ROANOKE COLLEGE
Classic for Tomorrow®

The MCSP Times

Volume 3, Issue 1 March 2013

A Good Conversation

What happens when you force students to go to mathematics, computer science and physics talks? In the case of the MCSP Conversation Series, you get an increased appreciation of the beauty and usefulness of these academic fields. While we would love to use the word "fun" here, let's keep it real: a recent student reflection paper proclaimed that a talk was "not the snooze-fest I was expecting." In today's fast-paced entertainment blitz, we'll take it.

The Conversation Series was launched 8 years ago as a friendly (hence the word "conversation") colloquium series that would highlight the faculty's love of their disciplines. Students in MCSP classes are required to go to *n* talks in a semester, with *n* ranging from 1 in INQ classes to 3 in upper-level classes. Attendance has sometimes exceeded 200, filling Massengill Auditorium, and many of the talks actually have been fun. Speakers have been MCSP faculty (about half the talks), MCSP students, job candidates and outside speakers. Outside speakers have included nationally known experts, parents, alumni, colleagues, and a Welsh corgi named Elvis. The Conversation Series has enlightened us and enlivened us.

The following three brief descriptions are intended to give a taste of what a Conversation talk can be. More information can be found at links off of our web site at www.roanoke.edu/mcsp.

"Science is a way of thinking much more than it is a body of knowledge."

Carl Sagan

Inside this issue:

Rich Grant is a Professor of Physics at Roanoke College, and a guitarist in the band Buc9D9. His talk on "The Science of Musical Instruments" is a multisensory journey through the basics of sound waves and harmonics, with demonstrations on the world's longest slinky and musical instruments ranging from trombone to didgeridoo to bagpipes to electric guitar. Did you know that a bagpipe equals three didgeridoos plus one trombone? This is the only physics talk you're likely to see that ends with students holding up cigarette lighters and calling for Free Bird.

Art Benjamin is a Professor of Mathematics at Harvey Mudd College, and a professional magician who has appeared on the Colbert Report. His talk on "Mathemagic" is a highly entertaining extension of his TED talk. Art can square 5-digit numbers in his head, does clever mathematics-based magic tricks involving calculators, tells you the day of the week for your birthday or other historic date, and creates personalized magic squares. He is funny and amazing, and had 300+ people in the Ballroom singing Happy Birthday to him and wanting more mathematics.

Jessica Young Schmidt is an alumna of Roanoke College, who joined our Conversation Series while a computer science graduate student at North Carolina State. She has since earned her Doctorate and is currently at Northeastern University. Jessica's talk on "From Privacy Policies to Software Requirements" covered the basics of her graduate research into privacy policies, including that fine print that we scroll past to hit the "Accept" button.

Like TED talks, Conversation speakers are given the freedom to talk about what excites them, in language that is accessible to all students. Follow the schedule at our web site, and come join in the Conversation!

Editors:

Dr. Roland Minton, Chairperson
MCSP Department
Trexler Hall, Room 270-C
540-375-2358 • minton@roanoke.edu

Laura Bair • bair@roanoke.edu

Message from the Chair: Dr. Roland Minton

Some of you have seen the Einstein mask in my office. If you haven't, come by and visit! (Or watch the video on my website.) It is a great illustration of how powerful our brains are and how amazing something as basic as vision is. For me it's a fun visual reminder each day of how magical life can be; let's do something great with it!

Roland Minton

Faculty Profile: Dr. David Taylor

Dave Taylor loves his job. This is clear when you see him talking with students in and out of class, joking with colleagues, and diving into a service activity for the college. Or, you can ask him, and he will tell you about students who have become friends, conferences at which he learned a new teaching technique, and colleagues with whom he is doing research. If you aren't careful, he may get you to let loose a piratical "arrr" like the hundreds of students at his 2012 Opening Convocation speech.

