

Fall 2013

## Volume 2013 - Issue 4 - Fall, 2013

Echoes Staff

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ROSE-HULMAN INSTITUTE OF TECHNOLOGY

# Echoes

FALL 2013

Vol. 2013, No. 4



## THE WINNER'S EDGE

TIM CINDRIC FINDS SUCCESS  
AS PENSKE RACING PRESIDENT

# WE EXCEL AT NUMBERS



## WE'RE THE NATION'S TOP UNDERGRADUATE ENGINEERING SCHOOL—AGAIN!

It's 15 and counting. That's the number of consecutive years we have been ranked the nation's top undergraduate engineering college—from a survey of engineering deans and senior faculty members for *U.S. News & World Report's* 2014 Best Colleges guidebook. We're also No. 1 in the following academic programs:

- Chemical Engineering
- Computer Engineering
- Mechanical Engineering
- Civil Engineering
- Electrical Engineering

*"Being No. 1 is an honor that we are proud to share with students, faculty, staff, and our alumni."*

— James C. Conwell, PhD, Rose-Hulman President

## FACULTY ACCESSIBILITY, ADMINISTRATION PUT US ON 'BEST COLLEGES' LIST

We are once again profiled in The Princeton Review's 2014 *The Best 378 Colleges* book, and were ranked among the top 20 in the following categories, based on student surveys:

- Most Accessible Professors – No. 7
- Best-Run Colleges – No. 16
- Students Study the Most – No. 18

The Princeton Review states Rose-Hulman has "a combination of strong academics and personal attention, small class sizes, and a family atmosphere that's a rarity" among colleges specializing in science, engineering, and mathematics.



## WE'RE ALSO A TOP CHOICE FOR COMPUTER SCIENCE MAJORS

Affordable Colleges Online (ACO) selected us for being one of the nation's top colleges for computer science majors, considering degree cost, 30-year net salary return, and accreditation. The institute was ranked No. 16 on ACO's 2013 survey for preparing students "to think critically and comprehensively" and having a computer science program that's "always adopting new ideas and programming languages."

Learn what's happening at Rose-Hulman at [www.rose-hulman.edu](http://www.rose-hulman.edu)

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### ON THE COVER

Tim Cindric, a 1990 mechanical engineering alumnus, has helped lead Penske Racing to remarkable success in the IndyCar and NASCAR auto racing series since being hired as team president in 1999. He was among five alumni receiving the Alumni Association's Honor Alumni Award during homecoming this fall. Read profiles about Tim and the other outstanding alumni inside this issue. (Photo courtesy of Penske Racing)

**WARM WELCOME:** President Conwell greeted incoming students and their parents to the Rose-Hulman family this fall. (Photo by Chris Minnick)



# Hitting the Ground Running

## We Have Something Special that Attracts the Best, Helps Them Grow and Prosper

by President James C. Conwell, PhD, PE

Everyone knows the dangers of arriving somewhere with expectations that are too lofty. My expectations were high when I returned to academia to become a college president after spending a considerable amount of time as an engineering executive. Before coming to this campus, I already knew about the institute's outstanding instruction and the

impressive caliber of graduates it produced. Rose-Hulman, I was promised, would be a remarkable and exceptional place.

However, I did not set my expectations high enough because now, with the new school year starting, and with each new day, I have been continually amazed by what I observe here.

## MESSAGE FROM THE PRESIDENT

Follow President Conwell  
@RoseHulmanPrez

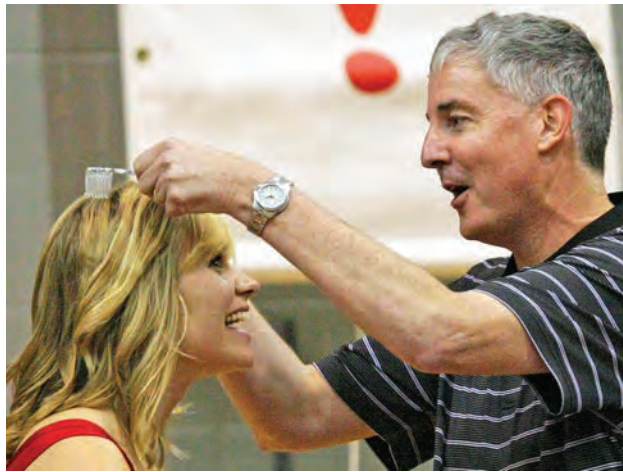
To begin with, I was pleasantly surprised to find that the commitment to undergraduate education here is far greater than what I had envisioned. I have found ingrained at Rose-Hulman an overarching expectation that being an effective and engaging teacher is of the highest importance.

