Norah; and her parents, Ed and Linda Mack.



pictured are her

(senior BS Mathematics,

BS Physics).

## Page 3 of 8







On May 3, 2013, An-MS Mathematics & Science, PME) graduated from Oklahoma State Environmental Science. She is now a full-time, tenure-track professor for Savannah State University's Department of Biology in Savannah, Georgia.

#### **Jared Otto**

(attended 2007-2009) is now the second tenor for the King's Herald Quartet after having worked in Florida in IT for the past few years.

Sandra Prieto (2011, BSE Engineering [Electrical and Computer], math ematics minor, PME) started graduate school in biomedical engineering at the University of Arkansas this fall after helping out in the lab during the summer. She is currently helping her PI to build a multiphoton confocal microscope, as well as building a GUI for it in Matlab. She says that wearing

several hats matches her interests exactly.

Emmanuel Scott (2009, BS Chemistry, Math Studies) and Sarah Fowler (2010, BBA International Business, BA Religion) were married in a small ceremony on Long Island on June 3, 2013. Emmanuel is attending medical school in Nashville, where the couple has moved.

Stefan Smith (2011, BS Mathematdrea Lisa Moore (2006, ics), a risk analyst for a company recently purchased by Goldman Sachs, says that he enjoys the math modeling he does on the job and University with a PhD in hopes eventually to become a senior analyst. He recently took a course in VBA, which, with his prior SQL training, is making him more comfortable writing code and database

**MATH@ANDREWS** 



queries. He is nearing the end of his mandatory service in the Bermuda Regiment and trained for two-weeks at Camp Lejeune, NC, earlier this year. His wife, Aashiqa (2011, BS Nursing), is a nursing intern at a local hospital.

Martha Turner (1970. MA Mathematics) retired a few months ago after working for the city of Austin, TX, in the watershed protection department, heading a team of people doing mathematical modeling and statistical analysis of environmental data on water quality and its



impact on various aquatic species. Some examples of their models include 1) hydrodynamic and water quality modeling of local streams and lakes relative to impacts of best management practices, with the goal of evaluating city ordinances and improving them to promote aquatic health, 2) development and calculation of local environmental indices including a sediment-quality index based on sediment toxicity effects on benthic communities, and 3) development of surface and groundwater models to predict the potential impact of spills of gasoline (tanker truck accidents in karst areas) on endangered salamander species living in springs. Her team worked on methods to assess the uncertainties associated with the toxic concentrations predicted by the exposure assessment models. Martha says that she used mathematics during her entire career and really enjoyed doing so.



Eric 'Siggy' Scott (2011, BS Computer Science, BS Mathematics, J N Andrews Scholar, PME) completed a summer internship at MITRE Corporation (a non-profit R&D company which supports the federal government), doing data mining and speech recognition research for the federal judiciary. He still works with MITRE part time as he enters his third year of the PhD program in computer science at George Mason University. This fall his lab is working with large-scale simulations of biologically realistic neural networks and helping professors across campus learn to crunch data with the lab's new supercomputing cluster. In his spare time Siggy has been researching machine learning.

## **MATH@ANDREWS**

## Page 4 of 8

# News



**Clifford O. Pope, Jr.** (1968, MA Mathematics), 73, formerly Professor of Mathematics and Applied Science at Atlantic Union College and retired accountant for the Atlantic Union Revolving Fund, died December 16, 2012, at U Mass Medical Center in Worcester, MA, after a lengthy illness. In 1962 he graduated from the University of Texas, Arlington, with a degree in electrical engineering. As a

calibration engineer for LTV-Vought Aeronautics, Grand Prairie, he wrote test and calibration procedures for quality assurance and provided engineering support to technicians.