Dave grew up in Dauphin, Pennsylvania, where his parents (who supply the department with Halloween and Easter candy) still live. He earned his undergraduate degree from Lebanon Valley College, where the mathematics faculty had an open-door policy and encouraged/cajoled students to do mathematics on their own. A similar philosophy at Roanoke College was a primary reason he chose to come here. Graduate school for Dave, like for many of us, was a wonderful time of intense work and forging of lifelong friendships. He and his UVa buddies have "reunion" dinners at national mathematics meetings that are great fun.

In the last year, Dave has been awarded the Exemplary Teaching Award at Roanoke College and has passed his tenure review. What's next? A sabbatical next fall, although it won't entail much resting. Inspired by his May term class (Mathematics of Games and Gambling), he will develop an inquiry-based Introduction to Probability textbook that introduces topics through games and situations that engage students. Starting with a game or competition that students understand and can analyze, cleverly constructed questions prompt students to discover the fundamentals of probability on their own. Not only do students take ownership of this material, they are anxious to continue working and make the next discovery. The grizzled and jaded among us may object that this is overly idealistic, but Dave makes it work. He is successful with students of all levels and majors.

When asked where he would like RC mathematics to be in 10 years, Dave says he wants the national mathematics community to know about Roanoke College. Dave has taken important steps to make this happen, including an active program of students attending mathematics conferences. 2013 will mark the 6th consecutive year that an RC student will give a talk at MathFest, a national mathematics meeting. This adds to a history of successful student talks and posters at regional meetings of the Mathematical Association of America. For which, by the way, Dave is an officer (program chair).

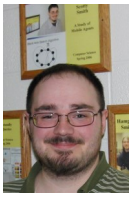
Dave's friend Robert Allen visits Roanoke College annually, and raves about the energy of our mathematics program: the kidding between students and faculty, students and faculty doing research and being excited about their topics, a vibrant colloquium series, and so on. This is why Dave Taylor loves his job. In turn, we recognize Dave's large contribution to this energy, and love having him here.

New MCSP Faculty

MCSP is pleased to welcome three new faculty members for the 2012-13 academic year. Dan Robb is an Assistant Professor of Physics, who comes to us from Berry College. Dan is a computational physicist with an excellent track record of involving students in interdisciplinary projects. Brian Gentry is a visiting Assistant Professor of Physics, who comes to us from The Institute for Atomic and Molecular Physics in Amsterdam. Scotty Smith is a visiting Instructor of Computer Science, who is working on his Ph.D. in computer science at George Washington University. Scotty is a 2007 graduate of Roanoke College.

Dr. Dan Robb

Dr. Brian Gentry



Mr. Scotty Smith

Student Profile: Ed Hrinya

Whether or not you have met Ed Hrinya, if you have been around Trexler lately you have probably heard The Laugh. Ed has a deep, hearty laugh that he lets loose with abandon. You might not know what to expect from someone double majoring in physics and philosophy, minoring in mathematics, acting in Theatre Roanoke College plays, and working for Information Technology, but The Laugh lets you know that Ed is grabbing every benefit he can from his time at RC.

Ed's zest for life is partly a function of his advanced age; he is (gasp) 31! After several years away from school, he is determined to make the most of his "second chance." His extra motivation and maturity show up in habits such as not procrastinating (do it now when it's easier), thinking and asking questions in class (it's easiest to learn while the professor is there helping you), and doing challenging activities such as theater and mathematics competitions because he likes them. Halfway jokingly, Ed says that a couple of years in retail showed him how special college life is, and he does not want to miss out on any of the fun.

Ed finds fun (phun?) and meaning in his two majors of physics and philosophy. He views both disciplines as trying to explain the world, and cites a long intellectual history in which the fields were joined: Isaac Newton, for example, was a natural philosopher. Ed bemoans the fragmentation of academic disciplines, and gives the impression that he would have enjoyed trading theories with Newton and Hooke at Royal Society meetings (Newton might have been more agreeable if he'd been around The Laugh). Fittingly, Ed's senior thesis in philosophy is on wave/particle duality, a crucial paradox in quantum mechanics. While he is fascinated by the role of faith in science, Ed likes that theoretical disagreements in physics are (eventually) settled by experiments.