That commitment comes through in the creativity and passion driving the way curriculum is taught. In all of the classes I have visited, I have been astounded by the total engagement of the students with the faculty—the discussions, the questions, and comments. Just as important, the commitment to learning shines through in faculty members' open-door culture and the fact that students regularly send e-mails to their professors after hours—and get prompt responses. (*Learn more about some of our excellent faculty on pages 11-19.*)

Alumnus and trustee Mike Hatfield (EE/MA ECON, 1984) left here and has proceeded to build three successful communications startups. One of those companies, a provider of high-speed fiber-optics systems, was acquired by Cisco Systems for \$7 billion.

Bill, Mike, and all the other alumni I have met have shared with me that their time at Rose-Hulman provided a key foundation for their professional and personal achievements. All have been passionate about their time here and have been incredibly thankful. I look forward to meeting many more alumni in the future.

I have also had the privilege to represent our institute at the 20th anniversary celebration of one of our partner



**GETTING AROUND:** In his first six months, President Conwell helped freshmen move onto campus, crowned 2013 Goldwater Scholar Katherine Moravec as homecoming queen, and threw out the first pitch at a minor league baseball game in Indianapolis – just a few of his many activities.

It's no secret that the best and brightest minds are attracted to joining the student body here. I helped move in students from Colorado, Texas, California, and even Brazil, South America. Our students are so diverse in their talents and interests, as well—I carried in everything from tennis rackets to a set of huge speakers for a student who plays electric guitar.

The common thread I observed was the students' level of excitement about being here on our campus. Without exception, I could tell just how strongly they believe they made the right choice for higher education.

I have also had the pleasure to meet many alumni during my time here. I have been struck by how much pride they have in the education they received here, and what they've been able to do with it in their professional careers.

Bill Fenoglio (ME, 1961), who stepped down this fall after faithfully serving as chairman of our Board of Trustees, told me how much his family valued the chance to study here. He drew funds from a "black box" to help pay for his education, and promised to put money back into the box so that his brother could follow him. (*Read profiles about Bill and other 2013 Honor Alumni Award winners on pages 4-10.*)

institutions, the University of Aizu in Japan. My travels underscored a number of points for me. One is the importance of continually building opportunities for our students to gain global experiences.

Also, I was struck by how solid a reputation we already have globally, given the number of institutions that desire to partner with us. As our Strategic Plan suggests, our job now is to leverage and grow that reputation further—to add to our already wonderful diversity on campus, to create new opportunities for international learning experiences for our students, and to further enhance the recognition and prestige of a Rose-Hulman education. Our foundation is solid and our opportunities are exciting.

I am grateful for the chance to guide this tremendous institution into a future in which the pace of change is ever-increasing. It's a critical and exciting time to be in the business of educating tomorrow's scientists, engineers, and mathematical visionaries. And, I know that Rose-Hulman will continue to lead the way. ■

*James C. Conwell, PhD, PE, is Rose-Hulman's 15th president.*

**ELITE COMPANY:**  
Tim Cindric celebrates one of his five Indianapolis 500 victories with Team Penske driver Helio Castroneves.



# ON THE FAST TRACK

Tim Cindric Helps Give Penske Racing a Winner's Edge

By Dale Long

As someone who's been making daily leadership decisions for a competitive IndyCar series race team, late-night telephone calls are nothing out of the ordinary for Tim Cindric. But, he even admits at being bewildered by a call he answered on a late October evening in 1999 from Roger Penske—the most recognizable name in American motorsports.

"First, I was taken aback because I had an unlisted telephone number. Then, I thought he was calling for my recommendation about someone joining his team," he recalls.