Prof. Pope obtained his Master's degree in mathematics in 1968 from Andrews University and continued studies at Pennsylvania State University and Temple University. Recognized on both campuses for his teaching excellence, he enjoyed a 27-year career as a professor of mathematics with the Berks Campus of Penn State and Atlantic Union College. In addition to teaching at Berks, he scheduled classes and made computer programming applications. He was the recipient of Berks' first annual Scholarly Activity Grant for a faculty member at that campus and received an Excellence in Teaching award at AUC in 1988, which stated that Professor Pope had become almost a legendary figure in courses such as Calculus I and II.

He is survived by his wife of almost 46 years, Ruth (Atkinson) Pope, of Lancaster, MA; son, John E. Pope and wife, Krista, of Amarillo, TX; daughter, Carolyn Denio of Lancaster; and six grandchildren, Renee, Elaine, and Jeny Pope, and Ashley, Madison, and Ethan Denio.

## New Feature at eigen\* Talks

One of the newer additions to the eigen\* talks is the Journal Club. Periodically students read and summarize a journal article for the other students, giving the undergraduates the opportunity to give presentations, to be exposed to a variety of journal articles they'd otherwise not have time to read, and to become more intellectually curious. Math students who gave journal talks this year are Luis Garibay, Christopher Greenley, Jonathan Wheeler, Samantha Easton, Michael McMearty, William Tritch, Belinda Cheeseboro, and Joelle Acre. In all, math eigen\* members gave 29 talks, poster presentations, and journal reviews during the 2012-13 school year.

## **Edward Specht Geometry Book**

**Dr. Donald Rhoads**, Professor Emeritus, who has been editing Dr. Edward Specht's geometry textbook, says that the editing work is essentially finished and that he is preparing a second proposal to submit to Birkhauser for publication, a task that has proven to be challenging.

Dr. H. Arlen Brown, Dr. Rhoads' mentor and thesis advisor at Rice College and the University of Michigan, and **Dr. Keith Calkins** (1981, BS Mathematics; 1991, MS Mathematics) [at right] are also looking





over the manuscript. **Dr. Calkins** is now a level-3 (fullyear with benefits) adjunct at Ferris State, currently teaching physics. Last year he taught chemistry at Ferris.

## "Calculus" Dog Dies

Known around the world for his skills at demonstrating calculus, Elvis, a Welsh Corgi who lived with his owner, Tim Pennings, in Holland, Michigan, died of cancer in July. About 10 years ago Pennings, a mathematics professor at Davenport University, noticed that, when fetching a stick out of the water, Elvis was using a complex math calculation to get there by the quickest path. "Instead of swimming straight there, which would be along a diagonal path through the water," says Pennings, "he would instead instinctively realize that he would get there faster if he'd run along the beach a ways and then go in and swim a shorter distance... since, of course, he runs faster than he swims." Textbooks around the world record Elvis' tactics, and his "calculations" have even come to the attention of the



Queen of England. Before Elvis died, he and Pennings collaborated on math talks, 20 in this year alone.

(Adapted from an article by Sandra McNeill, July 21, 2013, <u>http://</u> detroit.cbslocal.com/2013/07/31/ michigan-dog-who-did-calculusdies-at-13/?htt=us\_bn9)

## MATH@ANDREWS

### **Overseas Service**

Some people see mathematics majors as students who focus only on scholarly pursuits and have little time to reach out to others, but several Andrews mathematics majors have done service work, either paid or volunteer and, in the process of serving from months to years of their lives, have uncovered some insights about themselves and about life.

#### Currently three of our students are engaged in overseas volunteer service:

-Natasha Greenley (junior BSELED, mathematics minor) is working with Adventist Frontier Missions for a second year, working in Palawan, a remote area of the Philippines. [Kiana Binford (2010, BS Math Ed, Sec. Cert., PME) previously worked in the same area.] -Halfway across the world Erik Vyhmeister (junior BS Math Ed, PME) is a student missionary at Nile Union Academy, just outside of Cairo, teaching six classes to language students, including math, history, grammar, and choir—a great variety because the school is short-staffed. He reports that nearly all of his students, many of them Sudanese refugees, know little to no English, making communication a challenge.