Not that Ed shies away from airing out theoretical ideas verbally. In elementary school, he wanted to grow up to be a public speaker. His teachers often thought that he was practicing too much for this profession. This may explain his love of theater. On stage, he can be anyone. Exploring the motivations and actions of a character, as well, may not be that different from exploring the ramifications of a philosophical argument, except that you get to do it boldly to an audience.

Ed is hopeful that his future includes a stint with AmeriCorps and then graduate school. Meanwhile, the next time you hear The Laugh, you can bet that Ed Hrinya is busy exploring another new idea.

Award-Winning Models

For the second year in a row, a Roanoke College team of students has earned an impressive rating in the Mathematical Contest in Modeling. The team of Ed Hrinya and Lizzi Ciskowski received a Meritorius rating for their paper, placing them in the top 2% of the 3697 teams entered from 16 countries. The team of Katie Thornton, Kayla Klingensmith, and Gabe Giersch earned Honorable Mention status, placing them in the top 20% of competing teams. This gave Roanoke College the best two-team showing in the state of Virginia, with only Duke matching our performance in the southeast region.

The Mathematical Contest in Modeling is a four-day weekend competition. Teams choose one of two complex but loosely defined problems to tackle. The problems are too broad to have complete solutions, so the task is to construct a mathematical model. A model is a simplification of the full problem, whose solution or partial solution provides insight into the original problem. Teams decide which aspects of the problem to analyze thoroughly, and which to ignore. Past contests have provided industries with useful models to determine policies. In 2012, both Roanoke College teams worked on a problem of developing efficient strategies for scheduling camping/rafting trips given finite resources.

Congratulations to Ed, Lizzi, Katie, Kayla, and Gabe for earning international recognition!

The Idea That Grew Into A Reef

As the saying goes, it takes a village to raise a child. In this case, Jan Minton's "child" was an idea, that Roanoke College could host a satellite reef of the Hyperbolic Crochet Coral Reef that she saw exhibited at the Natural History Museum in Washington. The "village" turned out to be an ever-evolving coalition of Roanoke College employees and students, local crafters, and loosely connected people from around the country. The village's creation, the Roanoke Valley Reef, made its debut on January 25, 2013, in Olin Gallery to an enthusiastic reception, with nearly 3,000 visitors in its month-long run.

Jan Minton is a teaching associate in mathematics, with 25 years at Roanoke College. She taught herself to crochet at age 12, but eventually knitting became her craft of choice. A knitting circle that she held in Colket for several years was one of several college projects for Jan over the years. She was co-editor of a Roanoke College Cookbook (currently out of print), and was instrumental in bringing in mathematician/entertainer Art Benjamin (see page 1) as Copenhaver Scholar-in-residence. When she saw the Smithsonian exhibit with its synthesis of mathematical ideas, ecological concerns, and beautiful crochet work, Jan immediately thought, "Roanoke College should do this!"

The Roanoke Valley Reef represents two years of planning and work. Jan and other project leaders started with workshops and bi-weekly meetings at the Monterey House. Eventually, a critical mass of colleagues was reached and the project largely ran itself. Many participants had no crochet experience, but the beauty of the finished pieces and the camaraderie of the group were irresistible. Olin Gallery Director Talia Logan was a strong contributor throughout, and provided the artistic inspiration for the final assembling of the exhibit.

A coral reef is a cluster of underwater polyps and their secretions, and provides a habitat for a stunning variety of fish and other organisms. The Roanoke Valley Reef is a visually stunning collection of crocheted yarn and plastic, with over 2300 pieces from over 250 contributors. The creation of the reef provided a craftwork habitat for the contributors, a cultural reef that created new bonds from Roanoke College to the Roanoke Valley and beyond.

For speaker at the opening of the Roanoke Valley Reef, Jan found Paul Snelgrove, a biological oceanographer at Memorial University of Newfoundland, through his TED talk. This is another element in the web of reef ideas: Jan learned about the Hyperbolic Crochet Coral Reef through Margaret Wertheim's TED talk. Snelgrove was outstanding, meeting with biology classes and giving a provocative public talk about the status of the ocean.

