

Spring 2012

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Echoes Staff

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SPECIAL ISSUE: EXCELLENCE IN TEACHING

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

# Echoes

SPRING<sup>2012</sup>

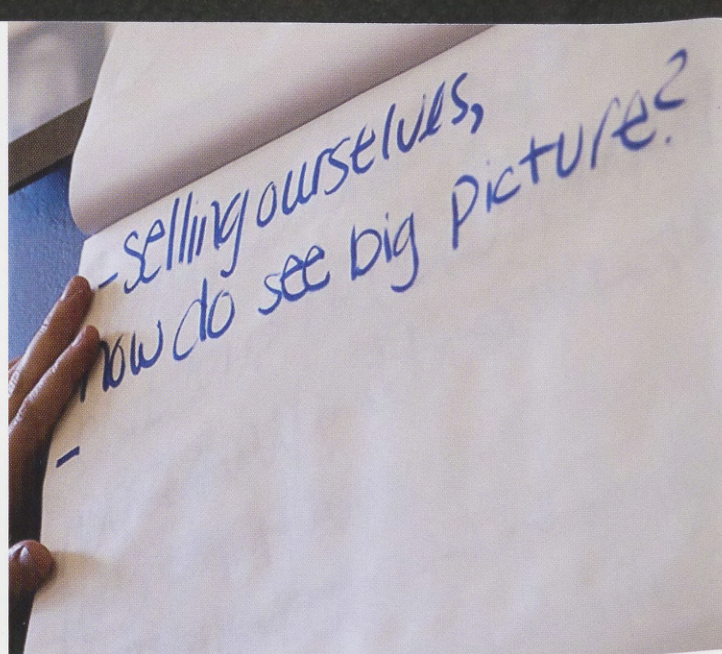
Vol. 2012, No. 2



## *The 'Best' Professors*

Six Faculty Chosen Among America's Top 300 Teachers





## EMERGING THEMES FROM

- Creativity and Innovation
- Dealing with Complexity
- Diversity
- External Collaborations
- Finances
- Global Experiences
- Innovative Approaches to Teaching and Learning
- K-12 Outreach
- Name Recognition
- On-Campus Environment
- Our Local/Regional Environment
- The Student Experience
- Student Preparation for Professional Practice



### THANK YOU

to those who have provided valuable input to our discussions on Rose-Hulman's role in facing global challenges in a technological age. These conversations have reached out to alumni, current students, parents, faculty, staff, retirees, employers, and peer institutions. Email your comments at any time to [thegreatdebate@rose-hulman.edu](mailto:thegreatdebate@rose-hulman.edu).

VISIT OUR SITE FOR MORE INFORMATION: [WWW.ROSE-HULMAN.EDU/THEGREATDEBATE](http://WWW.ROSE-HULMAN.EDU/THEGREATDEBATE)



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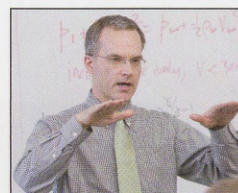
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## ON THE COVER

Six Rose-Hulman professors were selected for The Princeton Review's *The Best 300 Professors* book. The group includes (front row, from left) Diane Evans, Phillip Cornwell, and Richard Stamper. In the back (from left) are Elton Graves, William Weiner, and Yosi Shibberu. Photo by Shawn Spence.



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Matt Branam listens to discussions during The "Great" Debate.



Rose-Hulman Institute of Technology lost a visionary, friend, and alumnus with the untimely passing of President Matt Branam on April 20. He had written this message to alumni and friends for this issue of *Echoes*. Anyone who worked with President Branam knew The "Great" Debate engagements with the entire Rose-Hulman community were important to him. We thought you would value his ideas and words as the momentum of The "Great" Debate continues.

# Excellent Teaching is a Hallmark of a Rose-Hulman Education

by Matt Branam

Like any first-in-class organization, we realize that we are only as good as our people. Our reputation as a school rests squarely on the shoulders of our teachers—our professors and staff—inside the classroom and out. Two things that will never change about Rose-Hulman are our focus on what is best for our students and our dedication to the profession of teaching. In this issue, you will read about some on our faculty who have been recognized recently as great teachers. To their credit and to ours, the world has taken notice of their talent and expertise. To the benefit of our students, their focused dedication is indicative of what all of our teachers bring to Rose-Hulman.

As you will read, The Princeton Review's new book, *The Best 300 Professors*, has highlighted six of our professors. We dominate the list in math and engineering with three of the 32 math professors and two of the nine engineering professors profiled in the book. Congratulations to all six of these professors. This recognition highlights our long tradition of excellence in teaching.

Through the many conversations of The "Great" Debate, our 12-month-long strategic planning process, we are becoming even more convinced that it is great teaching that will further distinguish Rose-Hulman in the future. Two years ago our commencement speaker, Bob Metcalfe (the inventor



**In the course of our “Great” Debate thus far, we have met with hundreds of alumni, parents, and friends; visited noted university peers; taken advice from start-up emerging technology companies ... and we tapped the passion of students and the experience of our trustees, faculty, and staff.**

of Ethernet), explained that he believes the Internet will inevitably disrupt three major industries: energy, healthcare, and education. We are already seeing first-hand that he is right. Changes in educational technologies are indeed rapidly changing how we teach, and also how our students learn.

My recent conversations with entrepreneurs in Cambridge’s innovation economy revealed that when hiring new talent, they are less interested in what a candidate knows than how a candidate learns. A premium is placed on the candidate who is comfortable with complexity, flexible in problem solving, at ease with risk taking, and who displays a strong capacity to GSD—my new favorite metric—Get Stuff Done. Interestingly, we heard almost the exact same statements from our auto industry alumni during a “Great” Debate session in Detroit.

To quote our chief academic officer, Phil Cornwell, who is among Princeton Review’s *The Best 300 Professors*, “Newton’s second law isn’t going to change any time soon, but some of what we teach at Rose-Hulman changes constantly to keep our curricula current.” Can it be that the pace of change in our globalized, hyper-connected, high-speed information, technology-driven world is fast enough that the importance of what we teach is rivaled by the importance of how our students learn? Surely, lifelong learning is no longer an option, it is a given.

We are intently following these trends, and others, and anticipating how Rose-Hulman can best meet the challenges and opportunities of the future. We must ensure a continuously relevant educational experience for our students.

Another one of our professors listed among *The Best 300 Professors*, Rick Stamper, has led The “Great” Debate task force investigating how we can best integrate online learning into our toolbox of instructional technologies. Many of you want Rose-Hulman to offer more opportunities to pursue your own continuous learning. We don’t need to complete our strategic planning process before we respond to this resounding need. Our current Interim Dean of Faculty, Bill Kline, has agreed to build

much more robust continuing education, distance learning, and corporate partner education offerings in his new role as Dean of Innovation and Engagement.

In the course of our “Great” Debate thus far we have met with hundreds of alumni, parents, and friends; visited noted university peers including MIT, Harvard, Harvey Mudd, Princeton, and Kanazawa Institute of Technology; taken advice from start-



up emerging technology companies, large-scale manufacturing companies, patent lawyers, doctors, and consulting engineers; and we tapped the passion of students and the experience of our trustees, faculty, and staff. We have focused on our values, our vision and our mission to ensure we cultivate and protect what makes our school uniquely Rose-Hulman. We have probed our challenges and our opportunities to plumb the depth of the value we can add to the education of our students. Going forward, our campus conclaves and our “Great” Debate sessions will be focused on identifying specific strategies to guarantee that a Rose-Hulman education will continue to be the very best that it can be—a continuously relevant, constantly challenging education that leads teaching and teachers to a level that can only be called ... GREAT.

Let’s make it happen. Make it fun. Let’s GSD! ■



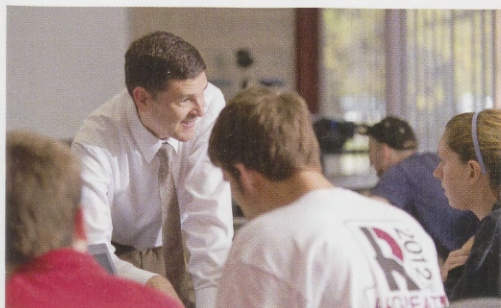
*Excellence in*  
TEACHING



# *The 'Best' Professors*

THEY TEACH AT ROSE-HULMAN





## Six Faculty Named Among Princeton Review's *The Best 300 Professors*

Story/Profiles by Steve Kaelble / Photos by Shawn Spence

*"Really fast, really nice, and really cool"... "He makes learning come naturally"... "One of the hardest classes was made easier than almost every other class, merely because he was an amazing teacher."*



Those are just some of the things students share about Rose-Hulman faculty in a new book spotlighting America's best professors. It's a small, select group honored in The Princeton Review's *The Best 300 Professors*, yet Rose-Hulman had not just one but *six* on the prestigious list. Considering that there are more than 4,000 colleges and universities across the United States, employing nearly 2 million post-secondary teachers, that's an incredible achievement.

"I had five of these six professors," recalls Brad Woodcox (ME, 2004; MSBE, 2009), who sees it as hardly coincidental that Rose-Hulman has so many professors on the list. "Rose-Hulman attracts professors who really enjoy teaching—and teaching is different from lecturing. They have a genuine concern for wanting students to learn."

Woodcox is also not surprised that students describe their professors as "cool," and talk a lot about the jokes their professors tell and off-the-wall stories shared in the classroom. These professors, he says, build strong relationships with their students in a way that helps them better connect from a teaching perspective. "A lot of professors at Rose-Hulman will reach out on a personal level, with personal

### ROSE-HULMAN PROFESSORS SHARING THE SPOTLIGHT ARE:

- **Phillip Cornwell**, Ph.D., Vice President for Academic Affairs and Professor of Mechanical Engineering
- **Diane Evans**, Ph.D., Associate Professor of Mathematics
- **Elton Graves**, D.A., Associate Professor of Mathematics
- **Yosi Shibberu**, Ph.D., Associate Professor of Mathematics
- **Richard Stamper**, Ph.D., Interim Associate Dean of Professional Experiences and Professor of Mechanical Engineering
- **William Weiner**, Ph.D., Associate Professor of Applied Biology and Biomedical Engineering

anecdotes and stories from their lives," says Woodcox. "It's getting to know students on a personal level, so students have a personal connection with their professors."

"I think it's a reflection that our emphasis is on students and undergraduate education," says Phillip Cornwell, Ph.D., Vice President for Academic Affairs. "Our professors view their primary responsibility as teaching and educating our students."

That emphasis on students' needs also shows up in the "open door" policy that is so prevalent on campus. At Rose-Hulman, "professors are available large parts of the day," Woodcox says.

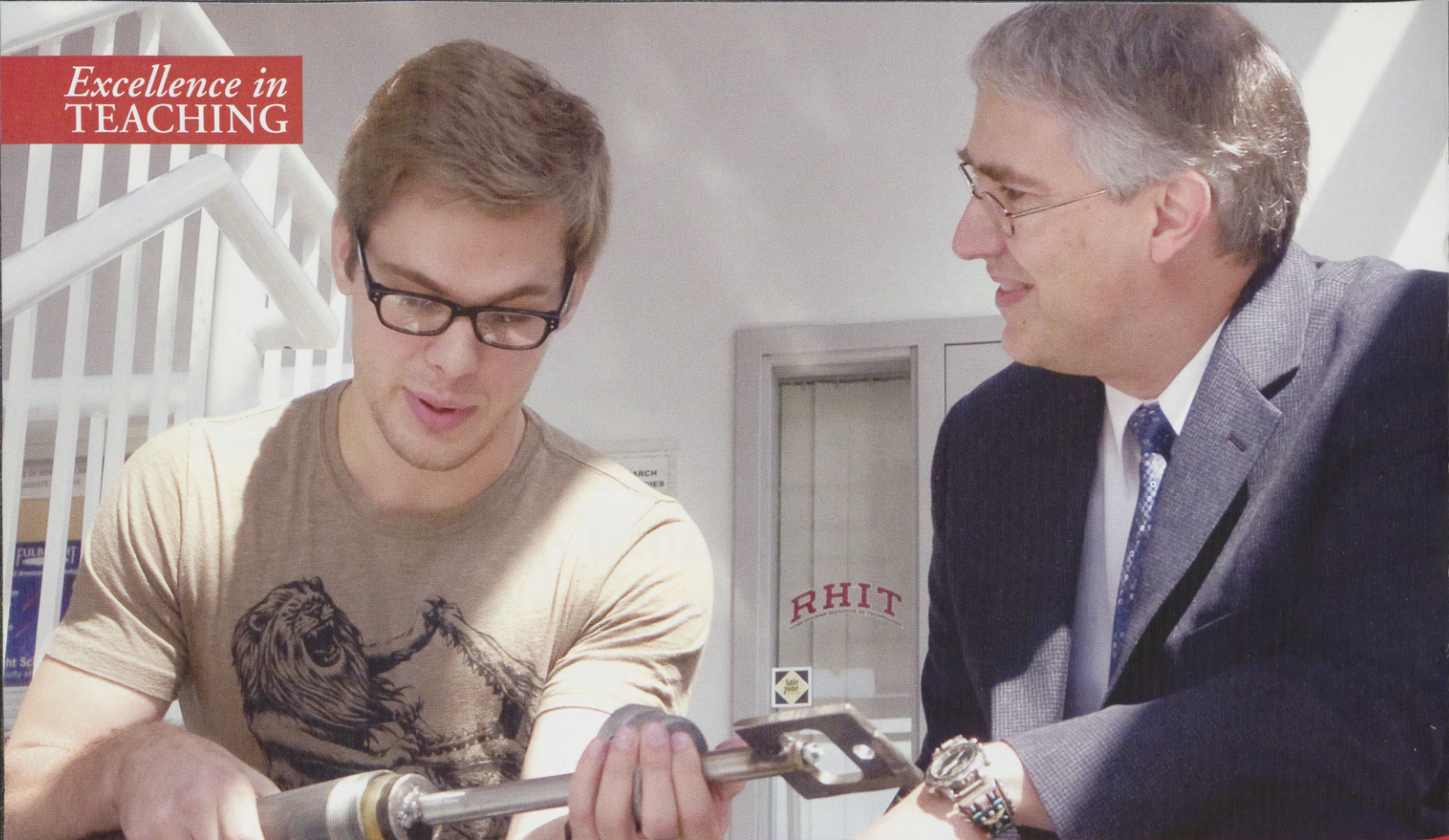
Add to that the small class sizes, and you have a recipe for teaching success. "When you have small classes, you know every student by name," Cornwell says.

"You recognize them and you value [each one of] them as a person."