-Also a student missionary in the Middle East, after a postponement of his departure from the US because of political unrest, is **Jonathan "Archie" Wheeler** (senior BS Physics, Math Studies, PME), who is helping students who have learning difficulties in math and science at BASS Academy in Beirut, Lebanon.

#### Two past graduates are currently still serving overseas:

-Theron Calkins (2012, BS Mathematics, BA English, PME) is teaching for a second year in Korea, at Saenggeuk Middle School. Of his experience teaching English, Theron says, "I kind of love it. I enjoy the challenge of trying to find creative ways to get the students to use English in the classroom, and interacting with them outside of class is a blast as well. And when they're yelling at their friends or talking to me and use a phrase or expression I've taught them, I find that extremely rewarding." In January Theron will begin teaching at Korean Advanced Preparatory Academy (KAPA) in Gyeonggi-do, Republic of Korea, where he will be instructing Korean, Korean-American, and foreign students in Algebra I and II and Geometry.

-Samuel Yoo (2012, BS Mathematics) currently is teaching full time at Samyook (SDA) Elementary School in Gwangju, South Korea, teaching English and Bible. He laments, "Every time I feel I have nailed some aspect of teaching, I receive a new challenge, a new standard, or an additional aspect I am to teach and find out that I have to change what I just nailed. Also, I am on a never-ending quest to find the balance between keeping students interested and making sure they learn and understand the material." In addition to teaching, he is the church pianist, Pathfinder leader, and Sabbath school superintendent and teacher. In summarizing his experience, he says, "I find great intrinsic achievement in finding a way to get students to pay attention and learn. Although I am mentally worn every day, I am greatly enjoying teaching—at least until the next challenge debunks me."

#### Two of this year's graduates also served overseas in the past:

-Danielle Burton spent ten months teaching English Conversation, Business English, and Western History to freshmen and juniors in Huayu College in Shangqiu, Henan Province in China.

-Chris Greenley served eight months as the first IT administrator at Malamulo Adventist Hospital. He says, "Beyond simply setting up computers, I also taught a computer literacy class for the hospital staff to help them feel more at ease with utilizing technology on a day -to-day basis. I really enjoyed the opportunity to put my skills towards helping others; I just wish I could have started the year having the knowledge I had when I ended the year!"

#### Three current seniors also have completed mission service:

-Sinclair Johnston (senior BS Mathematics) taught math and physics for a year at the SDA High School in Ebeye, an island 400 feet wide and 1.5 miles long with 16,000 residents, sometimes called the "slum of the Pacific" because of its severe overcrowding. In looking back, however, Sinclair believes, "This poor, dirty, smelly, overpopulated island was my paradise! I loved my students—they were the best group of energetic and interesting kids. My principal and fellow SM's really worked well together, which made our experience very positive. Overall, I loved my time in the Marshall Islands and hope to return soon."

-Mateja Plantak (senior BS Math Ed, BS Physics) and William Tritch (senior BS Mathematics, BS Physics) also did mission work, Mateja by teaching for a year in the Marshall Islands and William by teaching for five weeks in India.

#### Several past majors have served as well; here are two examples:

**-Tyler Bodi** (2011, BA Political Science, Math Studies, PME) is currently in law school at American University Washington College of Law in Washington, D.C. In July 2012 he finished his student mission work, which consisted of teaching ESL in Ukraine. In addition to teaching, he hosted Friday night discussion clubs, preached at the international church, and enjoyed the cultural experiences he encountered.

-Martha Turner (1970, MA Mathematics) taught a science teachers' workshop in the College of Education in Nellore, India. She had applied for mission service, but when she was turned down because she was a single woman, she went with the Peace Corps. She says, "God prepared a way for me even though the Peace Corps would not guarantee my right not to work on Sabbath, leaving that up to the president of the college. A church member had previously visited the president while ingathering and had told him about the Adventist church's opposition to the use of tobacco. Since this president also opposed the use of tobacco, he allowed me to have my Sabbaths off even though normally Saturday is a work and school day."