Penske was indeed in hot pursuit of someone to bring new, innovative ideas to Penske Racing. He wanted Tim Cindric.

So began a 14-year tenure leading what has often been referred to as the "New York Yankees of motorsports." The Rose-Hulman mechanical engineering alumnus has overall management responsibility for Penske's racing operations, including teams at the pinnacle of the NASCAR and IndyCar series. This has put him in the winner's circle at the Indianapolis 500 five times, the 2008 Daytona 500, three IndyCar

ROSE-HULMAN AND THE ALUMNI ASSOCIATION recognized five alumni during homecoming with the Honor Alumni Award. These alumni were selected based on their meritorious service, contributions to the national interest of our country, and professional achievement.

Read profiles about these outstanding alumni on pages 4-10.

**“Tim has shown remarkable vision, patience, determination, and a unique ability to lead people. He is always looking ahead to the next challenge, and he is one of the key factors to our continued success at Penske Racing.”**

—Roger Penske, Founder/President, Penske Corporation

championships, the 2012 Sprint Cup championship, and the 2010 Nationwide series title.

Cindric’s career in motorsports has always been on a fast track. He achieved a goal to become a team manager by the time he was 35 years old, being named to lead Rahal-Hogan Racing at age 26. He was the Championship Auto Racing Teams (now IndyCar) series’ Team Manager of the Year in 1998 and 1999.

Penske soon came calling, and by 2005 Cindric had added the responsibilities of managing Penske Performance Inc., with responsibilities over all racing operations (Indy Car, NASCAR, and sports car). He attends Penske Corporation board meetings and observes Penske’s global business empire with revenues in excess of \$19 billion.

“To be entrusted with my responsibilities is certainly more than I could have hoped for at this point in time,” says Cindric.

Alley, just a few miles from the famed Indianapolis Motor Speedway (IMS). Carl Cindric and Porter built engines for Penske and other IndyCar series teams, and it was Carl who urged his son to get an engineering degree in order to realize his dream of becoming a race car mechanic.

“There’s no way I’d be in the position I am now (without graduating from Rose-Hulman). I needed that solid engineering foundation,” says Cindric, who was presented the institute’s Honor Alumni Award at this year’s homecoming. “I watched how hard my father worked building an engine to win the Indianapolis 500. He wanted me to do so much more. If I picked motorsports as a career, he knew that a quality education was the key to success. I have been forever thankful for all of the sacrifices and hard work that’s gone into my career.”



**CALLING THE SHOTS:** Tim Cindric has been leading Penske Racing’s motorsports enterprises since 1999, working alongside legendary team owner Roger Penske. On race days, Cindric is chief strategist for IndyCar series driver Will Power.

“I never sent Roger a resume. He has a way of finding the right people.”

Penske knew that Cindric had the skills to lead the team to victory in multiple racing series.

“Tim has shown remarkable vision, patience, determination, and a unique ability to lead people,” states the Penske Corp. founder and president. “Tim is always looking ahead to the next challenge and he is one of the key factors to our continued success at Penske Racing.”

## Living a Childhood Dream

Ironically, Cindric’s motorsports career began when he was a kid, hanging out alongside his father, Carl, at Herb Porter’s Speedway Engine Development operations located on Gasoline

But Cindric nearly steered away from motorsports, being lured by an engineering career opportunity with a Fortune 500 company.

“It was a very lucrative job offer starting out living in Arizona. It was very tempting,” Cindric admits. “I knew that racing was a very difficult business to get into at the entry level. You have to be very persistent and make a lot of sacrifices relative to time, income, and family. You have to have the passion to do it.”

Asked to describe his dream project, Cindric says, “I’m living it.”