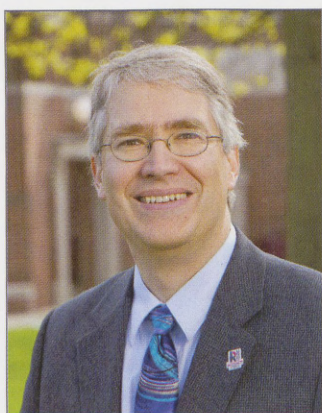
While Cornwell is pleased to find Rose-Hulman so well represented in *The Best 300 Professors*, he says there are many more on the faculty who are equally deserving of the limelight. In fact, he says, the quality of teaching is infectious. "We have so many talented educators that it raises everybody's level of teaching."

"I wouldn't be surprised to see even more professors from Rose-Hulman earn this distinction in the future," agrees Woodcox, now director of investment and operations at HalberdCross LLC and technical specialist for Novak, Druce + Quigg in California. "As an alumnus, I'm thrilled to see Rose-Hulman recognized on such a grand scale." ■





**BEST PROFESSORS PROFILE: PHILLIP CORNWELL/MECHANICAL ENGINEERING**



## *Active Learning Leaves No Excuses*

Back in the 1990s, a winter storm caused a power outage on the Rose-Hulman campus and closed the school for the first time in years. So much for Phillip Cornwell's review session, thought electrical engineering student Kelly Orr.

"I remember in the next day of class, Dr. Cornwell asked why no one had showed up for

the review. He said that he was there and had candles," recalls Orr (EE, 1996), who is manager consultant at Sogeti USA. "For the rest of my years at Rose-Hulman, several of my colleagues and I had a saying, 'I had candles,' that we used as sort of an example of 'No excuses.'"

There's certainly no excuse for being stumped by difficult subject matter if the professor is Cornwell, who became Vice President for Academic Affairs last year. He's well known for making tough topics easier to grasp. How? By letting students fill in the blanks, according to Julie Baas (ME, 2011), who works for Honeywell Federal Manufacturing and Technologies.

"Dr. Cornwell's notes were invaluable," Baas says. "He didn't just hand you a packet and ask you to follow along. He left out

the important stuff and made you fill it in, keeping you engaged throughout the lecture."

Likewise, she says, Cornwell's example problems held key lessons and applied the theories covered in lecture. "You couldn't help but learn the material."

"I consider being a teacher a calling," Cornwell says. "When I was working on my Ph.D. at Princeton, I was really energized by working with students. Therefore, I decided to look for a job where the emphasis was undergraduate education and teaching."

That turned out to be Rose-Hulman, which he says nurtured his teaching skills.

Cornwell is a believer in active learning, allowing students to learn by doing and through interactive examples. Being a good teacher, he says, means

"being organized, having a mastery of the material, being enthusiastic, respecting the students, engaging students in the material through active learning, homework and projects, having high expectations and standards, and helping students reach those standards." ■

**"The most satisfying part of the job is helping students learn and seeing them become successful after leaving Rose-Hulman."**

*—Phillip Cornwell*



"Professor Evans always made class enjoyable by creating an environment where students were not afraid to ask questions."

—Joshua Moore (ChE, 2004)



**BEST PROFESSORS PROFILE: DIANE EVANS/MATHEMATICS**



## *Helping Students Fill in the Gaps*

Diane Evans would prefer that her students talk in class than take notes. In fact, she even hands out lecture notes at the beginning of class to save students the trouble of writing everything down.

That may sound unorthodox, but Evans believes much of the real learning comes through interaction. "It's

almost like we're having a conversation, doing examples, and filling in the gaps."

She's a big believer in real-world examples, using bottled-water taste tests and hands-on studies of M&M manufacturing defects to help students connect with tough concepts. "She would make up really off-the-wall problems for us to do in class that were really weird and entertaining, yet practical," says Steven Vitullo (EE, 2004), who now teaches at Marquette University.

Then there are the games—dice, cards, and statistical puzzles. "I'm a very visual person," says Evans. "I have to see pictures,

diagrams, and have hands-on examples. I find it works well for them, too."

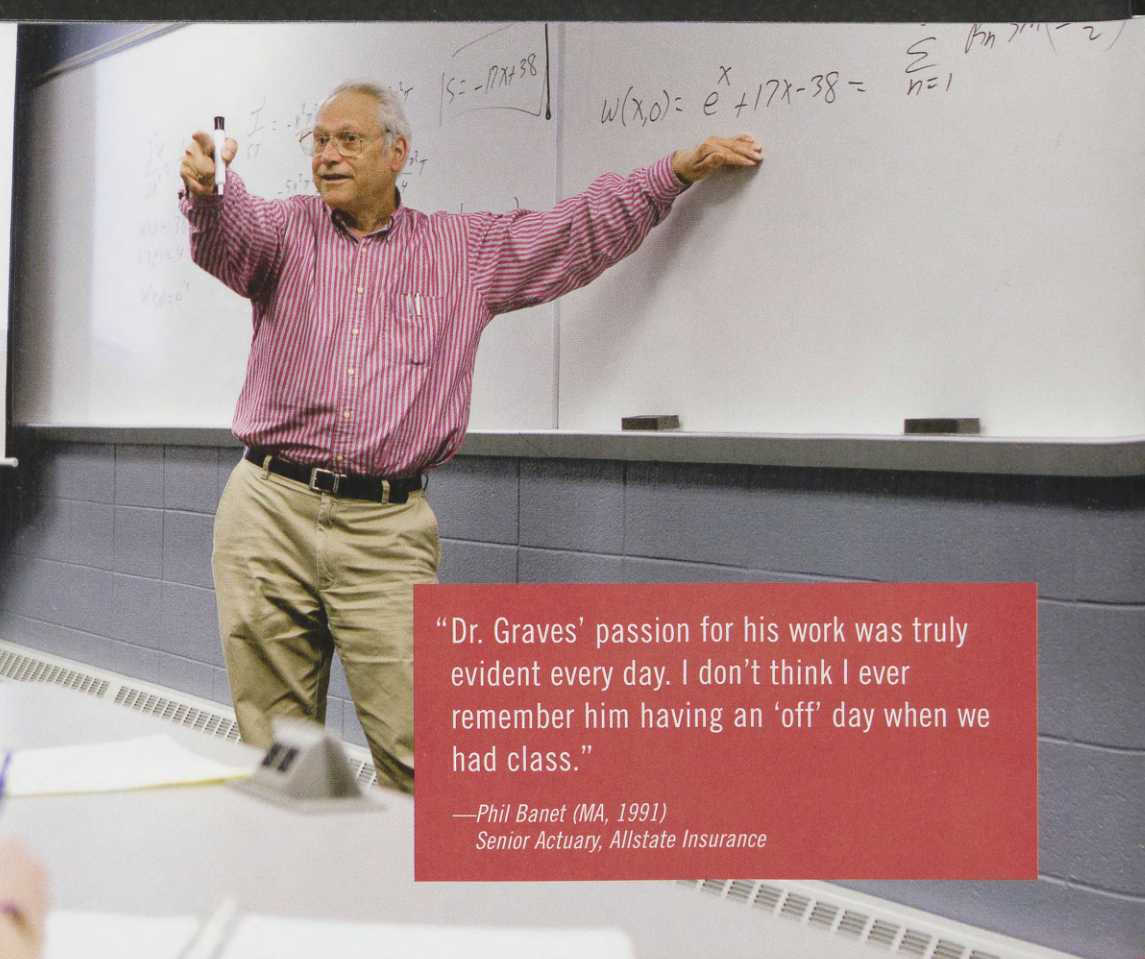
Apparently so, as Adri Platt (ME, 2005) says, "I think of dice all the time when I need to understand or explain probability in more detail for people without a technical background." Platt is an outsourcing program manager for Intel Corporation.

Beyond making tough concepts easier to grasp, Evans' approach sets a fun and informal tone that seems to resonate with students.

"She often started class with a funny cartoon or anecdote that would grab our attention and keep it for the entire lecture," observes Joshua Moore (ChE, 2004), a post-doctoral associate at the U.S. Army Research Laboratory in Maryland. "Professor Evans always made class enjoyable by creating an environment where students were not afraid to ask questions."

The effort she puts into each class allows students to see that Evans is working just as hard as they are, and that makes a positive and inspirational impression. "They see that I love it, and they try to appreciate what I am showing them," she says. And that, in turn, is a source of great joy for her. "There is nothing better than talking about mathematics and statistics with students who are interested in learning the subject." ■

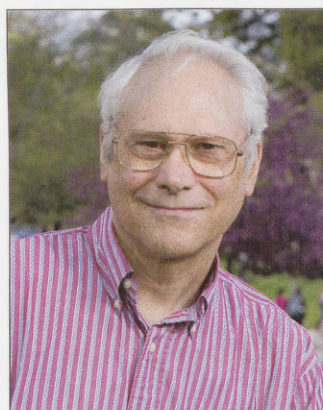




“Dr. Graves’ passion for his work was truly evident every day. I don’t think I ever remember him having an ‘off’ day when we had class.”

—Phil Banet (MA, 1991)  
Senior Actuary, Allstate Insurance

## BEST PROFESSORS PROFILE: ELTON GRAVES/MATHEMATICS



### *Real-World Examples Make Math Fun*

Why try to learn in the classroom when there’s a basketball court open? This is Indiana, after all, and Elton Graves knows that is where students would rather be. So one day he brought in a ball and told his math students to imagine they’re working in a group that could design a robot that plays basketball.

“The robot is going to emulate shooting a basketball,” he stated. “Your job is to figure out what math is required so programmers can make the robot make a free throw every time. What are the parameters you have to give the programmers and the mechanical engineers?”

This kind of real-world example makes Graves one of the best in undergraduate math education—and his students appreciate his work.

“Dr. Graves could help you visualize difficult material,” says John Cochran (ChE/MA, 1997; MSChE, 1999). “I remember we were talking about gradients, and he started the class by

telling us we were going on a field trip. He proceeded to lead us outside with a meter stick, and showed us what the gradient really meant from a physical perspective.”

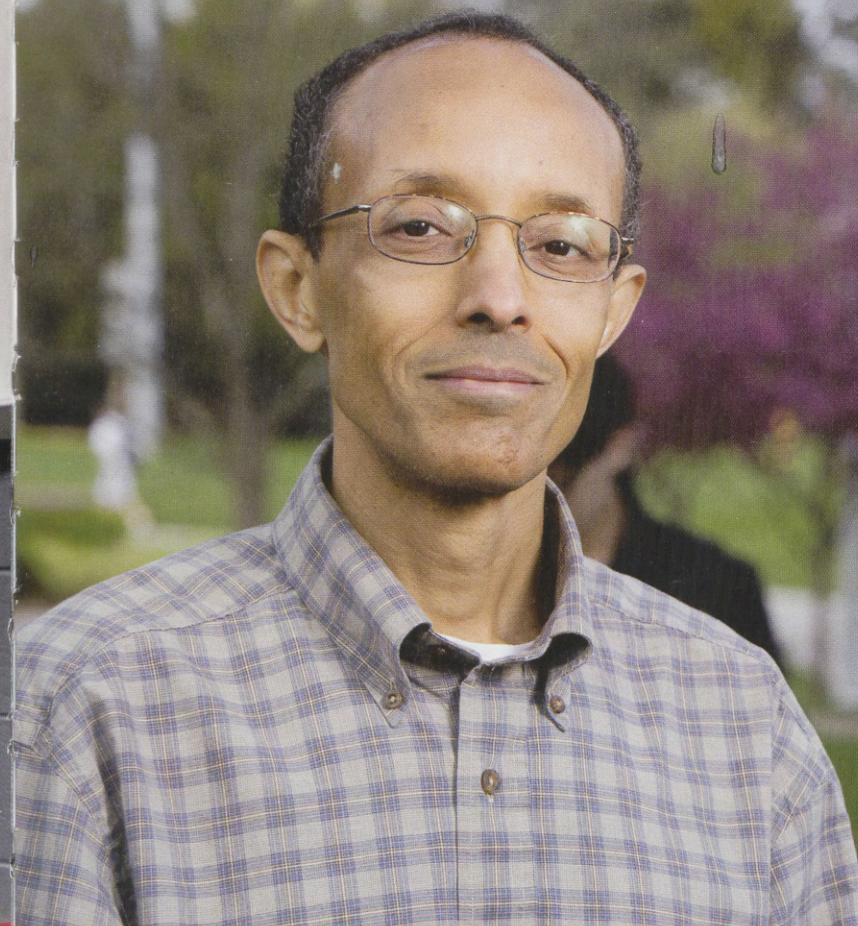
Graves’ teaching inspired Cochran to become an assistant professor of mathematics at the University of Tennessee-Martin. “Dr. Graves’ enthusiasm is contagious,” he says. “When he enters the classroom, he brings with him an excitement about mathematics that can easily be felt.”

“I think you have to be engaged and excited about the subject,” Graves says. “Using models and demonstrations helps students see the mathematics as a tool they will actually need as engineers or scientists.”

Lea Dekker (EE, 2011), an applications engineer at National Instruments, says Graves was always in tune with the needs of his students. “If his students looked lost, he’d pick up on that and change to a different teaching style,” she says. “His door was always open, too. Sometimes it seems like he was the first professor to arrive and the last one to leave.”

It’s the reaction of students that Graves finds truly energizing. “The most satisfying and rewarding part of being a professor is seeing students’ eyes light up when they understand the mathematics I am trying to teach.” ■





"Dr. Shibberu's course educated me on more than just math ... it's about learning how to be persistent, to learn from mistakes, and even strive to do it right the first time."

—George Evans (ChE, 2008)  
Environmental Engineer, ADM

**BEST PROFESSORS PROFILE: YOSI SHIBBERU/MATHEMATICS**



## *Preparing to Answer Life's Problems*

"If I could find a way to get rid of lectures, I would," says Yosi Shibberu. "When I'm talking, they're not really learning."

That's why Shibberu's math classes are focused heavily on problem-solving. There's just enough lecture to give students some basic direction, but they're working on problems

for as much of the class time as possible.

This educational approach takes into account the fact that different students perceive and learn mathematic concepts differently. As his students work on problems, Shibberu can interact and answer questions in a way that makes sense to each individual student.

"I'm walking around, and each student is learning in their own style. It's more flexible, more one-on-one," he says.

"Dr. Shibberu was my professor for Differential Equations

I," recalls George Evans (ChE, 2008), now an environmental engineer for ADM Corn Processing. "I had taken the subject in high school, but wanted to repeat for an easy 'A.'"

That's not what happened, and Evans is glad about that. "Through his five-chances-to-pass quiz, Dr. Shibberu helped me see that life isn't about the shortcut."