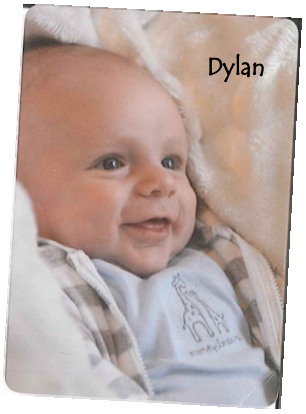
At the opening of the exhibit, Dean Richard Smith talked about the power of ideas. Jan's idea, coupled with the hard work of hundreds of new friends, resulted in collaborations among crocheters, mathematicians, biologists, and artists. Events in February with a coral reef theme included biology's Darwin Days, chemistry's Fisher Lecture, the Honors Program's Conference, and assignments in creative writing, biology and art classes.

Quite a village!

Paul Snelgrove, Jan Minton, Talia Logan, and Colleen Smith

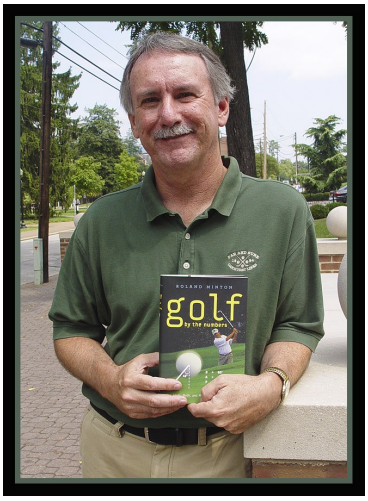
The MCSP Nursery

The MCSP Department has had a very productive year. Along with the professional achievements that fill these pages, several professors added to their families. Physics professor Rama Balasubramanian and her husband Navdeep welcomed their second daughter, Shruti Bala Gupta on September 6, 2011. Computer Science professor Durell Bouchard and his wife Suzanne welcomed their second son, Jude Schellenger, on September 15, 2012. Statistics professor Adam Childers and his wife Kristen welcomed their first child, Jack William, on October 20, 2012. Mathematics professor Karin Saoub and her husband Samer also had their first child, Layla Samer, on December 16, 2012. Mathematics teaching associates Claire Staniunas and Kathy Bauman became grandparents, with the births of Ivan Staniunas and Dylan James Blake. Congratulations to the proud parents and grandparents!



Golf by the Numbers

Sports analytics is becoming a big business, utilizing Big Data. The revolution started by Bill James and *Moneyball* has changed the way the sports industry operates and how we spectators watch. Roanoke College Professor of Mathematics Roland Minton has an entry in the field with his recently released book *Golf By the Numbers*, published by Johns Hopkins University Press. The book merges two of Roland's favorites, mathematics and golf. Stories from the history of golf help make this an accessible and enjoyable read, but the focus is on a statistical analysis of professional golf. A rating system for individual golf skills is developed, and is extended to an overall rating system for golfers. Who is the best putter in golf? How much luck is there in putting? Is putting more important than driving? Answers to these and other questions, can be found in *Golf By the Numbers*.

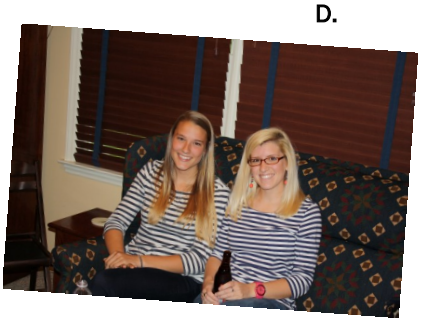


A.

B.

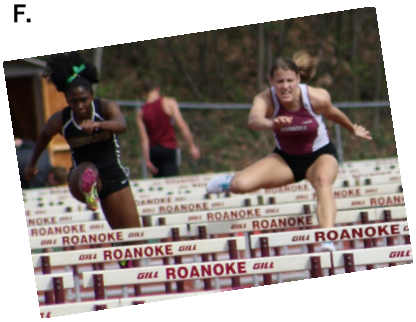
C.