## The Person Calling The Shots

When not involved with Penske Racing’s many business ventures, Cindric gets back to his racing roots by calling the shots in the pits as strategist for the Verizon Team Penske squad and driver Will Power. The team came up three points shy of winning the



## GETTING PERSONAL

### TIM J. CINDRIC, 45

President, Penske Performance Racing, Inc.,  
2005-Present

- Leads Penske Racing South, Inc. (NASCAR Operations)
- Leads Penske Performance Racing, Inc. (IndyCAR operations)
- Leads Penske Racing Holding Company President, Penske Racing, Inc., 1999-2005



### ACADEMIC BACKGROUND

Bachelor of Science in Mechanical Engineering, Rose-Hulman, 1990

### CAREER BACKGROUND



- Team Manager for Team Rahal, 1994-1999
- Engineering Coordinator, Rahal-Hogan Racing, 1993-94
- Production Manager, Rahal-Hogan Racing, 1992-1993
- Interim General Manager/Engineer, TrueSports Racing, 1991-1992
- Engine Engineer, TruePower Inc., 1990-1991

### ROSE-HULMAN CAREER/AWARDS

- Honor Alumni Award, Rose-Hulman, 2013
- Athletic Hall of Fame, Rose-Hulman, 2001
- Basketball Varsity Letterman, 1987-1990
  - All-College Athletic Conference, 1989
  - Honorable Mention Academic All-American, 1990
  - Helped 1989 Team Qualify for NCAA Division III tournament
  - Career Statistics: 1,081 points; 609 rebounds (12th on all-time list)

### PERSONAL RECOGNITION

- Tom Carnegie Award, Indianapolis Motor Speedway, 2013
- Indiana Basketball Hall of Fame Silver Anniversary Team, 2011
- *Inventors Digest* magazine's Class of Leading Mechanical Engineers, 2011
- Pike High School Hall of Fame, 2010
- Herb Porter Memorial Award, 2002
- CART Series Team Manager of the Year, 1998/1999

### FAMILY/NOTABLES

- Resides in Mooresville, North Carolina
  - Wife, Megan
  - Two sons, Tanner and Austin
- Member IndyCar Competition Committee, 2013
- Serves on Governor's North Carolina Motorsports Advisory Council
- Serves on Cannon Board of Visitors

2012 IndyCar Series championship and was fourth this year after winning the last two races of the season. Team Penske teammate Helio Castroneves finished second in the 2013 series standings.

"My job is more than the strategy part of it because just anybody who follows racing could know if you're going to come in or not come in (to pit road)," Cindric says. "It's trying to know your driver and what makes him tick. As the leader of that group, what you're trying to instill is confidence and focus."

And, Cindric utilizes the engineering skills honed at Rose-Hulman on or off the race track. His background as a standout basketball player on campus has also come in handy.

"I took away from Rose-Hulman the knowledge that engineering is a process. There's a thought process and a decision-making process that are key to running a successful business," he says. "In racing, our deadlines never move. The green flag is going to drop on race day, and you're dealing in a very competitive world."

Cindric, a member of Rose-Hulman's Athletic Hall of Fame, adds, "Athletics is all about getting people to work as a team and realizing their importance to achieving the team's goals. In racing, second isn't good enough. Our success from season to season is about getting the right kind of people and giving them the resources to do their jobs. That's what Roger does best, putting the right people in the right places for the team's success."

Cindric affectionately refers to Penske as a "mentor," "father figure," and "good friend."

The respect is mutual, with Penske stating: "From the beginning I saw that Tim was someone that could balance many different pieces of the racing team and do it consistently. The most important thing is his high integrity, on and off the track, which makes a huge difference. In every business that we have, the leadership really decides the fate. I can tell you, [Tim's] the guy there every day. He's the one that calls the shots."

### A Racing Legacy Continues

When we caught up with Tim Cindric this fall, he was in the role of proud father and concerned parent as his 15-year-old son, Austin, was behind the wheel of a Porsche 944 Turbo racer in the Historic Racing Series' Savannah (Georgia) Speed Classic event. He's had success driving in the 2013 Cooper Tires USF2000 Powered by Mazda series (for Andretti Autosport) and the Skip Barber Racing winter series. Austin began driving race cars at 9-years-old.

"Austin doesn't even have a driver's license and he's behind the wheel of a Porsche 944," says Cindric. He's joined by his wife, Megan, whose father, Jim Trueman, was in charge of one of America's most successful motel brands—Red Roof Inn—and former team owner for 1986 Indianapolis 500 champion driver, Bobby Rahal. The couple's oldest son, Tanner, 18, is a budding entrepreneur, with a Nightrain Clothing line that's sponsoring Austin's race car.