"He prepared me for everything I would see at Rose-Hulman and helped me find the fight in myself to make it through on time," says Evans. Shibberu stands out as a professor because "he cares and can see more in a student than they initially see in themselves."

Teaching is definitely in Shibberu's blood. His early years were spent on the campus of Alemaya University in Ethiopia, where his father taught for three years. Those memorable experiences influenced his decision to pursue a career in academia.

Shibberu appreciates that Rose-Hulman is a community of highly motivated students, faculty, and staff. "I have the freedom to work on interdisciplinary problems that I find interesting. I can work on these problems at a pace suitable for my student and faculty collaborators." ■





**BEST PROFESSORS PROFILE: RICHARD STAMPER/MECHANICAL ENGINEERING**



## *Inspiring the Love of Engineering*

Richard Stamper's students can hardly wait for him to mess up while teaching class. "I tell them if I make three mistakes at the board while doing example problems, and they catch me, class is over," he says.

That actually doesn't happen very often, but that rarity is not the biggest source of pride

for Stamper, who is also Interim Associate Dean of Professional Experiences. He's most pleased at how closely students follow what he's doing in class as they hope to catch him making mistakes, and how it encourages them to participate. "A student who normally wouldn't engage will raise a hand and say, 'Ha!' It helps draw them out."

Beyond that, Stamper strives to present interesting examples that bring concepts to life for students, according to Matt Kuester (ME, 2000; MSBE, 2002). "Dr. Stamper understands how to make subject material relevant to the real world," says the senior product manager at Tornier Inc. "He is passionate about his students' successes and has an infectious personality that captivates them in the classroom."

Stamper's contributions are valuable outside the classroom as well, says Josh Karnes (ME, 2003; MSME, 2005), manager of research and development at Arthrex Inc. Stamper served as his master's thesis advisor and Karnes worked at the professor's company, Stamper Medical Technologies. Clearly, Stamper "was an extremely influential person in my life at that time, and arguably was a foundation for my entire career," he says.

While Stamper teaches the subject matter of mechanical engineering, he's also determined to help students remember the real reason behind what they're learning—to develop new designs and products that are helpful to the world. Engineering, according to Stamper, is all about creativity and serving the needs of society.

Stamper's students are inspired by that love for the field of engineering, for teaching, and for helping students succeed. "Dr. Stamper has a genuine personality and visible excitement for teaching that creates a unique and collaborative relationship with his students," says Kuester. ■

**"He is energetic, clear and concise, and encouraging. His personal love of the material really shows."**

*—Evan Breedlove (ME, 2009)*



*"Everyone has a capacity to learn; it is the professor's job to figure out how best to make this happen."*

—William Weiner  
Associate Professor of Applied Biology and  
Biomedical Engineering

**BEST PROFESSORS PROFILE: WILLIAM WIENER/APPLIED BIOLOGY AND BIOMEDICAL ENGINEERING**



## *Always Putting His Students First*

"How something is presented is as critical as what gets presented," says William Weiner. That's why he presents his subject material with unmistakable enthusiasm.

"I believe my students sense my energy and excitement," he says. "After all, if I am not excited to be teaching a subject, then why should

students get excited to be learning it?"

Chad Zarse (AB, 2005) certainly believes it. "Bill's own enthusiasm for the subject matter was absolutely infectious," says the internal medicine doctor candidate who is starting a nephrology fellowship later this year. "He made the entire class interested in the subject at hand and eager to discuss it."

Zarse gives Weiner a lot of credit for helping him down the path toward becoming a physician. "Without Dr. Weiner as my primary mentor and thesis research advisor, I'm sure I would not be in the position I am today," he says.

The bottom line is that Weiner really cares about his

students, and he thinks it's important that they know it, because that knowledge seems to help them succeed. "I find that once students understand that I care about them, they try harder and are more comfortable coming to see me for extra help," he says. "When students know I am doing everything possible to help them succeed, they will put forth maximum effort."

Weiner caught the teaching bug as a graduate student, where he was a teaching assistant for multiple courses. He was moved to find out how much impact his efforts could make. "Many students told me that I was the only reason they made it through the course." Having the chance to fill in for a couple of professors on sabbatical sealed his career ambitions. "I was hooked!" he says.

The relationships with students are the most rewarding part of being a professor, says Weiner. "Everyone has a capacity to learn; it is the professor's job to figure out how best to make this happen. It's all about trying to optimize and maximize each student's potential," he explains. "Over time, to see all of the amazing accomplishments of my former students, and to know that I played a tiny role in each individual's success, is an unbelievable feeling!" ■





Professor Kay C Dee shares a laugh with students during an outdoor group meeting.

# It's Our Special Recipe

Our Professors Have a Passion for Teaching and Helping their Students Succeed

By Michael Davids

It is almost expected that faculty who teach rigorous courses at a highly demanding pace and with totally uncompromising grading standards would be rated harshly by their students.

That's not the case at Rose-Hulman, an institution in which *The Huffington Post* ranks professors No. 9 in the nation for having faculty members that were valued by their students as good teachers.

"What has impressed me the most over my four years is the time and resources my professors provide to us," says senior civil engineering student Joe Wright.

"Their readiness to help and their open-door office policies make it easy to ask for help whenever you need it. My team just completed our senior design project

and Dr. [Jennifer] Mueller-Price answered questions throughout the project. She turned the project reviews around overnight when we were up against our deadline."

At most technical universities, faculty members are rewarded for research, grant writing, and producing graduate students. Teaching is often left to graduate assistants.

"I had some great teachers at larger universities," says Mechanical Engineering Professor Don Richards, Ph.D. "You will find good teachers there. But here, nearly everyone is in that category, or trying to be."

Applied Biology and Biomedical Engineering Professor Kay C Dee, Ph.D., who also came from teaching at a large university, remarks, "I loved research and

loved teaching my subject, but I came to realize that the more skilled I became at these activities, the further I would be removed from them. Ironically, as you move up in your field, you train graduate assistants to do the research and teaching, and you stop doing the things you love. You become a manager whose job is to pursue funding."

Dee's husband and colleague, Glen Livesay, Ph.D., adds, "there are structural penalties to paying attention to students at research universities. I enjoy doing research with my students here at Rose-Hulman. Without graduate assistants, we can eliminate the middle man. Professors can pursue their research passions while working directly with the students they are teaching."



**"We want all our graduates to leave with a Get Stuff Done gene spliced into their DNA. You get that gene if you learn that working very hard can be rewarding and really fun."**

—Kay C Dee  
Biomedical Engineering Professor

Those relationships provide a nurturing educational environment, along with the high academic standards, that brings success as seen in Rose-Hulman students' high achievements in external competition programs, their high acceptance rates into graduate school, and their high employment rates upon graduation.

According to a study of U.S. undergraduate students by UCLA's Higher Education Research Institute, only 36 percent of white, 21 percent of black, and 22 percent of Latino in science, technology, engineering, and math fields finish their bachelor's degrees within five years of initial enrollment. This compares to Rose-Hulman's five-year graduation rate that's greater than 80 percent (among all groups). Our faculty is very good at making one of the most demanding curriculums in America not only survivable, but enjoyable.

Mechanical Engineering Professor Thom Adams (ME, 1990), Ph.D., is a proponent

of active learning which minimizes the amount of time the professor lectures and maximizes the time students are actively using the newly learned material to solve problems.

"If you can make it fun, learning is not a chore," states Adams.

"Professors can nurture the sense of discovery and students make great strides without even realizing they are learning."

"Sometimes a professor comes here with great teaching evaluations from their students at other places, and those evaluations take a nosedive here. That's because the bar is set very high. The students are educated consumers and expect more," Adams says. "It takes a while to get used to a culture that puts so much value on the individual student's experience."

Mary Pilotte addressed Rose-Hulman faculty at a Center for the Practice and Scholarship of Education workshop this winter. "Students persist and graduate when they make a connection with a faculty member, and when they make a connection between the material and their career goals," she says. "The professor makes all the difference in a students' confidence."

"In professional engineering, there is



## AN ALUMNA PERSPECTIVE

Rose-Hulman's emphasis on teaching cleared pathways for me to become a teacher. As a junior, I was perplexed about my career options. I contemplated transferring to earn an education degree elsewhere. Chemistry professors Dan Morris and Ed Mottel were inspirational. Dr. Morris encouraged me to stick it out and earn my Rose-Hulman degree. Then, Dr. Mottel created experiences that were similar to a teaching assistantship, while introducing me to the educational theory behind teaching chemistry.

Today, I am in my 10th year teaching gifted and AP high school chemistry in the metro Atlanta area. As a proud Rose-Hulman alumna, I have been compelled to introduce all my classes to my alma mater and the Operation Catapult program. I am thrilled that one of my AP students will be attending Rose-Hulman in the fall.

The excellent teaching and smaller classes at Rose-Hulman have inspired me to realize my goals. I pursued a master's degree in science education and will start my Ph.D. in chemistry this fall at Georgia Tech.

Erin Gawron, CM/MA 1999  
Chemistry Teacher  
Heritage High School  
Conyers, Georgia



James Mayhew, last year's Dean's Outstanding Teacher Award winner, is praised for his ability to engage students in the learning process.



little room to be wrong," she continues. "This pressure to be right in industry can beat innovation out of you. And yet, innovation is the lifeblood of industry. The confidence that Rose-Hulman students graduate with helps them to be strong enough to overcome these pressures."

Richard House, Ph.D., a professor of English, uses an engineering quality management term to describe his colleagues' process. "There is a strong culture of continual improvement here at Rose-Hulman. As faculty, we have frequent conversations about what we do in the classroom—what worked versus what didn't. We are always tweaking. Frankly, I think it would be boring to teach my courses the same way every time. The fun part of the job is discovering new and creative ways to make



**Richard House**  
makes a point  
in class.

the presentations more interesting and engaging."

Livesay describes one of the biggest surprises he had after joining the Rose-Hulman faculty. He had been challenged to learn how to teach Richards' sophomore-level Conservation and Accounting Principles course. At the end of the quarter, when the team of instructors met to decide on final grades, Livesay thought he was done. "It was late, we were all done grading and ready to take a well-deserved break," he says. That's when Richards reminded the group that the education process wasn't complete. "How do we make the course better?" he asked the group. "We spent the next hour and a half going over the class notes and brainstorming ways to improve the class for next year," recalls Livesay. "I don't think that would happen anywhere else."

*Michael Davids is Director of Marketing. ■*



**Thomas Adams**



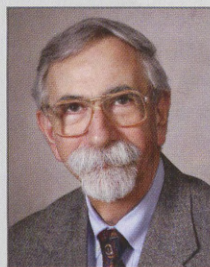
**Carlotta Berry**



**Ed Wheeler**



**Julia Williams**



**Bruce Black**



**Calvin Lui**

## Current Faculty Dean's Outstanding Teacher Award Winners

2011 – James Mayhew, Mechanical Engineering  
2010 – Ralph Grimaldi, Mathematics  
2009 – Elton Graves, Mathematics  
2008 – William Weiner, Applied Biology  
2007 – Diane Evans, Mathematics  
2006 – Richard Stamper, Mechanical Engineering\*  
2005 – Thomas Adams, Mechanical Engineering\*  
2004 – Galen Duree, Physics/Optical Engineering  
2003 – David Stienstra, Mechanical Engineering  
2002 – Dale Bremmer, Economics  
2000 – Phillip Cornwell, Mechanical Engineering  
1999 – Ron Artigue, Chemical Engineering  
1996 – Michael Maloney, Physics/Optical Engineering  
1994 – Caroline Carvill, English  
1993 – David Purdy, Mechanical Engineering  
1987 – Cary Laxer, Computer Science  
1982 – Keith Hoover, Electrical Engineering\*

## Current Faculty Trustees Outstanding Scholar Award

2011 – Ed Wheeler, Electrical Engineering\*  
2010 – Dan Morris, Chemistry/Biochemistry  
2009 – Sudipa Kirtley, Physics/Optical Engineering  
2008 – Julia Williams, English  
2007 – Lee Waite, Biomedical Engineering  
2005 – Kurt Bryan, Mathematics  
2004 – Richard Stamper, Mechanical Engineering\*  
2003 – Mark Yoder, Electrical/Computer Engineering  
2002 – Richard Ditteon, Physics/Optical Engineering\*  
2001 – Phillip Cornwell, Mechanical Engineering  
2000 – Rob Bunch, Physics/Optical Engineering  
1999 – Azad Siahmakoun, Physics/Optical Engineering  
1997 – Charles Joenathan, Physics/Optical Engineering  
1993 – Ralph Grimaldi, Mathematics  
1992 – Bruce Allison, Chemistry/Biochemistry  
1989 – Patricia Carlson, American Literature

## Current Faculty Fulbright Scholars

Patricia Carlson, American Literature  
Scott Clark, Anthropology  
Rebecca Dyer, English  
Thomas Adams, Mechanical Engineering\*  
Carlotta Berry, Electrical/Computer Engineering  
Bruce Black, Electrical/Computer Engineering