## Research

#### Papers:

Burton, D., & Henson, S. M. (2014). A note on the onset of synchrony in avian ovulation cycles. To appear in Journal of Difference Equations and Applications.

*Cowles, J. D.,* Henson, S. M., Hayward, J. L., & *Chacko, M. W.* (2013). A mathematical method for predicting harbor seal (*Phoca vituli-na*) haulout and monitoring long-term population trends without telemetry. *Natural Resource Modeling* 26:605-627.

Cushing, J. M., & Henson, S. M. (2012). Stable bifurcations in semelparous Leslie models. *Journal of Biological Dynamics* 6:80-102. Hayward, J. L., Weldon, L. M., Henson, S. M., *Megna, L. C., Payne, B. G., & Moncrieff, A. E.* (2014). Egg cannibalism in seabird colony increases with sea surface temperature. To appear in *Condor*.

Hayward, J. L., *Megna, L. C., Payne, B. G.*, Velastegui Chavez, S. R., & Henson, S. M. (2013). Temporal and environmental effects on the behavior of flightless cormorants. *Wilson Journal of Ornithology* 125:790–799.

Kang, J. H. (2013). Positive equilibrium solutions to general population model. *International Journal of Pure and Applied Mathematics* 85:1009-1019.

*McCormick, M. A.*, Hayward, J. L., & Henson, S. M. (2013). Egg mass in Glaucous-winged Gulls (*Larus glaucescens*) as a function of length and width. *Northwestern Naturalist* 94:147-150.

*Moncrieff, A. E., Megna, L. C.,* Hayward, J. L., & Henson, S. M. (2013). Mating patterns and breeding success in gulls of the *Larus glaucescens-occidentalis* complex, Protection Island, Washington, USA. *Northwestern Naturalist* 94:67-75.

**Oh, Y. M**. (2013). Riemannian submersions and Lagrangian isometric immersion 1. *International Electronic Journal of Geometry* 6:14-18.

#### Articles:

**Moore, R. C**. (2013, May-June). Measuring a circle: A math lesson for grades 5-10. *The Journal of Adventist Education*, 30-33. **Prince, M. V.** (2013, May-June). The Common Core State Standards' mathematical practices: What do they mean for the Adventist mathematics classroom? *The Journal of Adventist Education*, 25-29.

#### Talks:

Hayward, J. L., Weldon, L. M., Henson, S. M., *Megna, L. C., Moncrieff, A. E., & Payne, B. G.* "The Effect of Sea Surface Temperature on Egg Cannibalism in Gulls." Talk presented at the Annual Conference of the Michigan Academy of Science, Arts, and Letters, Hope College, Holland, Michigan, March 22, 2013.

Henson, S. M. "Co-adaptation of Cannibalism and Ovulation Synchrony," Talk presented at the Michigan Academy of Science, Arts & Letters Conference, Mathematics Section, Hope College, Holland, Michigan, March 22, 2013.

Henson, S. M. "Chaotic Dynamics and Lattice Effects in Experimental Insect Populations," Talk presented at the Colloquium of the Departments of Mathematics and Biology, Hope College, Holland, Michigan, March 8, 2013.

Kang, J. H. "Steady State Solutions to General Population Models." Talk presented at the Annual Conference of the Michigan Academy of Science, Arts, and Letters, Hope College, Holland, Michigan, March 22, 2013.

Kang, J. H. "Steady State Solutions to General Population Models." Talk presented at the annual meeting of the American Mathematical Society, Joint Mathematics Meetings, San Diego, California, January 10, 2013.

Moore, R. C. "What Constitutes a Well-written Proof?" Talk presented at the Annual Conference of the Michigan Academy of Science, Arts, and Letters, Hope College, Holland, Michigan, March 22, 2013.