"Every parent enjoys helping their children do what they really want to do," Cindric says. "For now, Austin is continuing the family legacy in racing. Where this takes him, nobody knows." ■

*Dale Long is Rose-Hulman's director of media relations.*



# Fenoglio Applied Campus Lessons to Business Success

Story by Carolyn Duffy Marson/Photo by Shawn Spence.

One of Bill Fenoglio's proudest moments came in 2009 when his grandson Guillaume Rousson graduated from Rose-Hulman with a civil engineering degree.

"I had just become chairman of the Board of Trustees. I gave him his degree and a big hug," Fenoglio says. "Now I'm encouraging my second grandson to consider Rose-Hulman."

Fenoglio knows the great sense of accomplishment that comes with earning a Rose-Hulman degree.

"When I graduated, I felt that if I could succeed at Rose-Hulman, I could succeed anywhere," says the 1961 mechanical engineering alumnus. "One of the benefits that Rose-Hulman gave me that lasted my whole life was self-confidence. You worked hard and you succeeded in a tough situation."

Those lessons set the stage for Fenoglio's successful career. He spent 23 years with General Electric Company, rising to vice president and general manager of the component motors and controls business. He later became CEO of the Barnes Group, a Fortune 500 aerospace components company, as well as president and CEO of Augat, an electrical and electronic components manufacturer.

"At Rose-Hulman, I learned that if you want to succeed, you have to work hard. Nobody is going to give it to you. That's an attribute you can learn anywhere, but you learn it in spades at Rose-Hulman," Fenoglio says.

A Terre Haute native, Fenoglio lived at home during his four years at Rose-Hulman. He played baseball, serving as co-captain in his senior year; was co-editor of the *Explorer* newspaper; and an active member of the Lambda Chi Alpha fraternity. These activities, along with the rigorous coursework, helped develop Fenoglio's leadership skills, the importance of collaboration, and an engineering approach to problem solving.

"If you look at some problems, they seem insurmountable, and many people don't know how to start solving them. But what you learn at Rose-Hulman is how to break down a problem into subsets, solve the subsets, and eventually you've solved the whole problem," Fenoglio says.

Fenoglio stepped down this fall after serving four years as chairman of the Rose-Hulman Board of Trustees and 21 years as a trustee. He earned an honorary doctorate in 1987 and helped the institute establish a Strategic Plan that builds upon its past successes.

"Rose-Hulman is a unique college experience: It's small. It's personal. It's a great school," Fenoglio says. "I know there are other good engineering schools, but they aren't like Rose-Hulman." ■

*Carolyn Duffy Marson is a national correspondent for Network World, and has written for MacWorld, PC World, and CEO magazine.*

# Thomas Has New Worlds to Conquer

By Carolyn Duffy Marson

Growing up within a small rural community in nearby Clay County, Mike Thomas was destined to attend Rose-Hulman. Starting at the age of three, his mother told him that he would need a college degree, and that the nearby institution was the ideal place to get it.

“My parents ran a general store. They knew we needed to get a college education,” says Thomas, a 1964 mechanical engineering alumnus. His brother, Steve (ME, 1973), followed him to Rose-Hulman.

Thomas remembers fondly the challenging math and chemistry courses on campus. Succeeding gave him the self-confidence to launch a successful career in the automotive industry.

“The key aspects of a Rose-Hulman education are building confidence and finding something that inspires you so you can hit the ground running,” Thomas says.

Following Rose-Hulman and two years in the Army, Thomas had a rewarding 30-year career at Ford Motor Company, where as director of worldwide automotive planning, he led complexity reduction initiatives to improve engineering and manufacturing

efficiency. As executive director to USCAR, he led Big Three research collaboration efforts with the government to develop fuel efficiency improvement technologies. And, he led China’s Shanghai Automotive Industry Corporation startup automotive practice in Detroit.

Then, in 2004, Thomas created Automotive Insight to provide extensive automotive industry knowledge, experience, skills, and relationships to produce results in areas of fuel

economy, wireless communications for vehicle safety, and new materials.