\* Rose-Hulman alumni

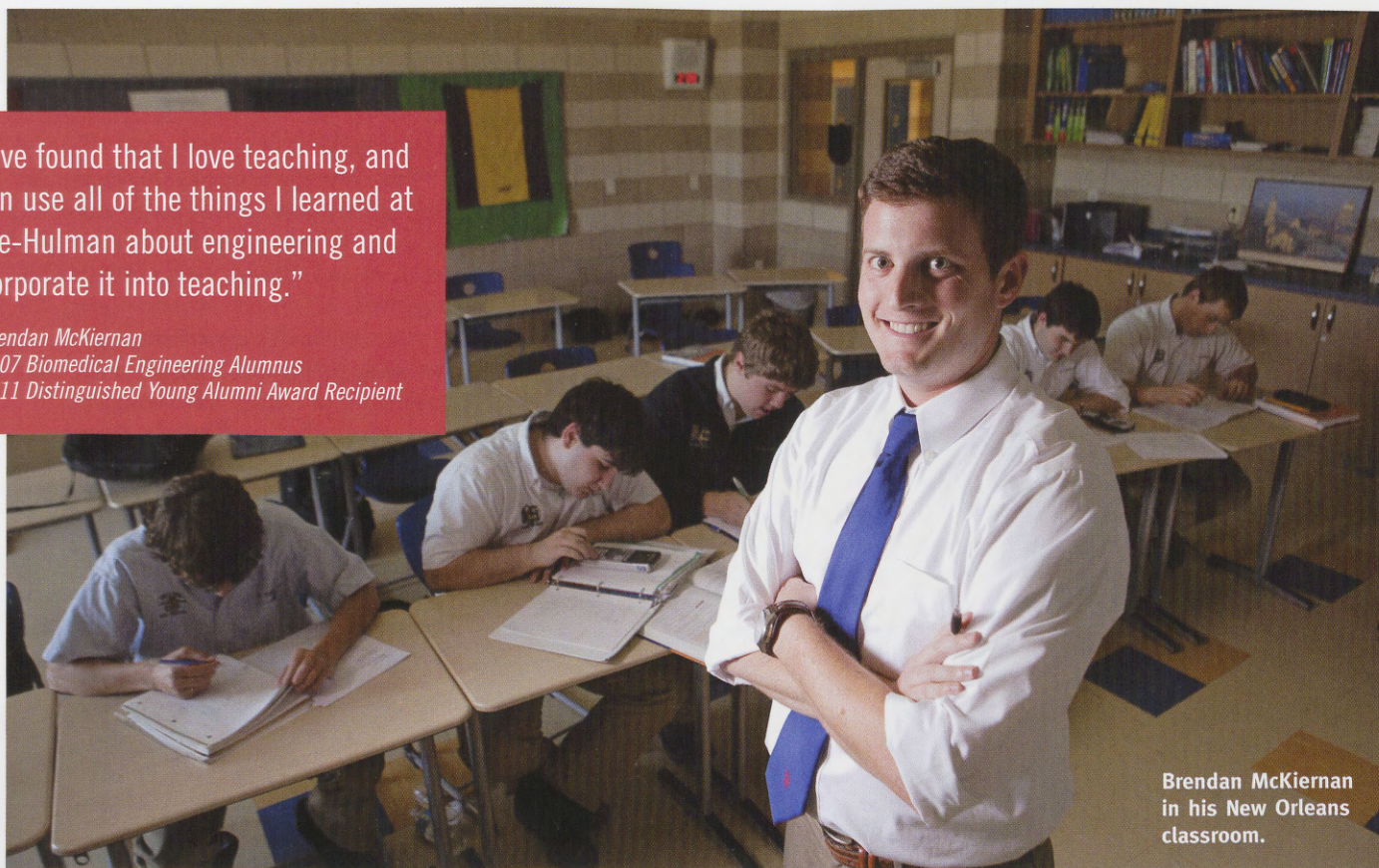
## Alumni Administrators/Professors at Rose-Hulman

Thomas Adams, 1990, Mechanical Engineering  
Ashley Bernal, 2007, Mechanical Engineering  
Zac Chambers, 1994, Mechanical Engineering  
Richard Ditteon, 1975, Physics/Optical Engineering  
David Fisher, 2000, Mechanical Engineering  
Kimberly Henthorn, 1999, Chemical Engineering  
Keith Hoover, 1971, Electrical/Computer Engineering  
Matthew Lovell, 2006, Civil Engineering  
Calvin Lui, 1991, Mechanical Engineering  
Richard Stamper, 1985, Interim Associate Dean of Professional  
Experiences/Professor of Mechanical Engineering  
Ed Wheeler, 1982, Electrical/Computer Engineering



"I have found that I love teaching, and I can use all of the things I learned at Rose-Hulman about engineering and incorporate it into teaching."

—Brendan McKiernan  
2007 Biomedical Engineering Alumnus  
2011 Distinguished Young Alumni Award Recipient



Brendan McKiernan  
in his New Orleans  
classroom.

# Finding the Love of Teaching

Young Alumnus Helping New Orleans Teens Set Math Horizons Story by Terri Hughes-Lazzell/Photo by Chris Granger

Brendan McKiernan (BE, 2007) didn't attend Rose-Hulman to become a teacher. However, it was his education and experiences at the institute that blossomed into a passion for teaching. He is now captivating young minds as a math teacher in New Orleans.

McKiernan stepped off the engineering career path after being disenchanted with the cubical work environment in an internship with a California-based healthcare company. His interest in teaching was piqued when he heard about the University of Notre Dame's Alliance for Catholic Education, a two-year teaching service program at Catholic schools in underserved areas.

"I thought teaching would be challenging and rewarding," he says. "I also liked that I could continue my education and

get my master's degree in education."

McKiernan's teacher training featured two years of service at a school in New Orleans. After leaving the area briefly, he has returned to the area as a math teacher and math department chair at Holy Cross School in the Ninth Ward's Gentilly neighborhood, a mostly blue-collar area rebuilt after Hurricane Katrina. Last year, he also coached and served as athletic director for the middle school.

Looking back at the path not taken in engineering, he has no regrets. His background in engineering allows him to integrate elements of technology, robotics, physics, and science into his classroom and that makes learning math more exciting for his students.

"They want to know how math applies

to engineering and other careers," he says. "I can give them that perspective. They know I was trained as an engineer and they respect that."

McKiernan has found that teaching fits him. His experiences as a Residential Assistant and Sophomore Advisor at Rose-Hulman, as well as working at Catapult summer camp, made him comfortable leading young people.

"Interacting with students makes teaching worthwhile," he says. "The academic expectations at Rose-Hulman helped me value educational challenges. I want to help my students get the most out of their potential. I'm helping students achieve that every day in the classroom. I can't wait to hear about the exciting things that my students do in the future." ■





Mike Fowler works with chemistry students at Indianapolis' Ben Davis High School.

## Alumni Go Back to Classroom to Share Their Experiences with Others

By Terri Hughes-Lazzell

During his 28-year career as an engineer and manager, Rose-Hulman Mike Fowler (CE, 1983) found the experiences he enjoyed most were those opportunities he had to mentor young engineers and scientists. So, he took early retirement

from Indianapolis' Vertellus Specialties Inc. last year to begin a second career as a science teacher through the Woodrow Wilson Indiana Teaching Fellowship program. It prepares future teachers to work in Indiana's high-need schools.

"For me, it was quite a leap," Fowler says about moving from engineering to teaching. He will earn a master's degree in education next year from the University of Indianapolis.

Education has become more engaging and activity-based since Fowler was in school. "There's more effort to reach all students and engage them at all levels," he says.

One of Fowler's most satisfying teaching experiences came when he created math-related video lessons to help a struggling student in an honors chemistry course. "The video lessons helped her and she's back to a B-level," he says proudly.

A similar story comes from Robert Hynes (CE, 1975), who discovered the AmeriCorps program after retiring as a manager for a northwest Indiana steel

**"When the 'light-bulb moment' comes—when they begin to understand—that's when I know that what I'm doing is valuable."**

*—Robert Hynes (CE, 1975)  
AmeriCorps Volunteer*

company. He had been searching for a meaningful way to help students improve their math skills.

"I was doing substitute teaching, but realized I could contribute more if I could work one on one with students," Hynes told *The Munster Times*. He now reports to a middle school every day for a full schedule of tutoring sessions with seventh- and eighth-grade students.

"When they begin to understand and that 'light-bulb moment' comes—that's when I know what I'm doing is valuable," he says.

Another alumnus, Mark Ware (ME, 2000; MSBE, 2003) spent six years as a teacher for an inner-city Houston high school after completing the two-year Teach for America program. The program helps successful professionals train to become teachers at urban and rural public schools with low-income students.



"I had always been exposed to great education in high school and then at Rose-Hulman. I knew the qualities that went into being a good teacher," says Ware. He later pursued an MBA at Rice University and is now using his technical and presentation skills as the operational benchmark coordinator at Stanford University Hospital and Clinics.

"I greatly enjoyed my work in solving educational problems, and I continue to look forward to solving new problems in the healthcare industry," states Ware.

Bryce W. Clark (ME, 2002) taught advanced-level physics in Tanzania, Africa, through the Peace Corps. "My Rose-Hulman professors helped me see that there were more options available than traditional engineering professions," he says.

Later, as a Peace Corps Volunteer Fellow, Clark earned a nursing degree



**Nick Bloss (CE, 2008)** is among alumni that have helped others as Peace Corps volunteers. He taught math and science for two years in Namibia, and now works as a construction supervisor on an island off the coast of Abu-Dhabi.

in 2006 from Johns Hopkins University and now works with a New York City outpatient clinic for people living with HIV.

Bryce's brother, Chester (ME, 2005), was stationed in Namibia, Africa, teaching math and science as part of the Peace Corps from 2005 through 2007. He states he learned as much as his students.

"My students had a great willingness to learn," he says. Chester is now working on his master's in education at the University of Arizona as a Peace Corps Fellow.

These alumni are proving that a passion for learning can be even more fulfilling when it is shared. ■

## Alumnus Also Among 'Best Professors'

**Stephanie (Cohen) Gould (Chem, 2000), Ph.D.**, Assistant Professor of Chemistry at Texas' Austin College, was among the nation's top college professors featured in The Princeton Review's *The Best 300 Professors* book. She believes that learning happens when a student is being stretched to think critically about a problem. "Having high expectations pushes the students," she says. "Most of them probably don't appreciate those expectations during the classes, but a few years later they do." She earned a master's and Ph.D. from Arizona State University, and specializes in organic chemistry.



**Stephanie Gould**

## Alumni Past College Presidents

**Fujio Matsuda**

**Civil Engineering, 1949**

**University of Hawaii, 1974–1984**

The nation's first Asian-American university president helped create a vibrant institution that makes all Hawaiians proud.



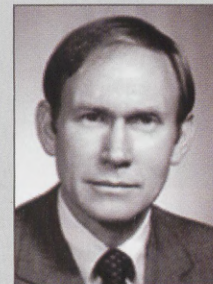
**Fujio Matsuda**

**William S. Gaither**

**Civil Engineering, 1956**

**Drexel University, 1984–1987**

Led the creation of 11 new majors, increased alumni giving, and worked on programs to enhance minority student enrollment. He was an expert on ocean engineering and frequently testified before Congress on environmental issues.



**William S. Gaither**

**Matt Branam**

**Civil Engineering, 1979**

**Rose-Hulman Institute of Technology, 2009–2012**

After successful leadership roles with the American Red Cross and UPS, Branam returned "home" to provide visionary leadership and brought many new enhancements to the college.



**Thomas Enneking**

## Alumni Current Education Leaders

**Thomas Enneking, Civil Engineering, 1977**

Provost, Marian University

**Jonathan Holtz, Civil Engineering, 1974**

Dean, Skanska University (in-house corporate training)

**Philip Gerhart, Mechanical Engineering, 1968**

Dean of Engineering, University of Evansville

**John Snow, Electrical Engineering, 1968**

Dean of Atmospheric/Geographic Science, University of Oklahoma

**Erich Friedman, Mathematics, 1987**

Former Chair, Math/Computer Science Department, Stetson University

**Robert Marks, Electrical Engineering, 1972**

Distinguished Professor, Baylor University

**Eugene Stuffle, Electrical Engineering, 1966**

Associate Dean of Electrical Engineering, Idaho State University

**Eugene LeBoeuf, Civil Engineering, 1985**

Associate Chair of Civil Engineering, Vanderbilt University

**Richard Flora, Math Economics, 1974**

Dean of Veterinary Technology, St. Petersburg College

**Dane Mellor, Civil Engineering, 1976**

Chair of Division of Business, Bob Jones University



**John Snow**





Showing off the many uses for their campus mobile app are (from left) Kevin Wells, James Theis, Bryan Watts, and Scott Glowski.

## Senior Design Projects Provide Valuable Hands-On Lessons, Help Others

By Dale Long

The sound of Mason Unton's tennis shoes scampering down the hallway of his elementary school was music to the ears of his parents and the three senior biomedical engineering students that designed a device to assist his walking movement.

The 6-year-old boy has spastic cerebral palsy, which limits movement of his right hand and both of his legs. He spent his first days on life support, and physicians didn't give much hope for a long-term prognosis. His mother's wish was for Mason to someday return her loving smiles.

Mason's parents, Chris and Kristy Unton, approached Rose-Hulman for help

in updating a juvenile assistive walking device that would support their child's continued physical development. It will also allow Mason to join friends playing sports.

"He's advancing every day, and this device will give him more independence," says Chris (CS, 2002). "The fact that my college is helping my son makes this even more special."

Seniors Aaron Kiraly, Jordan Oja, and Geoff Schau spent considerable time getting to know Mason and his parents. Special requests included a seat, hand brakes, and something green, Mason's favorite color.

From there, the students studied video

of Mason's movements. They examined physical tolerances, taking into account that Mason is an energetic boy. Finally, they created a prototype with numerous hand-crafted parts.

"This is about as hands-on as a project can get," says Schau.

The walking device was one of several biomedical engineering capstone design projects students completed this academic year for personal or corporate clients.

"We really believe that students get a lot out of doing real projects for real people," says Kay C Dee, Ph.D., co-instructor of the biomedical engineering design course.



### Revitalizing Gary Neighborhood

Four civil engineering students have helped alumnus Tony Broadnax (CE, 1989) take a step closer to revitalizing a neighborhood in his Gary, Indiana, hometown by creating a livable community to work, live, and play.

A community planning report supports the proposed development project by highlighting its impact on community resources. The students examined major characteristics of city planning that included the potential cost of separating storm and sanitary sewer systems, and a traffic study that would improve public access from the Emerson neighborhood to the U.S. Steel Yard Baseball Stadium.

"This is a new initiative and there were a lot of problems," Broadnax told *The Times of Northwest Indiana* about the ambitious plans for his old neighborhood. He estimates it will be a five- to eight-year project. "The students did very high-quality work," he adds.

The project was an ideal, real-world experience for the students. Being able to help an alumnus was another benefit.

"This is exactly what civil engineering is—making an impact on people's lives," says senior James Ricci.

Other students involved in the project were Kelli Phillips, Jim Schuler, and Joseph Wright.



Senior civil engineering students get valuable feedback from alumnus Anthony Broadnax (top, second from right) for a design project to revitalize a Gary, Indiana neighborhood. Meanwhile, 6-year-old Mason Unton (left) takes his first steps in a new assistive walking device created by three biomedical engineering seniors (top photo by John Luke/The Times of Northwest Indiana).

### Blue Ribbon Environment Project

A team of four senior mechanical engineering students received the Judge's Choice Award for best design paper in the 22nd IEE/WERC Environmental Design Contest this spring at New Mexico State University. One of the team members, Hannah Chapin-Eppert, earned the Terry McManus Memorial Award for demonstrating a personal drive for environmental excellence.

The students took on the challenge of designing a system that utilizes running industrial wastewater to create between 10 and 18 kilowatts of hydroelectric power. The system has a payback period of 4.6 years. A design model allowed the team to showcase concepts involving the

turbine wheel and generator.

"We were clearly focused on developing a sustainable project," says team member Morgan Lopez.