**Oh, Y. M.** "An Inequality on Riemannian Submersion and Theta Slant Submanifold." Talk presented at the 1095th AMS Meeting, UC Riverside, Riverside, California, November 3, 2013.

**Oh, Y. M.** "An Inequality of Riemannian Submersion Invariant and Riemannian Isometric Immersion." Talk presented at the Annual Conference of the Michigan Academy of Science, Arts, and Letters, Hope College, Holland, Michigan, March 22, 2013.

**Oh, Y. M.** "Riemannian Submersion and Lagrangian Isometric Immersion." Talk presented at the annual meeting of the American Mathematical Society, Joint Mathematics Meetings, San Diego, January 10, 2013.

**Prince, M. V.** "Using the TI-Nspire to Teach the Common Core Mathematical Practices." Talk presented at the 2013 T3 International Conference, Philadelphia, March 8-10, 2013.

**Prince, M. V.** "My Favorite Activities in Color with the TI-84+C" **and** "Using the TI-73 for the CCSS." Talks presented at the 2013 MCTM Conference, Traverse City, Michigan, July 30-August 1, 2013.

#### Research Symposia Organized:

Henson, S. M. Mathematics Section, Michigan Academy of Sciences, Arts & Letters annual meeting, Hope College, Holland, Michigan, March 22, 2013.

Henson, S. M. Special Session on "The Mathematics of Natural Resource Modeling" at the annual meeting of the American Mathematical Society, Joint Mathematics Meetings, San Diego, California, January, 2013.

## Page 7 of 8 MATH@ANDREWS Chair's Letter: Exciting Changes in the Department

Dear Friends,

The department is undergoing some exciting changes!

*Math Commons Room.* You may remember this room with its wooden bookshelves as a wonderful place to study. We have removed the tall storage cabinets that lined two of the walls. That area, now recarpeted and repainted, will hold individual study carrels. We also are working with James White Library to place a STEM library kiosk there, next to the Pallaschke Collection, with career information and specialized search engines. The moveable tables for group study remain and will be surrounded by new upholstered, stackable chairs. The old couches will be replaced by a grouping of three over-stuffed armchairs around a magazine table.

*Front office*. Karen's desk sat in the middle of the room because there was no wall space. We pulled out the filing cabinets along the wall, removed the tall storage cabinet, and moved the faculty mailboxes. The university repainted the walls and laid new carpet in both Karen's office and my office. Karen's new modular desk will sit along the wall; this will greatly enlarge the space, give easy access to all parts of the room, and allow Karen to work with the public without interruption. The tall wooden cabinet, along with those taken from the Commons Room, will line the walls of



*Chair's office*. My enormous desk sat in the middle of the room, with a tiny round conference table crowded in front. The desk functioned primarily to hold my desktop computer; I found that all of my work with students, parents, colleagues, administrators, and research collaborators occurred at the small round table. The old desk will be replaced by a modular desk along the wall, opening up a roomy space in the middle for a large round conference table and chairs. I am particularly excited about the way this will enable me to work with students.

*The Math Center*. The Department hires students to staff the Math Center, which provides free tutoring in the evenings and on Sundays. During the day, we increasingly use the Math Center as a modern "alternative classroom" because of its computers and its arrangement of round tables for group interaction. We will be installing a ceiling projector and screen in this room to facilitate its use as a creative classroom space.

*Hallway*. Our Honors students and other undergraduate research students create posters and present them at conferences. Until now we have not had a good way to display these posters. David Steen, Professor Emeritus of Biology, is building 15 beautiful black cherry frames with glass fronts. These will hang artistically in the main hallways of the Department, showcasing our students' research.

The remodeling projects will total \$18,033. We already have raised some of the money, and the University is pledging up to \$6,738 in matching funds on what we raise from donors. The hallway poster frames will total \$1,500. If you would like to help, please fill out the enclosed donation slip. We are so grateful!