“We’re helping Chinese automotive companies with strategy, technology, engineering, and investments,” Thomas says. “We have a half-dozen projects underway. We’re bringing engineers from the U.S. over to China. We’re very optimistic about the future.”

While others his age may be retiring, Thomas is looking for new worlds to conquer.

**“Rose-Hulman recognizes the value of diversity. The student body, faculty, and staff are more diverse than any time in our history, and that’s a great achievement.”**

—Mike Thomas, ME, 1964  
Founder, Automotive Insight



HONOR ALUMNI AWARD RECIPIENT  
**MIKE THOMAS**

“It’s the reward of taking on new challenges and pursuing new chapters,” he says. “I see young Rose-Hulman graduates in industry, and they’re not afraid to tackle new things. They know how to solve problems.”

After working in Brazil and traveling to Asia, Europe, and South America, Thomas is a strong advocate of Rose-Hulman’s Strategic Plan and its call to provide each student with a meaningful international experience.

“Rose-Hulman recognizes the value of diversity,” says Thomas, an emeriti member of the Board of Trustees. He points out 48 incoming freshmen are from China. “The student body, faculty, and staff are more diverse than any time in our history, and that’s a great achievement.” ■

*Carolyn Duffy Marson is an Indiana-based freelance writer.*

# Burgner Cherishes Rose-Hulman's Role in Career Success

By Carolyn Duffy Marson

Dave Burgner was almost a Boilermaker instead of a Fightin' Engineer.

In the spring of his senior year in high school, Burgner received a visit from the Rose-Hulman football coach, offering him the opportunity to study engineering while continuing to play football in college. Purdue University couldn't match those possibilities.

Burgner went on to play football on campus for four years, serving as co-captain his senior year (1971-72). He has fond gridiron memories, lifelong friendships from his association with the Sigma Nu fraternity, and received a top-notch engineering background.

"Rose-Hulman's success comes from its focus on teaching students. It was that way when I was there 40 years ago, and it's still that way today," Burgner says. "For me, there was a good balance between the educational and social processes."

Burgner remembers several outstanding professors, including Tom Roper (Calculus III), Robert Steinhauser

(Thermodynamics), and Herman Moench (Electromagnetic Fields and Waves II).

"Fields and Waves is one of the most difficult courses for electrical engineering students," Burgner explains. "I had taken the first course and gotten through it, but I didn't feel like I understood it. Herman Moench taught the second course and brought it all together for me."

Those lessons led Burgner to a successful 40-year career with General Motors' Packard Electric Division and Delphi Corporation, retiring this summer as vice president and global customer director at Delphi. The teamwork pedigree forged on the football field came in helpful as he built valuable relationships with GM executives, mid-level management, and sales team members throughout the world. He wrote and published the book, "It Isn't Magic," detailing

**"Rose-Hulman provided me the ability to think logically about problems and set me up for a lifetime of learning."**

—Dave Burgner, EE, 1972  
Retired Executive  
Delphi Corporation



HONOR ALUMNI AWARD RECIPIENT  
**DAVID BURGNER**

the successful manufacturing processes of a Japanese supplier to Toyota. Career international assignments included stops in Germany, Japan, France, Spain, Italy, Romania, Morocco, Poland, and Turkey.

"Rose-Hulman provided me the ability to think logically about problems and set me up for a lifetime of learning," says Burgner, who went on to earn an MBA from Massachusetts Institute of Technology through a Sloan Fellowship. "Most alumni realize how the college has set them up for career success."

Burgner gave back to his alma mater by encouraging GM and Delphi relations with the institute, helping resurrect the Detroit alumni network group, establishing the inaugural Rose-Hulman Dream Cruise, and leading the creation of a Sigma Nu endowed scholarship fund to honor longtime chapter advisor Bill Sisson. ■

*Carolyn Duffy Marson, a freelance writer, has interviewed several corporate leaders.*

# Jansen Likes Tackling Tech Challenges

By Carolyn Duffy Marson

Erik Jansen fell in love with Rose-Hulman while attending the intensive two-week Operation Catapult summer program after his junior year at Indianapolis' North Central High School.