Chapin-Eppert is ready for a career in sustainable engineering after tailoring her course electives in areas of sustainable energy systems, renewable energy, and wind turbines.

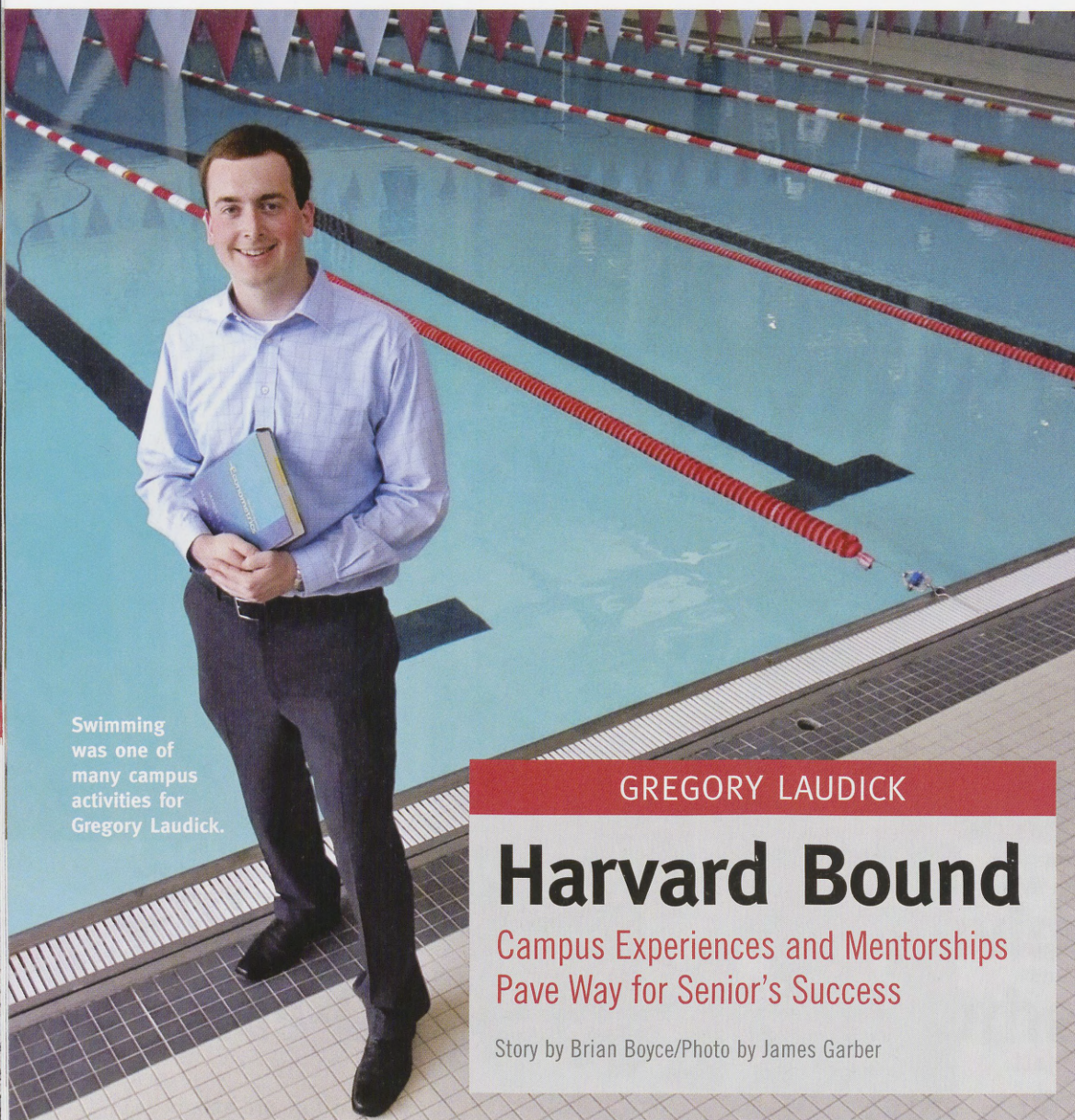
Other members of the award-winning team were Robert Cartwright and Keith Kelley II.

### There's An App for Campus

Computer science and software engineering students have developed a mobile application for campus that will allow visitors, students, faculty, staff, and alumni to view an interactive map with the ability to explore any building. The project earned this year's Doc Criss Outstanding Senior Project Award.

"We're opening the campus to other worlds through technology," says Kevin Wells. He joined Scott Glowski, James Theis, and Bryan Watts on the project. ■





Swimming was one of many campus activities for Gregory Laudick.

GREGORY LAUDICK

# Harvard Bound

Campus Experiences and Mentorships Pave Way for Senior's Success

Story by Brian Boyce/Photo by James Garber

Ever so humble, Gregory Laudick lets his accomplishments speak for themselves, and his forecast for the future is promising.

Completing four years at Rose-Hulman with a 3.96 grade point average, Laudick has been involved in a long list of campus activities, including four years as a varsity swimmer. His postgraduate pursuits will have him working at General Electric Aviation as a maintenance contract engineer before enrolling in the prestigious Harvard Business School 2 + 2 Program.

Where Laudick is going reflects where

he's been and demonstrates who he is. The double-major in mechanical engineering and economics, with a minor in mathematics, credits Rose-Hulman and his high school, Indianapolis' Brebeuf Jesuit Preparatory School, with paving the way for his future success. The high school athlete with a 4.0 GPA chose Rose-Hulman over schools such as Notre Dame and Washington University in St. Louis.

"The thing that set Rose-Hulman apart, for me, was the sense of community, particularly the open-door residence life policy," Laudick says. That collegiality carried over to the classroom, where

faculty and staff regularly interact with students. "It creates a very open atmosphere," he adds.

Former mathematics professor Dr. Michael DeVasher offered more than instruction in statistical analysis, but career advice and camaraderie as well. Likewise, Dr. Kevin Christ's instruction in economics was matched by his personal support and attention.

DeVasher's valuable advice to Laudick: the only way to be great at something is to enjoy doing it.

Laudick feels he's found happiness within General Electric's aviation division. He has gained valuable experiences through summer internships at Goldman Sachs in New York; Mussett, Nicholas, and Associates in Indianapolis; and GE Aviation's Onpoint Solutions in Cincinnati. The opportunity to merge his engineering background with economics at GE Aviation helped decide his course for the next two years.

"I definitely like the culture of GE, and I really like the aerospace business," he says, ready to work in

a hybrid that combines business and engineering. "That's something I'm really excited about."

Harvard's MBA program prefers students with work experience. The next two years at GE Aviation, along with his four years at Rose-Hulman, will get Laudick ready for any business challenge.

"Eventually, I want to get into management," he says, adding his ideal position would involve a wide range of activities, from customer service to finance and production. "An all-encompassing role, that's where I eventually want to be." ■





Students Donna Marsh (left), Kelly Macshane, and Dylan Kessler experienced Japanese culture this spring at Japan's University of Aizu.

## Global Experiences Open New Worlds for Students

By Brian Boyce

Rose-Hulman students are taking their college experiences to Japan, Sweden, Turkey, and Germany for enriching global adventures that will enhance their career horizons.

Partnerships with international universities have long benefitted students. This year has been no different, and many have taken advantage of opportunities to participate in a variety of educational and cultural activities overseas.

Donna Marsh, Kelly Macshane, and Dylan Kessler spent three months this spring at Japan's University of Aizu as part of an exchange program between the two leading engineering and science institutions.

Kessler, a sophomore who is majoring in software engineering, attended classes in computer science, while making the time to learn about his Japanese classmates.

"I have always been interested in Japanese culture," he states in a recent

e-mail. "When I was first looking at (attending) Rose-Hulman, I spoke at length with Dr. (Cary) Laxer (head of the Department of Computer Science and Software Engineering) about study abroad opportunities. He told me about his time on a sabbatical at Aizu. When the opportunity came around to apply for the program, I jumped at the chance."

Chris Taylor became interested in travel early in his college career, and, as a freshman last year, jumped at the chance to go to Japan this winter. He completed courses in Japanese culture and geography, and served as the master of ceremonies for a student group's presentation on the mapping translation project at Japan's Ishikawa Prefectural University. A total of 20 students participated in the trip, led by Scott Clark, professor of anthropology, and Mike Kukral, associate professor of geography.

"It's a very positive atmosphere,"

says Taylor, a sophomore mechanical engineering major. "The best way to learn a language is to just immerse in it. Basically, we got over there and we were talking with the Japanese students. I got a piece of paper out and started writing down the phrases I knew we'd use most."

In less than two weeks, Taylor tripled his vocabulary, and now is proficient with using chopsticks.

Sophomore mechanical engineering major LeKisha Bradley will spend the next school year in Germany through the Congress-Bundestag Youth Exchange for Young Professionals. She will attend a two-month intensive German language course, study at a German university or professional school for four months, and complete a five-month internship with a German company in her career field.

"I'm looking forward to experiencing life in other parts of the world and seeing how people live, work, and play," she says. ■



## OUTSTANDING STUDENT ATHLETES



Track All-Americans  
Elizabeth Evans and  
Sutton Coleman.

### SUCCESS ON NATIONAL STAGE

Performances by Elizabeth Evans and Sutton Coleman at NCAA Division III championships:

#### ELIZABETH EVANS – HIGH JUMP

2012 Indoors – National Champion  
2011 Outdoors – National Champion  
2011 Indoors – National Champion  
2010 Outdoors – Second Place  
2010 Indoors – Second Place

#### SUTTON COLEMAN – HURDLES

2012 Indoors (60m) – Second Place  
2011 Outdoors (400m) – Fourth Place  
2011 Indoors (55m) – Sixth Place  
2011 Outdoors (110m) – Eighth Place  
2009 Outdoors (400m) – Eighth Place

(5' 10½") at this year's indoor nationals would have earned All-American honors with an eighth-place finish at the Division I nationals.

Evans has three more opportunities to become the first Rose-Hulman athlete to earn four career national championships and rank among the all-time best in Division III history. She has already qualified for the NCAA outdoor nationals (May 24-26 in Claremont, Calif.).

"Since Liz cleared the bar in her first meet, she's been intently focused on becoming one of the best at the Division III level," says Rose-Hulman Track and Field Coach Larry Cole. "She is a gifted athlete who has worked very hard to get maximum effort and performance in every meet."

Future workouts may be focused on training to compete in U.S. Olympic Track and Field Team trials.

"I would love to continue jumping after graduation and qualify for the Olympic Trials down the road. I'm not ready to end my track career. However, if I don't make it in the jumping world, it's nice to have an engineering degree to fall back on," says Evans, a double major in mathematics and electrical engineering. "My original plan was to graduate, work one or two years, then go back to school and earn a master's degree. Those plans could change if I go

# Soaring to New Heights

## Evans and Coleman Among Nation's Best on Track

Story by Kevin Lanke/Photo by Shawn Spence

The sky may be the limit for high jumper Elizabeth Evans and hurdler Sutton Coleman as they continue two of the greatest athletic careers in Rose-Hulman history.

This spring, the track and field athletes could tie the school record for career All-American awards (six) and once again stand on the awards podium at NCAA Division III national championship

events after being named the Heartland Collegiate Athletic Conference's top track athletes.

And, the Olympics may also be within reach.

The gifted Evans has become a dominant force in high jumping at any collegiate level. The junior has won three consecutive NCAA Division III national championships. Her winning jump



much higher over the next year and a half. If I have a chance, I want to take a shot at making the Olympics.”

Evans’ 3.5 grade point average and athletic accomplishments have also earned second-team Capital One Academic All-American honors in 2011.

Coleman has cleared thousands of hurdles to join Evans as a five-time All-American on the track. He also was a four-year varsity letterman as a football receiver and special teams player. It’s not surprising that he was named this year’s top graduating athlete.

“Sutton has gotten the most out of his athletic skills—as a track and football athlete,” says Cole. “He’s motivated to be the best that he can be, and brings that attitude to perform at his very best.”

Tips from his high school football and track coaches brought Coleman to Rose-Hulman.

“I was pretty set on going to Virginia Tech, where my dad went to school. My high school football coach told me to consider Rose-Hulman because of its No. 1 reputation in engineering,” he says. “The football staff invited me to campus, and I also met men’s coach (Larry) Cole and the track and field team. I thought I had more to prove in athletics and Rose-Hulman would give me the opportunity.”

Coleman won the high and intermediate hurdles titles to help the Engineers earn their sixth Heartland Collegiate Athletic Conference men’s title.

The mechanical engineering major also has a bright future, having accepted a position with Raytheon Space and Airborne Systems in Los Angeles following graduation.

Evans and Coleman are part of a decorated Rose-Hulman track and field history that includes 44 All-American awards, eight individual national championships, and eight national runner-up efforts.

*Kevin Lanke (Econ, '97) is Assistant Athletic Director for Sports Information and Communications.* ■

## ANOTHER SUCCESSFUL ATHLETIC SEASON

### Three Teams Advance to NCAA Tournament

**VOLLEYBALL:** The team reached the NCAA Division III Tournament for the first time in program history after winning the Heartland Collegiate Athletic Conference (HCAC) tournament championship. The squad lost to eventual national champion Wittenberg University in a first-round match. The Engineers established season school records for victories (24-9) and winning percentage.

**MEN'S SOCCER:** The team won the HCAC tournament and advanced to the Division III tournament for the second time in school history. The victory marked the 11th straight, a school record. That stretch would end with a first-round loss to Ohio Northern University in the NCAA tournament.

**MEN'S BASKETBALL:** The Engineers played in the Division III tournament for the first time since 1999 after winning the HCAC tournament title with an overtime victory over No. 16-ranked Transylvania University. North Central College (Naperville, Ill.) came out on top in the NCAA first-round game. The Engineer's 20-9 record was the fourth 20-win season in school history. This tied for second on the season school record list for wins.

### Two Continue Academic All-American Heritage

**ALISA DICKERSON:** The four-year starter and career record-holder added to her resume third-team Capital One NCAA Division III Women's Basketball Academic All-American honors, selected by the College Sports Information Directors of America. She became the first Rose-Hulman women's basketball player to earn the recognition. Dickerson ranked No. 2 in the HCAC this winter in scoring (18.6 ppg) and led the conference in rebounding (8.1 rpg). She maintains a 3.75 grade point average in mechanical engineering.



Alisa Dickerson

**CLINT VATTERRODT:** The senior earned Second-Team Division III Men's Soccer Academic All-American Honors. He became the sixth Academic All-American in men's soccer after maintaining a 3.39 grade point average as a civil engineering major.