D.



E.

F.



G.

H.

I.

J.

MCSP at work and play

A. Students in the Math Club working hard on a tangram, but…
B. It's Dr. Childers who claims success on this one!
C. Paul Vines, winner of the first Jane Ingram Computer Science Award, with Dr. Ingram.
D. Sarah Witt and Kelsey Fisher—that's OK, we *both* make this outfit look good.
E. Jack Childers pies Dr. Minton on Pi Day; Dad's not cute enough to get away with this!
F. Sarah Witt, ODAC 110m hurdles champ and ODAC female scholar/athlete of the year.
G. Award winners Heather Cook, Sarah Witt, Ed Hrinya, Paul Vines and Justyn Dooley.
H. Avery Makel explains his Physics research to prospective students.
I. Jan Minton gives the banquet talk at the MAA meeting at VMI.
J. Clay Bouchard – "what do you mean I'm going to have a little brother?"

Selected Faculty Research:

Dan Robb: article in *PLOS ONE:* "Random Phenotypic Variation of Yeast Single-Gene Knockouts"
Dave Taylor: article in *Advances in Pure Mathematics* "One Step Forward, Two Steps Back: Biconvergence of Washed Harmonic Series"
Reviews for *American Mathematical Monthly* and *AMS Mathematical Reviews*
Presentation at MathFest: " A Modified-Moore Method Approach to Abstract Algebra"
Matt Fleenor: article in *American Biology Teacher* "Drawing on Popular Culture: Using Tattooing to Introduce Biological Concepts"
Review for *American Journal of Physics*
Presentation at NRAO Astronomy: " How multiwavelength datasets aid in galaxy evolution studies"
Roland Minton: popular press book *Golf By the Numbers*, Johns Hopkins University Press
Presentation at Joint Mathematics Meetings (JMM): "Putting on the PGA Tour"
Adam Childers: Presentation at JMM: "V-Optimal Experiment Designs for Nonlinear Models"
Anil Shende: Review for *IEEE Transactions on Parallel and Distributed Systems*
Chris Lee: Presentation at ICTCM: "Moodling Mathematics"
Hannah Robbins: Presentation at JMM: "A Hands-on Introduction to Knot Theory"
Jan Minton: Banquet Presentation and Workshop at MAA: "Hyperbolic Geometry and the Roanoke Valley Reef"
Karin Saoub: Presentation at MAA meeting: "Graph Theory as a General Education Course"
Rama Balasubramanian: Presentation at North American Mossbauer Symposium: "Investigations on the role of nanocatalysts in the formation of nanotubes"
Rich Grant: "Science Facility Renovation" grant from Robert G. Cabell III and Maude Morgan Cabell Foundation
Presentation at Lilly Conference: "Encouraging Critical Thinking Through Reflection"

Selected Student Research:

Akram Sublouban: "Contributions of Arab Mathematicians"
Allen Kirby: "Segmenting Repetitions in Android Device Sensor Data"
Anne Kyner: "Synthesis and Characterization of Mars Analog Iron Oxides"
April Saul: "Is Heart-Rate Variability Chaotic?"
Austin Howard: "A Distributed Parallel Factor Attack"
Brandon Shelton: "Assignment Evaluations at a Micro Level"
Brian Ruane: "The Existence of Compact Groups Within Galaxy Clusters"
Daniel Ballou: "Synthesis and Characterization of Cr and Co Substituted Goethite"
David Guynn: "Star-formation within Intercluster Galaxy Filaments"
Greg Wise: "Fluorescence Imaging of F-actin Liquid Crystals "
Heather Cook: "Analyzing Zombie Dice for Optimal Play Decisions"
Joe Jackson: "Comparison and Analysis of GPU Energy Performance and Efficiency Between OpenCL and CUDA"
Jon Ostrander: "Three-Dimensional Learning"
Jon Thompson: "Matchings of Size at least the Lower Bound in Planar Graphs with Minimum Degree 4 or 5"
Jonathan Marino: "Graph Theoretical Analysis of Directed Social Networks"
Justyn Dooley: "Analyzing Directional Thoughts with Artificial Intelligence Algorithms"
Lizzi Ciskowski: "A Fundamental Approach on the Complexity of Music and Complex Personalities"
Marc Sandoval: "Android Handwriting Tutor: Feedback and Analysis"
Maya Shende: "Modeling the Breathing Rhythm with Morris-Lecar Neurons"
Noel Porter: "Simulating and Visualizing Graphene Deposition"
Paul Vines: "Synthesis and Characterization of Nanocatalysts for Nanotube Growth"
Samantha Parsons: "The Mathematics of RSA Cryptography"
Sarah Witt: "Defining Influence in Social Networks"