May the peace and joy of Jesus Christ fill your hearts as you celebrate Thanksgiving and Christmas!

Shandelle M. Henson Professor and Chair

a new math storage room.

#### Andrews University Department of Mathematics

#### Programs

BS in Mathematics BS in Mathematics Education Mathematical Studies Major Mathematics Minor Mathematics Education Minor Minor in Mathematics of Economics and Finance Behavioral Neuroscience Mathematics Track

#### PME Michigan Gamma Chapter

\*Robert Polski, President \*William Tritch, Vice President \*Brandon Baptist, Sec.-Treas. \*Prof. Joon Hyuk Kang, Advisor

eigen\* Math and Physics Club

\*Belinda Cheeseboro, Math President \*Bryan Pearson, Physics President \*William Tritch, Secretary \*Mateja Plantak, Secretary \*Julie Logan, Poster Secretary

#### **Mission Statement**

Through teaching, research, and service, the Department of Mathematics seeks to provide leadership in the mathematical sciences by:

\*Preparing students with the mathematical understanding, problemsolving skills, and dispositions that enable them to excel in their chosen careers;

\*Increasing mathematical and scientific knowledge through publication and presentation;

\*Supporting the broader mathematics education community and mentoring others for generous service through a committed Christian life.

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### **MATH@ANDREWS**

## Page 8 of 8



## 2013 Inductees into Pi Mu Epsilon

*L to R--Front row (kneeling):* Joelle Acre, Julie Logan, Ricardo Huancaya, Jonathan (Archie) Wheeler, Erik Vyhmeister. *Second row:* Janna DeWind, Ye Lim Seo, Nina Lassonnier, Bryan Pearson, Jacina Schultz, Tanner Williams. *Back row:* Andrew Roderick, Stefan Von Henner, Isabel Stafford, Robert Polski (new 2013-14 PME president), Philip Campbell, Jason Ruiz.

## 2013 Awards for Excellence in Mathematics

Rodney Allen Elem. Statistics; Yvonne Badu-Nimako Reasoning with Functions; Brandon Baptist Abstract Algebra; Justine Benjamin Elementary Statistics; Alyna Blackmer Arithmetic & Algebra Review I; Danielle Burton Applied Mathematics; Melissa Butler Elementary Statistics; Seth Campbell Calculus I and Calculus II; Anamaria Castillo Reasoning with Functions; Cassandra Chlevin Reasoning with Functions; Bethany Conrad Secondary School Mathematics Teaching and Probability Theory with Statistical Applications; Michael Hess Calculus II; Alanna James Calculus I: Dana Johnston Geometry and Probability Theory with Statistical Applications; Kelsea Knecht Precalculus Trigonometry; Lukasz Krzywon Calculus I and Calculus II; Christine Lee Calculus I for Biology; Rachel Lee Calculus I; Steven Lee Reasoning with Functions; Julie Logan Calculus III; Joses Ngugi Elementary Statistics; David Ortiz Arithmetic and Algebra Review I; Jeannie Park Precalculus; Robert Polski Calculus III and Differential Equations; Ashley Reichert Calculus I for Biology; Zachary Reichert Calculus I for Biology; Jason Ruiz Probability Theory with Statistical Applications; Ye Lim **Seo** for Calculus II and Introduction to Linear Algebra and Differential Equations; Brian Shockey Calculus III; Meredith Starr Precalculus Algebra; Samara Sterling Elementary Statistics; Jessica Thompson Introduction to Linear Algebra; Tiffany Turner Elementary Statistics; Nathan Verrill Calculus I and Calculus II; Stefan Von Henner Calculus III and Probability Theory with Statistical Applications; Sumiko Weir Calculus I for Biology; Errolyn Williams Arithmetic & Algebra Review I; Dillon Zimmerman Calculus I; Thomas Zirkle Probability Theory with Statistical Applications and Introduction to Linear Algebra