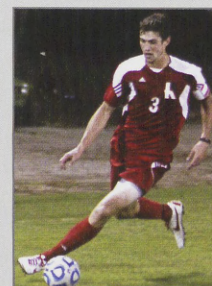


Kyle Kovach

Rose-Hulman students have been earning Academic All-American status for 27 consecutive years, the sixth longest streak among all NCAA Division I, II, or III schools, and the longest in Division III. To date, the institute has had a total of 94 Academic All-Americans.

### Two Fall Athletes Named All-Americans

**KYLE KOVACH:** The junior running back became the first Engineer football player in more than 50 years to earn Associated Press All-American honors as a third-team all-purpose player. His all-purpose yardage average (225.1 ypg) led NCAA Division III, and he earned a second straight HCAC rushing title (1,213 yards). He was Rose-Hulman's first AP Little All-American since Carl Herakovich in 1958.



Clint Vatterrodt

**CLINT VATTERRODT:** Became the Institute's first men's soccer All-American after ranking sixth nationally in NCAA Division III with 21 goals, and seventh nationally with 52 points. He was also named the Heartland Collegiate Athletic Conference's Most Valuable Player. He earned two all-region honors while an Engineer, set a school record with 24 career assists, and stands third in school history with 40 goals and 104 points. ■

Keep track of Rose-Hulman athletics at [www.rose-hulman.edu/athletics.aspx](http://www.rose-hulman.edu/athletics.aspx)



## Alumni Join Kline in Stepping Into New Campus Leadership Roles

Two alumni will have important leadership roles in the campus administration, starting on July 1. Meanwhile, the Institute has taken a progressive step by appointing the first Dean of Innovation and Engagement.

Elizabeth Hagerman, Ph.D. (ChE, 2000), is returning to serve as Vice President for Rose-Hulman Ventures, the institute's successful innovation space. She has a wealth of experience in business development, business assessment, and emerging technology evaluation through leadership roles at Baxter Healthcare.



Elizabeth Hagerman

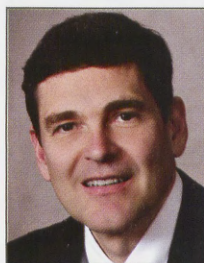
"I'm looking forward to building relationships that help propel the entrepreneurial experiences of Rose-Hulman students to the next level," says Hagerman, a Distinguished Young Alumni Award winner and trustee (2009-12). "The depth and creativity of academia, combined with expertise and culture of business, provide an exciting platform for emerging ideas."

William Kline, Ph.D. will be the first Dean of Innovation and Engagement after leading these efforts during his 10 years as an academic leader and faculty member. He has organized summer innovation workshops for faculty members; has directed the remodeling of five state-of-the-art Myers Hall classrooms to deliver online courses, continuing education, and professional development materials; and helped set up the new Student Innovation Center, a hotbed of creativity and innovation on campus.



William Kline

Richard Stamper, Ph.D. (ME, 1985), will serve a one-year appointment as Interim Dean of Faculty as Rose-Hulman provides administrative, leadership, and managerial experiences for faculty members. He has served as the Head of the Department of Engineering Management, the Interim Associate Dean of Professional Experiences, and the Interim Associate Dean of the Faculty.



Richard Stamper

A faculty member since 1998, Stamper has been named one of the nation's top 300 professors by The Princeton Review, has received the Dean's Outstanding Teacher Award and Board of Trustees' Outstanding Scholar Award, and earned the Jess Lucas Alumni Leadership Award. His industrial experience includes positions with Proctor & Gamble and General Electric, and is a registered patent agent at the U.S. Patent and Trademark Office. ■

## 'Dean' of Invention Speaking to Seniors

The Class of 2012 will be inspired by one of the world's greatest inventors, Dean Kamen, a holder of more than 440 patents and this year's commencement speaker. The founder of the FIRST Robotics Competition, Kamen's organization gave many of our graduates their first experience in engineering.

FIRST (For Inspiration and Recognition of Science and Technology) was founded in 1989. By 2011, the organization was serving more than 250,000 young people, ages 6 to 18, in more than 50 countries.

"Rose-Hulman's reputation for inspiring young people to become innovative technology leaders is well known," he

## PEDAL POWER LEADS TO ANOTHER TITLE



The Human Powered Vehicle Team once again showcased its pedal power, earning another American Society of Mechanical Engineers title after taking top honors in this year's East Coast race.

This marks the eighth time in the past 10 ASME competitions that Rose-Hulman has captured top honors.

"We have maintained high standards," states Michael Moorhead, Ph.D., the team's faculty advisor.

Rose-Hulman once again earned high marks for innovative design with its hybrid regenerative braking/electronic drive apparatus, and a sportsmanship award after volunteering team members to help competing teams. ■



says. "Rose-Hulman is a true partner in my mission to help young people become scientists and engineers."

Kamen also answered students' questions during a spring campus teleconference. ■



# Bailey Challenge

By Professor Emeritus Dr. Herb Bailey

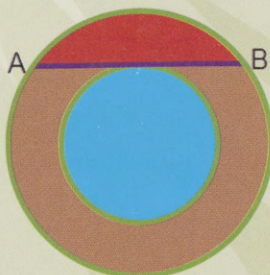
With the election nearly upon us, I have posed some problems of national interest. Congress may be going in circles, family values are at the forefront, and the cost of gas will push us to train travel.

## SPRING PROBLEM NUMBER 1

In a certain town, two-thirds of the males are married, and three-fifths of the females are married. (Marriage between a man and woman) What fraction of the people (male and female) in the town is married?

## SPRING PROBLEM NUMBER 2

Two concentric circles are shown in the figure. The chord  $AB$  of the larger circle is tangent to the smaller circle. The area of the larger circle is twice the area of the smaller. What is the area of the segment of the large circle (shown in red) that is cut off by the line segment  $AB$ ?



## SPRING BONUS PROBLEM

A morning train leaves the station exactly on the minute. After traveling 10 miles, the engineer checks his watch and finds that the minute hand is directly over the hour hand (an eclipse of the two hands). The train traveled these 10 miles at an average speed of 44 mph. Find the time that the train left the station.

**SOLUTION TO THE WINTER BONUS PROBLEM:** Find all isosceles triangles with side lengths numerically equal to the square of the secant of the angle opposite. There were a few solvers and no two solutions were the same. My solution: Let  $AB = AC$ , where  $A$ ,  $B$ , and  $C$  are the vertices of the triangle.

If  $\angle BAC = 2\theta$ , then  $\angle ABC = \angle ACB = 90 - \theta$ . If  $D$  is the midpoint of  $BC$ , then  $\angle DAC = \theta$ ,  $\angle ADC = 90$

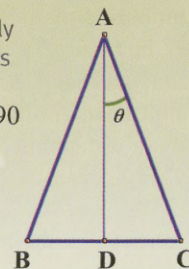
$$DC = AC \sin \theta = \sec^2(90 - \theta) \sin \theta = \frac{\sin \theta}{\cos^2(90 - \theta)} = \frac{1}{\sin \theta}.$$

Also  $DC = \frac{BC}{2} = \frac{\sec^2(2\theta)}{2} = \frac{1}{2\cos^2(2\theta)}$ . Combining these two expressions for  $DC$ , we have

$$4\cos^4(2\theta) = \sin^2 \theta = \frac{1 - \cos(2\theta)}{2}. \text{ Letting } z = \cos(2\theta), \text{ the above equation becomes } 8z^4 + z - 1 = (2z - 1)(4z^3 + 2z^2 + z + 1) = 0.$$

There are exactly two real values of  $z$  satisfying this equation  $z_1 = 1/2$  and (using Maple)  $z_2 \approx -.6766$ .

The two corresponding vertex angles,  $BAC$ , are  $2\theta_1 = \arccos(1/2) = 60^\circ$  and  $2\theta_2 = \arccos(-.6766) \approx 132.58^\circ$ .



Send your solutions to [Herb.Bailey@rose-hulman.edu](mailto:Herb.Bailey@rose-hulman.edu) or to Dr. Herb Bailey, Department of Mathematics, Rose-Hulman Institute of Technology, 5500 Wabash Ave., Terre Haute, IN 47803. If you are an alumnus, please include your class year.

Congratulations to the following solvers of the winter problems:

**ALUMNI:** P. Gottfried, 1949; C. Hirschfield, 1954; H. Brown, 1957; D. Bailey, 1959; J. Dhooge, 1960; J. Snyder, 1962; C. McCoy, 1962; K. Metz, 1969; R. Collins, 1973; D. Wheaton, 1974; J. Schroeder, 1976; M. Bailey, 1976; B. Hunt, 1976; P. VandeMotte, 1977; T. Greer, 1978; M. Denzin, 1979; R. Priem, 1979; R. Joyner, 1980; V. Hasler, 1984; M. Connaughton, 1988; C. Abdnour, 1989; G. Heimann, 1990; B. Burger, 1991; R. Hochstetler, 1991; P. Kimmerle, 1991; K. Bartow, 1998; M. Pilcher, 1998; P. Swickard, 1998; C. Hayden, 2001; C. Cole, 2001; P. Baker, 2006; and J. Rose, 2010

**STUDENT:** T. White, Class of 2014

**FRIENDS:** M. Ashiru, K. Bailey, D. Crisler, A. Cutaia, A. Mahajan, L. Gaintner, J. Ley, and E. Wern



# Haut Protects Environment While Improving Oil, Natural Gas Production

Story by Steve Kaelble/ Photo by Vic Cherubini

A best-selling book from the 1980s proclaimed: "All I ever really needed to know, I learned in kindergarten." Richard Haut, Ph.D., can relate to that feeling—his present career in environmental research was strongly influenced by childhood advice from his mother.

"My mom told me three things that really stayed with me," he recalls. That advice: Leave the world better than you found it; always remember to take just what you need and nothing more; and, if you harm somebody or something, make it right.

Today, Haut is senior research scientist at the Houston Advanced Research Center (HARC), which focuses much of its attention on helping human civilization live in harmony with nature.

Haut earned a bachelor's degree in mechanical engineering from Rose-Hulman in 1974, followed by a master's in aerospace engineering from the University of Tennessee and a Ph.D. from Old Dominion University. An interest in fluid mechanics led him to the oil and gas industry, where he spent much of his career at Exxon.

Needless to say, that industry hasn't always gotten along well with environmentalists. Haut's current work is all about exploring ways to make the business more environmentally friendly by demonstrating that where there is a will, there's a way for the environment and the energy business to coexist successfully.

At HARC, Haut has been principal investigator for the Environmentally Friendly Drilling Systems program, aimed at reducing the impact of petroleum drilling and production. It identifies new technologies and helps to commercialize them. Haut also has been director of HARC's Sustainable Technologies



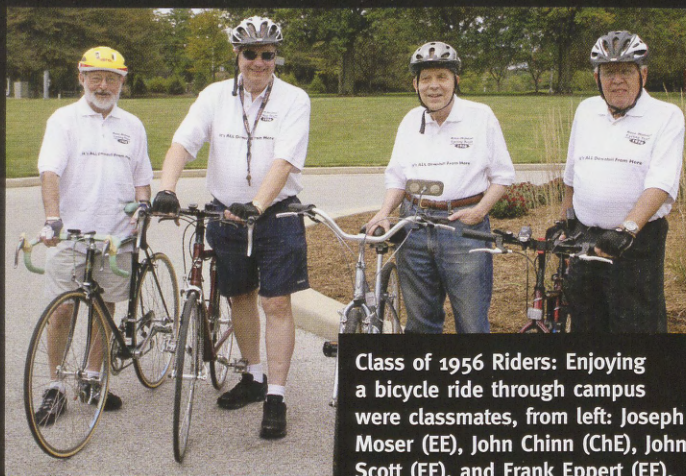
Richard Haut, Ph.D.

Group, investigating everything from green building systems and materials reducing emissions into the air.

Haut's sphere of influence is growing all the time. He helped create the Houston chapter of the U.S. Green Building Council, and played a key role in the Solar America Communities demonstration project in Houston. His expertise was tapped following the oil spill in the Gulf of Mexico, and he chairs the Environmental Advisory Group of the Research Partnership to Secure Energy for America. Haut sees tremendous future in clean-burning natural gas, noting that America has a 175-year supply, and that automakers are working to build cars that are powered by natural gas. ■



## ALUMNI PHOTO ALBUM

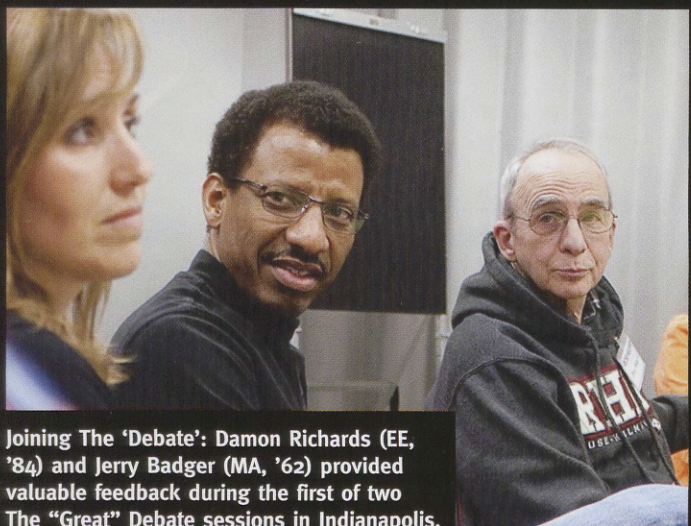


**Class of 1956 Riders:** Enjoying a bicycle ride through campus were classmates, from left: Joseph Moser (EE), John Chinn (ChE), John Scott (EE), and Frank Eppert (EE).

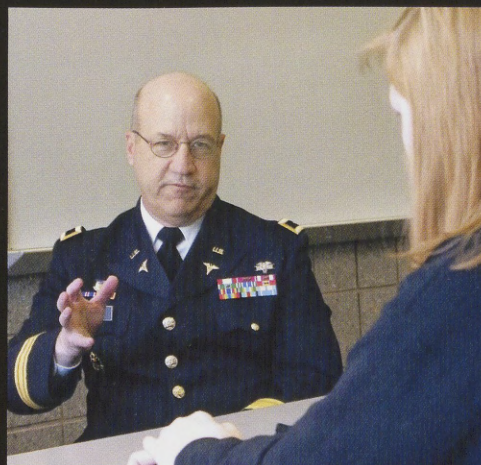
**Record Breaker:** Professor Ashley Bernal (ME, '06) congratulated junior Creasy Clauser for breaking her school track record in the 400-meter dash.



**Museum Artifact:** Bob Casey (ME, '68), curator of transportation at the Henry Ford Museum, gave senior Chad Conway a private tour of the new *Driving America* exhibit. The display features a photo of Conway driving a restored Electric Comuta-Car.