Alumni News

If you are missing from this list or are misrepresented, please get in touch with us!

Adam Gray works at Lash Group – AmerisourceBergen Consulting Services in Charlotte.

Adam Peters is a Mathematics teacher at Franklin County High School.

Alan Moore teaches Mathematics and coaches baseball at Cave Spring High School.

Aleah Dillon is an Application Developer at Servpro Industries.

Alex Moore is lead technician at Pyrotecnico in Baltimore.

Amanda Coughlin in the MS program in Statistics at Virginia Tech.

Anibal Avalos is a Mathematics teacher at Dominion High School in Loudon County.

Ashley Francis Dennie is an Operations Research analyst at the Department of Defense.

Ashley Rowe MacFarlane is a Reliability Engineer for ManTech, supporting the U.S. Army Test and Evaluation Command.

Billy Scott is a software engineer at Wake Forest University Health Sciences.

Blaire Conner teaches Mathematics at Liberty High School in Fauquier County, Virginia.

Bonnie Gumpman works for Scott Insurance.

Brian Sheppard is a senior data analyst for First Data in Delaware.

Britney Barrett Conrad works for CMR Institute.

Brittany Shelby is a financial reporting assistant in Boston.

Casey Gearheart Turner works for the Army and lives in Maryland.

Chad White is back in the Roanoke Valley after several years abroad doing missionary work. Chad works for ABS Technology Architects and lives in Vinton with his wife Leslie and three kids.

Charles Cooley is a Computer Science professor at Eastern Mennonite University.

Christian Doyle works for the United States Naval Research Laboratory in Washington, DC.

Connie Baker Jones is a lawyer with Finnegan, Henderson, Farabow, Garrett & Dunner in Atlanta.

Dana Bowles Dishman teaches Mathematics at William Byrd High School.

Danny McNamara teaches Mathematics at Colonial Beach High School.

David Hill is an associate at Booz Allen Hamilton in Houston.

David Myer teaches Mathematics at Porter-Gaud School in Charleston, SC.

Drew Fleming is a software developer at CGI.

Emily Wooge is Special Projects Manager at Roanoke Gas Company.

Frank Clayton is a manager at Community Health Systems in Tennessee.

Geoff Boyer teaches Mathematics and coaches volleyball in Craig County. He is the “Voice of the Rockets” at athletic events.

Greg Fielder works for Affinity Consulting.

Hampton Smith is in the PhD program in Computer Science at Clemson University.

Jack Gerdeman is an economics/business analyst at Mitre Corporation.

Jake Bennett is in the PhD program in High Energy Physics at Indiana University.

James Kohlhaas works for Datatel near DC.

James Pennix is Dean of Admissions at Radford University.

Jason Carlin works for IBM’s Advanced Analytics and Optimization group.

Jason Turbyfill works for Datatel.

Jennifer Jennings Shannon teaches Mathematics at Salem High School.

Jennifer Rose Staten is a financial analyst in Suffolk, Virginia.

Jessica Young is finishing up her Ph.D. in Computer Science at NC State.

John Paul Roop is a Mathematics professor at North Carolina A&T.

Julie Critchfield Moore works for Fayette County Public Schools in Kentucky.

Karen Consiglio is employed by Jacobs Engineering and works on the Dulles Corridor Metrorail Project for the Metropolitan Washington Airports Authority.