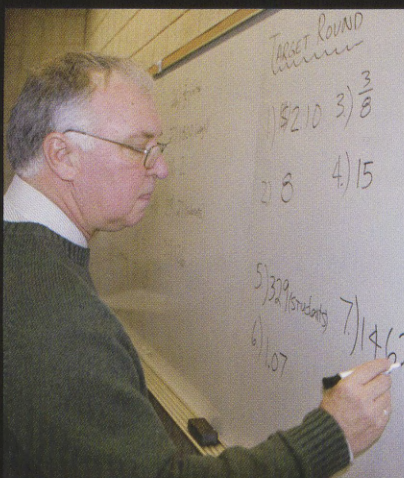
**Joining The 'Debate':** Damon Richards (EE, '84) and Jerry Badger (MA, '62) provided valuable feedback during the first of two The "Great" Debate sessions in Indianapolis.



**Encouraging Students:** Major General James K. Gilman, M.D. (BIO, '74), talked with pre-med students during a recent campus visit. He also gave a presentation on leadership development.



**Kansas City Gathering:** Enjoying good times at a recent alumni social event were, from left: Ashley Erffmeyer (ME, '08; EN, '10), Katie Zack (ChE, '08), Tess Fuller (ChE, '09), Joe Craycraft (ChE, '09), Julie Baas (ChE, '11), Peter Wenzel (CPE, '10), Andrea Raff (ME, '11), Ken Cohn (EE, '89), and Kyle Chmielewski (ME, '10).



**Promoting Math:** Denis Radecki (MA, '72) was the Grading Room Coordinator for this year's Indiana MATHCOUNTS competition, which encourages middle school math education.



# CLASS NOTES

## Class Notes

**1949**

**Richard Bricker (ME)** was the Galveston (Texas) Art League's featured artist of April. The retired engineer for NASA's Johnson Space Center was inducted into the Space Technology Hall of Fame in 1996 for his contributions to the development of fire resistant aircraft seats. He picked up photography in retirement and now captures life in Galveston Bay.

**1968**

**Dennis Fritz (ChE)** received the IPC Raymond E. Pritchard Hall of Fame Award for his dedication and service to the printed circuit board industry. The honor is the highest level of volunteer recognition for IPC, a global trade association. Professionally, Fritz works for SAIC in Indiana, where he's involved with technology and

standards for the Naval Surface Warfare Center in Crane, Ind. He helps the Navy plan and prepare for future technological changes.

**1971**

**Nelson Baxter (ME)** defined 48 case histories of intriguing machinery problems in sound and vibration for the February 2012 issue of the *Journal of Sound and Vibration*. He is owner of ABM Technical Services and is considered one of the world's leading industrial vibration analysts.

**1982**

**Dan Wolodkiewicz (ME)** has become a Certified Financial Planner after meeting experience and ethical requirements by the Certified Financial Planner Board of Standards. He is President of Pinnacle Financial Associates in Beavercreek, Ohio.

**1984**

**Eric Lucas (ChE)** has been appointed Senior Vice President of California-based Acacia Research Corporation, which partners with inventors to license their patents to corporate users. Lucas has more than 15 years of patent licensing experience and most recently he was a consultant for Intellectual Ventures. He formerly was Director of Intellectual Property Business at The Boeing Corporation.

**Rod Schrader (CE)** is the new Chief Executive Officer and Vice Chairman of Komatsu America Corp., the world's second largest manufacturer and supplier of construction, mining, and compact construction equipment. He has been with Komatsu America for 25 years, serving as Executive Vice President and General

## ALBERT ONE OF SWE'S 'NEW FACES OF ENGINEERING'



**Jessica (Farmer) Albert** was featured in the Society of Women Engineers' winter magazine as one of the five SWE "New Faces of Engineering." The honor recognizes young engineers who have demonstrated outstanding technical excellence, and have made a significant and positive impact on the engineering profession.

Albert (ChE, 2004) is a production engineer and the WIN site leader at Dow Chemical's Houston Area Operations.

SWE has also honored Albert with this year's southwest regional Emerging Leader—Professional Award for outstanding technical leadership excellence resulting from her involvement in SWE and community activities.

"Jessica is able to consistently deliver great engineering solutions to address the opportunities she encounters working in our Bayport Operations," says Albert's supervisor, Daniel

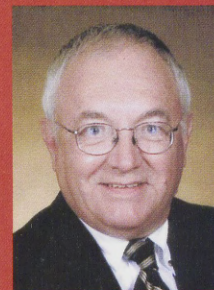
Lurvey. "The fact that she also fosters the next generation of potential engineers makes her especially deserving of this type of recognition."

In 2009, Albert was honored as a distinguished volunteer for the Houston Area SWE Chapter. She has been involved in the Big Brothers Big Sisters program, and has coordinated several service days for the Houston Food Bank and Habitat for Humanity. ■

Chip E. Bradway



Dennis Fritz



Ashvin Lad



Eugene (Gene) LeBoeuf



Rod Schrader





Manager of Komatsu America Corporation's mining division.

**1985**

**Eugene (Gene) LeBocuf (CE)** serves as commander for the Army Corps of Engineers' Contingency Response Unit, supporting global military operations and executing field force engineering missions in support of combatant command operations. In his civilian life, LeBocuf is an Associate Professor of Civil and Environmental Engineering at Vanderbilt University.

**1986**

**Bill Bradford (EE)** has been named President and CEO of Minco Technology Labs. He has served on the Minco Board of Directors since 2010 and has more than 25 years of direct sales, sales management, marketing, and business development experience in the semiconductor industry. He previously was Senior Vice President of worldwide sales for Entropic Communications.

**1988**

**E. Sean Griggs (ChE)** was featured in this year's Indiana Super Lawyers list, which is selected through peer review. He is an attorney specializing in environmental litigation for Barnes and Thornburg LLP in Indianapolis.

**1993**

**Raymond Orie (EE)** is now the Director of Engineering and Operations for the North Star Group. He brings more than 15 years of experience in management and engineering in the public and private sectors. He formerly was Director of Program Management for North Star and was a Senior Scientific Analyst at Jacobs Sverdrup.

**1996**

**Ashvin Lad (ChE)** has recently been named to Chicago's "12 People to Watch in 2012" by Chicago Now after taking over management of the \$6 billion pooled investment Illinois Funds division for the Office of the Illinois State Treasurer.

**1997**

**Chip E. Bradway (CE)** was chosen as one of the "15 Rising Stars in Structural Engineering" earlier this year by *Structural Engineer* magazine. He is Senior Project Manager for CE Solutions in Carmel, Ind., overseeing several higher education projects and the Indianapolis International Airport's Enplanement Drive.

**1996**

**Shawn Wischmeier (ChE)** is the new Chief Investment Officer of Margaret A. Cargill Philanthropies, Minnesota's largest philanthropic organization with \$6 billion in assets. He formerly was CIO of North Carolina's Department of State Treasurer and Indiana's Public Employees' Retirement Fund.

**2001**

**Brooke Enochs (ME)** has joined Frankfurt Short Bruza, an Oklahoma City architecture and engineering firm, as a mechanical engineer. She specializes in HVAC and plumbing design.

**2005**

**Rebecca (Johnson) Reck (EE)** participated in Massachusetts' Science Club of Girls' "Letter to Your Young Self," a letter-writing campaign to encourage young girls to pursue science and engineering careers. She is a Senior Systems Engineer in the Flight Control Systems

## CAREER ACHIEVEMENT AWARD RECIPIENTS



**JASON KARLEN, CHE '92**

**Electrical Leader/Senior Process Engineer  
Ford Motor Company**

As a Six Sigma Master Black Belt and a former Army officer, Karlen has utilized his leadership skills and technical prowess to tackle many complex problems having a direct and positive impact on Ford's customers. His team's efforts helped the Ford Explorer have an average

37-percent improvement in year-over-year customer electrical concerns from 2006-10. In early 2011, Karlen became the electrical leader at Ford's Louisville Assembly Plant and senior process engineer for the launch of the 2013 Ford Escape.



**CHRISTOPHER LANKER, ME '92**

**Vice President, Global Supply Management  
BorgWarner Morse TEC**

Since joining BorgWarner in 1998, Lanker has had a variety of leadership positions in the company, the latest being Vice President of Global Supply Management of Morse TEC. Other experiences have been in the areas of global supply management and engineering: Director of Supplier Development

and Commodity Management, Director of Product Strategy in the Emissions Systems Division, and Director of Sales and Plant Start-Up in the Turbo Systems Division. He holds a patent and earned the 2006 BorgWarner Innovation Award. Prior to joining BorgWarner, Lanker served in engineering and product management positions at Federal Mogul and Coltec Industries.



**KENNETH KOZIOL, CE '92**

**Senior Project Manager  
Transportation Consulting and Management**

Koziol's professional experience spans two careers: in the U.S. Navy as a commissioned officer of the Civil Engineer Corps, and for the last 15 years as a senior program manager specializing in new airport design. He was responsible for the terminal design of award-winning, \$1 billion airport projects

in Detroit and Indianapolis. Both projects have earned global recognition. His current project is Delta Air Lines' hub expansion at LaGuardia Airport in New York City.



**JACK MAYO, CS '92**

**Group Program Manager, Windows Division  
Microsoft**

Mayo has been a contributor in every major release of Microsoft's Windows operating system since Windows 2000, including IE8. His current responsibilities include device connectivity for peripherals and coordinating the effort to port Windows to the ARM processor architecture.

Prior to Windows, Mayo helped deliver the first three releases of Microsoft Exchange, and also drove the deployment of Exchange within IT across the company. He started his career at Andersen Consulting (now Accenture) as a systems and network consultant. ■



# CLASS NOTES

## Class Notes

Department's Systems and Software Group at Rockwell Collins.

**2006**

**Ashley Bernal (ME)** was a member of a Georgia Tech research team that developed a ground-breaking "soft template infiltration" technique for fabricating free-standing piezoelectric ferroelectric nanostructures. The research is scheduled for publication in the journal *Advanced Materials* later this year. Bernal has returned to Rose-Hulman as an Assistant Professor of Mechanical Engineering.

**Garry Wieneke (EE)** finished his master's degree in engineering from Purdue University.

**2007**

**Tim Pulliam (ME)** and **Shaun Quirk (EE, 2010)** took their entrepreneurial dreams on the road as "buspreneurs" in this year's StartupBus, described as "the pressure cooker startup incubator on wheels." The event brought together 10 teams of 30 young inventors for cross-country bus rides from throughout the country with the goal of launching a startup upon arrival in Austin, Texas. Pulliam was a member of the Columbus, Ohio-based Team Siply and called the adventure "the ride of my life." He is a project manager at Energy Systems Network in Indianapolis. Quirk, an engineer for Tesla Motors, was a member of the Stanford bus.

**2010**

**Nicholas McNees (CPE)** has joined DISTek Integrations' office in Dubuque, Iowa, as a software engineer. ■

## Rosebuds

**1996**

**David E. Good (ME)** and wife Bonnye Busbice welcomed their second son, George, last May. He joins 9-year-old brother Xander. The family lives in Seymour, Ind.

**2001**



**Kirk Allen (CE)** and wife Denise had their first child, Aiden, last June. The family lives in Sierra Madre, Calif.

**2005**



**Brad Jones (MA)** and wife Kelly had their first child, Camden, last June. The couple was married in 2009 and lives in Fishers, Ind.



**Alison (Thomann) Vieck (ChE)** and **Jake Vieck (CE, 2006)** welcomed their first child, Austin Timothy, last September.

**2003**



**Aaron Baldauff (ME)** and **Rachel (Selby) Baldauff (CHEM, 2007)** had their first child, daughter Ellenore, on November 30, 2011. Aaron is working at Wright-Patterson Air Force Base while Rachel is a stay-at-home mom after earning a master's degree in chemistry from The Ohio State University. The family lives in South Charleston, Ohio.



**2009**

**Daniel Coons (EE)** and wife **Lisa (Jacobs) Coons (ChE)** welcomed their first child, Gabriel, on July 27, 2011 in Bloomington, Ind. ■

**We Want Your News—Promotions, Achievements, Weddings, and Birth Announcements!**  
Submit articles and photographs to [dale.long@rose-hulman.edu](mailto:dale.long@rose-hulman.edu)



## Marriages



2003

**Walter Flood IV (CE)** married Niki Mastond last July in a ceremony in the Canadian back country officiated by **Chad Dunham (PH/CS, 2003)**. The couple lives in Chicago and expects their first child in August. Walt, son of **Walter Flood III (CE, 1975)**, is an assistant engineer and project manager for Flood Testing Labs. He is also the chair of the Student Activities Committee for the American Concrete Institute and operates national student competitions throughout North America twice a year.

2004

**Matt Howard (CPE)** and Nancy Liu were married in April. He is employed by Midwest ISO in Carmel, Ind.

2006

**Benjamin Barnett (CPE)** and Laura Chandler were married this March in Cedar Rapids, Iowa, where he is an electrical engineer at Rockwell Collins. He added a master's degree in electrical engineering from Rose-Hulman.

**Adam Gossmann (ME)** and Natalie Wilson were married last September in Kansas City, where he is employed by Kiewit Engineers while pursuing an MBA at Baker University.

2007

**David Hargis (CPE)** and Heidi Wetzel were married March 17 in Murfreesboro, Ky. He earned a master's degree in electrical engineering in 2010 from Rose-Hulman, and works for PP&L as an operations engineer.

2008

**Joshua Lee Catt (CS)** and Michelle Belt were married last November and reside in Westfield, Ind. He is a senior automation developer and group manager with Interactive Intelligence of Indianapolis.

**Lt. Casey Boley (EE)** and Leah Nicole Hervey were married in August 2011 in Nashville, Ind. He is a pilot in the U.S. Air Force, stationed at Ramstein Air Force Base in Germany. The couple now lives in Kaiserslautern, Germany.



2009

**Scott Lord (ChE)** and **Natalie Dickman (BE)** were married last October in the White Chapel. Scott is a chemical engineer for Dow Chemical, while Natalie is a field clinical specialist for Biotronik, Inc. The couple resides in Champaign, Ill. ■

## Obituaries

1940

**Willis Lucas (CE)** died on February 29. He worked for Factory Mutual Insurance before ending his career with the City of Tucson, Ariz. He is survived by daughter Marcia Callagy, and sons William and Robert.

1941

**Edward J. Klecka (ChE)**, 92, died on February 18. He was a chemical engineer who helped produce consumer goods and rocket propellants. He is survived by daughters Ann Harrill, Karen Weyandt, Jean Hart, and Ellen Teuscher; six grandchildren; and one great-grandchild.