Katrina Palmer is a Mathematics professor at Appalachian State University.

Kelly Beeman founded the comedy sketch group The Uncomfortables.

Ken Sine works for Yokohama.

Kim Knorr Sheppard is a Statistics professor at Cecil College.

Kim Thomas Emory teaches Mathematics at Staunton River High School.

Kimberly Schlitt Ciccarelli is a business analyst with Honeywell International.

Krista Pickle works at Acadian Asset Management.

Kyle Allen is a tennis professional in Roanoke.

Laura Beth Viventi-Collins works for the Naval Surface Warfare Center.

Laura Cassels Clinger is in the PhD program in Material Sciences and Engineering at the University of Delaware.

Lisa Brookshier teaches Mathematics at Glenvar High School.

Lizzie Franz teaches Mathematics at Cave Spring Middle School.

Marcy Conner works for Softwise.

Maria Cupples Hudson is a programmer for Mathematica Policy Research in DC.

Mark Lucas is a software developer for Integrated Imaging in Roanoke.

Mat Miller is a graduate student in Applied Physics at Johns Hopkins University.

Matt Troutman finished a Michelson Fellowship in the PhD program in Astrophysics at Clemson University.

Matthew Browning teaches Mathematics at Lord Botetourt High School.

Michael Kluge works in IT for Roanoke College.

Natalie Horvath works for HyperGen Inc.

Pam Armata Schweighart is a biostatistical research analyst for Blue Cross of Tennessee.

Patrick McCleary is a statistical analysis manager at Capital One.

Perry Hardin teaches Mathematics at Rockbridge High School.

Philippe Moore works at Tenable Network Security.

Richard Goeres is studying at Lutheran Theological Southern Seminary in Columbia, SC.

Rink Pingry is the owner of Gremlin Games.

Scotty Smith is in the PhD program in Computer Science at George Washington University.

Stephanie Morford is an analyst at Wells Fargo.

Steve Garren is a Statistics professor at James Madison University.

Steve Wheatley teaches Mathematics at Montgomery County Community College in Maryland.

Steven Nunnally is in graduate school in Computer Science at the University of Pittsburgh.

Susan Mayorshi Sine teaches Mathematics and Statistics at Cave Spring High School.

Tiffany Shartzer Simmerson teaches Mathematics at Glenvar Middle School.

Tom Ward works for Gallo Mechanical.

Tracy Ilgenfritz Jenkins teaches Mathematics at Glenvar High School.

Teacher of the Year

Dave Taylor was named the winner of the 2012 Roanoke College Exemplary Teaching Award. Dave is known for high energy in and out of class, a relentless enthusiasm that pulls others along in his wake. He is the fourth member of MCSP to win the Teaching Award, following Chris Lee (2009), Rich Grant (2001) and Roland Minton (1998). Dave is an Assistant Professor of Mathematics, and teaches all levels of mathematics courses. This year his teaching schedule has ranged from INQ 240 and a new offering of INQ 300 through Calculus and on to Math Seminar. Coming up soon is a Pi Day talk of Magic Tricks, one of several ways he keeps himself, his students and his colleagues entertained. Lest you think he's all fun and games, you should know that he loves teaching Abstract Algebra. You wouldn't be groaning right now if you'd had Dave for this course.

Great Experiences

You will find the phrases "experiential learning" and "learning firsthand" sprinkled throughout the Roanoke College admissions literature. Rich Grant, Professor of Physics at Roanoke College, is in charge of converting these phrases into a meaningful and enriching program. The program sets standards for and provides support for faculty and students involved in internships, research, study away, service learning and creative/artistic works. As Director of Experiential Learning, Rich coordinates a diverse set of faculty and students already involved in these five activities, while finding ways to better publicize outstanding work and amplify the benefits for students. The program clarifies that Roanoke College is serious about providing experiences beyond the classroom to prepare our students for success.

ADDRESS SERVICE REQUESTED
221 College Lane | Salem, VA
Department of Mathematics, Computer Science and Physics
ROANOKE COLLEGE
1842