1946

**Robert T. Penno (ME)**, 87, died on February 11. He spent 25 years at the Allison Turbine Corporation in Indianapolis before retiring from the State of Indiana in 1989. He is survived by sons Robert Prewitt and Thomas Paul Penno, daughters Barbara Ann Isch and Nancy Steketee, and several grandchildren and great-grandchildren.

1949

**Max M. Scott (CE)**, 87, died December 26, 2011, in Bloomington, Ind. He worked at U.S. Steel in western Pennsylvania before returning to his hometown of Bloomington, where he worked for the Rogers Group until his retirement in 1990. He is survived by his wife, Alice Scott, brother, Donald Scott, and several nieces and nephews.

1959

**Richard B. Kirby (ME)**, 74, died on March 14 in Evansville, Ind. He enjoyed reading and programming computers. He is survived by son, James Kirby, daughter, Silistra Reinhart, six grandchildren, and ex-wife, Bertha.

1979

**Roger M. Burger (EE)**, 54, died on April 3 in Belize following a snorkeling accident. He was owner of the Electron Shop/Inventure Electronics, an electronic design and manufacturing business in Goshen, Ind. He is survived by his wife, Rebecca, a son, Zachary, a stepson, Chase Higgins, mother, Martha, two brothers, and a sister.

Special Friends/  
Former Faculty

**Renée Benjaminov**, 87, died on February 10 in Terre Haute. She was the widow of former chemistry professor Ben Benjaminov and an avid supporter of Rose-Hulman's Performing Arts Series. She is survived by daughter, Deborah Gurman Breiter, grandson, Loren Gurman, granddaughters, Whitney Gurman Roberts and Rachael Gurman Campbell, and one great-grandson.

**Stan S. Thomas, Ph.D.**, 92, died on January 18. He taught mechanical engineering and aeronautical science at Rose Polytechnic. After 35 years in academia, he retired as Dean of Engineering Technology at New Jersey Institute of Technology in 1987. ■





Jim Bertoli

## Get to Know Jim Bertoli ... New Alumni Executive Director Wants to Know You

Jim Bertoli may be from western Pennsylvania—and an enthusiastic supporter of Pittsburgh sports teams—but he's well aware of Rose-Hulman's prestige and heritage in his second "hometown" of Terre Haute.

"I have long admired Rose-Hulman, its people, and, especially, the loyal support from its alumni," he says.

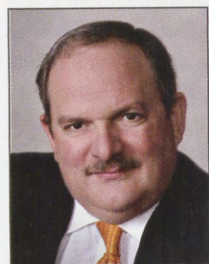
Bertoli is finding out those deep loyalties—one handshake at a time—as he gets acquainted with alumni throughout the country as the new Executive Director of Alumni Affairs.

A member of the Terre Haute community since 1997, Bertoli has served as executive director of the Union Hospital Foundation and United Way of the Wabash Valley, and is a former

head volleyball coach at Indiana State University.

"I'm a people person, and, as a former coach, I appreciate being a member of a winning team. We have won 13 straight national championships (U.S. News & World Report annual college rankings)," he says. "We need to tap into the alumni's loyalty and excitement, provide more and better service to our alumni, and strengthen relationships that benefit alumni and Rose-Hulman."

"I want to get valuable feedback from alumni," he continues. "We want alumni to be familiar and comfortable with the Office of Alumni Affairs. We're here to help them." ■



Robert F. Conrad

## Conrad Helping Alumni Plan for Future

Robert Conrad's strong people skills and knowledge of working with engineers made him a great fit to become

Senior Director of Planned Giving. He joins Vice President for Institutional Advancement Rickey N. McCurry and Director of Planned Giving Chris

Aimone to create a team of attorneys who are experts in wealth management and estate planning.

Conrad has experience building sustainable and successful planned giving programs at Florida State University, Florida International University, and Ohio University, and was instrumental in helping the development teams at these institutions receive the largest gifts in school history. ■

## ALUMNI CALENDAR

### THE "GREAT" DEBATE | JUNE 9

San Francisco

### SUMMER SCHOLARSHIP SCRAMBLE | JUNE 14

Heartland Crossing Golf Links, Camby, Indiana

11 a.m. — Registration

1 p.m. — Shotgun Start

### THE "GREAT" DEBATE | JUNE 16

New York City

### THE "GREAT" DEBATE | JUNE 23

Houston

## SAVE THE DATE FOR HOMECOMING 2012 SEPTEMBER 21 & 22

### ALUMNI GOLF OUTING | SEPTEMBER 21

Hulman Links/Country Club Courses

8:15 a.m. — Registration

9 a.m. — Shotgun Start

### CLASS OF 1967 GATHERING | SEPTEMBER 21

Moggers Restaurant, Terre Haute, 4:30 p.m.

### ALL-ALUMNI RECEPTION | SEPTEMBER 21

Rose-Hulman, 5-7:30 p.m.

### ROSIE'S 5K FUN RUN | SEPTEMBER 22

Sports and Recreation Center

Rose-Hulman, 8 a.m.

### ALUMNI AWARDS BREAKFAST | SEPTEMBER 22

Rose-Hulman Student Union, 8 a.m.

### 50 PLUS CLUB GOLDEN GALA | SEPTEMBER 22

Rose-Hulman Student Union, 5:15 p.m.

### CLASS REUNIONS

#### CLASS OF 1957 | SEPTEMBER 21

Rose-Hulman Student Union, 5:30 p.m.

#### CLASS OF 1962 | SEPTEMBER 21

Rose-Hulman Student Union, 6 p.m.

#### CLASS OF 1967 | SEPTEMBER 22

Stables, Downtown Terre Haute, 6 p.m.

#### CLASS OF 1972 | SEPTEMBER 22

TBD, Off Campus, 6 p.m.

#### CLASSES OF 1977/1982/1992/1997/

2002 | SEPTEMBER 22

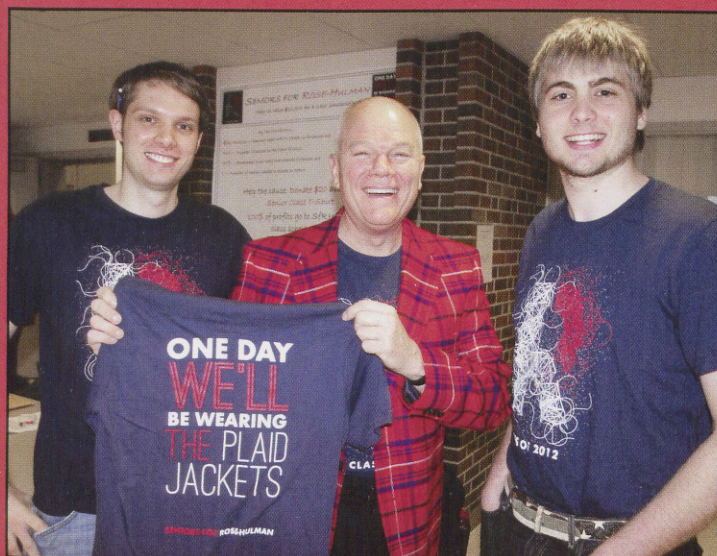
The Ohio Building, Terre Haute, 6 p.m.

#### CLASS OF 1987 | SEPTEMBER 22

Rose-Hulman Student Union, 6 p.m.



# DEVELOPING A SPIRIT OF GIVING



*Giving to Rose-Hulman helps us continue to provide the world's best education in engineering, science, and mathematics.*

## SENIORS FUND LARGEST CLASS GIFT IN HISTORY

The Class of 2012 is leaving quite a legacy. A campus fund-raising drive has helped seniors donate the largest graduating class gift in history. Their efforts were enthusiastically endorsed by the late President Matt Branam. The seniors' generosity has been matched by students from other classes, faculty and staff members, alumni, and special friends.

“Our goal was to educate all students about the importance of supporting Dear Old Rose. Keeping Rose-Hulman the best and continuing on the road to greatness will require the institute to continue attracting the best students. Financial aid comes from all those who choose to support the institute.”

Trenton Tabor, Class of 2012  
Co-Organizer, Senior Challenge

## FRESHMAN PAVES 'OPERATION CATAPULT' PATHWAY

Angelica Cox had such a delightful experience attending our summer Operation Catapult program that it helped make her decision to attend Rose-Hulman. Now, she's willing to help others from her hometown share the same educational adventure—donating up to \$1,000 to support one student to attend the program this summer.



“I loved every minute of Operation Catapult, and it was instrumental in my decision to attend Rose-Hulman. Now, I hope to provide that experience for others.” —Angelica Cox, Freshman Math Student

*Interested in supporting students through a scholarship fund?*  
CONTACT THE OFFICE OF INSTITUTIONAL ADVANCEMENT AT 812-877-8453



**THANK YOU FOR YOUR GIFT!**  
**Rose-Hulman Institute of Technology**  
Office of Institutional Advancement  
5500 Wabash Avenue  
Terre Haute, IN 47803  
www.rose-hulman.edu  
tollfree: 1-800-248-7448, ext. 8159



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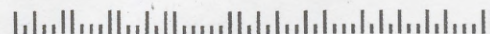
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## YES, I WANT TO SUPPORT ROSE-HULMAN. ENCLOSED IS MY GIFT.

Name \_\_\_\_\_ Class Year \_\_\_\_\_ Phone Number \_\_\_\_\_  
Address \_\_\_\_\_  
E-mail \_\_\_\_\_

I'm making a gift of \$ \_\_\_\_\_ by (please choose one option):

- ☐ **Check** (payable to Rose-Hulman Institute of Technology)  
☐ **Credit Card** (one-time or recurring): ☐ Visa ☐ Mastercard ☐ American Express ☐ Other

\_\_\_\_\_ This is a one-time gift of \$ \_\_\_\_\_ (whole dollars only)

\_\_\_\_\_ This is a monthly recurring gift of \$ \_\_\_\_\_ (each month)

Start Date \_\_\_\_\_ Stop Date \_\_\_\_\_

Account Number \_\_\_\_\_ Exp. Date \_\_\_\_\_

Authorized signature \_\_\_\_\_

To make your gift online, please visit our secure Web site [www.rose-hulman.edu/give](http://www.rose-hulman.edu/give).

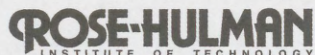
- ☐ Credit this gift equally to my spouse (spouse's name and class year, if applicable) \_\_\_\_\_

### Multiply Your Dollars

If you or your spouse is affiliated with a company that has corporate gift match, please indicate:

Name of Company \_\_\_\_\_

- ☐ Form enclosed ☐ Completed form online



Office of Institutional Advancement ☐ 812-877-8217 ☐ [www.rose-hulman.edu](http://www.rose-hulman.edu)

### Please direct my gift to:

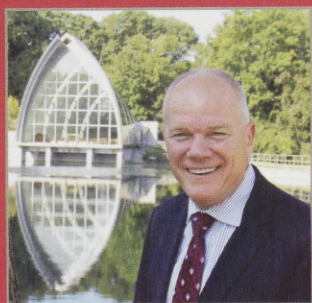
- ☐ The Annual Fund  
☐ The Endowment  
☐ Scholarships  
☐ Other

### For Additional Information:

- ☐ I have Rose-Hulman in my estate plan.  
☐ I am interested in information regarding planned giving.  
☐ I am interested in learning more about corporate and foundation giving.  
☐ I would like to speak to someone regarding making a gift

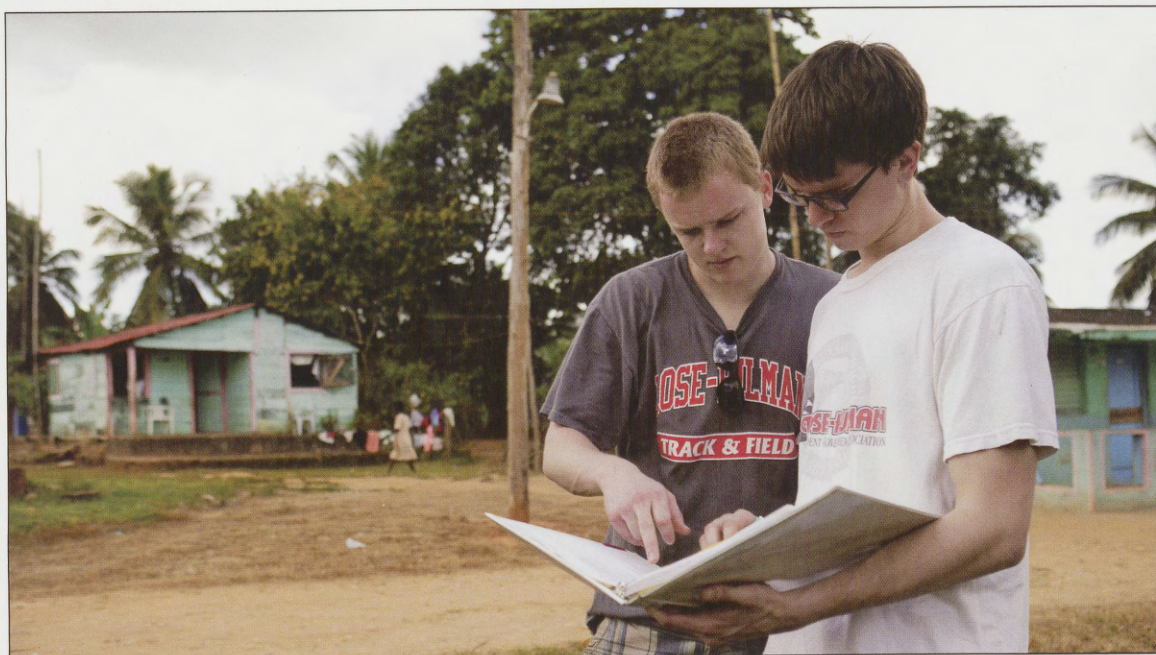
ECHOES Spring 2012





## SPRING ISSUE ADVISORY

As this Spring issue was being finalized for publication, the campus community, alumni, and friends mourned the loss of our visionary and dedicated leader — President Matt Branam. We went ahead with this special issue, which was guided by Matt's pride in his alma mater, its students, its faculty, and staff. We are following his advice: "Let's Make It Happen. Make It Fun."



### PARTING SHOT

#### Global Perspectives

Engineers Without Borders members Marcel Snijder van Wissenkerke (left) and Alex Morelli check notes in an assessment trip this spring to Batey Santa Rosa, Dominican Republic, in preparation of the design and construction of new latrines for the community. (Photo by Rose-Hulman Professor/EWB Mentor John Gardner)