"I got to live on campus and interact with other geeky, over-achieving math and science students," recalls the 1978 electrical engineering graduate. "I got the benefit of exposure to college-level facilities, ideas, and professors. After that, Rose-Hulman had the incumbent advantage. I knew I wanted more."

Jansen remembers being excited about Rose-Hulman's curriculum when he arrived on campus.

"I'm a naturally curious person, and naturally curious people love nothing more than the toughest mysteries, challenges, and puzzles," he says.

One of the biggest challenges for Jansen, and others, on campus was a course in Information Theory.

"The mathematics (behind the course) would choke 99.999 percent of all mortals. It was brutally difficult," he says, never considering dropping the course. "People who go to Rose-Hulman don't give up, and they don't give in. I learned an important lesson in that course: When things are difficult, you need to find someone who is smarter than you, and work alongside that person to learn."

**"I'm a naturally curious person, and naturally curious people love nothing more than the toughest mysteries, challenges, and puzzles."**

—Erik Jansen, EE, 1978  
Supporter of High-Tech Companies

Jansen's career has been devoted to building technology-based businesses. After executive roles at Texas Instruments, he spent a decade working for Wall Street investment banking firms, and helped form Palo Alto Technologies in California. Now based in Seattle, he is founding partner of the financial advisory firm of Jansen, Remmers, Nichols & Bernier, Inc.

When not investing, Jansen is an avid adventurer with a variety of interests that include travel, photography, and coins.



HONOR ALUMNI AWARD RECIPIENT  
**ERIK JANSEN**

He serves on the U.S. Mint's Citizens Coinage Advisory Committee and helps select the artwork that goes on U.S. coinage, bullion, and honorary gold medals.

Jansen's appreciation for Rose-Hulman continues as he is president of the Lambda Chi Alpha Fraternity Holding Corporation. He was a member of the institute's Board of Trustees from 1997 to 2005, gave the commencement address to the Class of 2000, and received an honorary degree that same year.

"At homecoming this year, we ran our annual meeting for the fraternity. A half dozen guys, ages 18 to 20, walked up to me afterwards and said: 'Thanks for caring about us.' That meant so much to me. I got that benefit from Rose-Hulman long after I graduated," he says. ■

*Carolyn Duffy Marson is an award-winning business and technology journalist.*



Learn more about our interesting faculty members in profiles published in the following Faculty Excellence section.

# Dedicated to Excellence

Excellent educators are superabundant at Rose-Hulman

Stroll through any academic building or the Branam Innovation Center and you're bound to find professors that are dedicated to hands-on learning—and loving every minute of those experiences.

Six professors in mechanical engineering, mathematics, and biomedical engineering were cited in *The Princeton Review's* 2012 *Best 300 Professors* book, many others have received national teaching awards, and others are distinguished fellows in their respective fields.

These faculty members are not only dynamic; they're tough, with high expectations. They're pushing students to develop the skills needed to become the next generation of scientific and technical leaders.

Emma Dosmar (BE, 2011) has fond memories of her classroom experiences with Associate Dean of Learning and Technology Kay C Dee, professor of biomedical engineering. "Professor Dee is very into active learning," Dosmar says. "She's

creative. She's open. She's unafraid to push people to new levels of understanding."

Those skills have helped Dosmar excel in her graduate studies at the Illinois Institute of Technology.

"One thing about Rose-Hulman students is that we have really great presentation skills. Other engineers don't know how to do PowerPoint," she says. "We know how to turn in beautiful work. We know how to be personable with our professors, and we are not afraid to ask for help. We're really good at problem solving. We don't get overwhelmed. We just tackle it step-by-step."

Dosmar's enthusiasm for the Rose-Hulman faculty is shared by alumni of all ages. Gather a group of Rose-Hulman graduates in one room, and they will immediately start reminiscing about their eight-hour final exams, surviving Technical Communications presentations, and coming back from an unsatisfactory grade on an early test. They will also say that this dedicated faculty inspired them to always strive for excellence. ■

# Dee Loves Her Students, Accepts Their Challenges

Story by Carolyn Duffy Marsan  
Photo by Shawn Spence

Kay C Dee will do just about anything for her biomedical engineering students: review their resumes, consult about graduate school, and even advise the lovelorn.

But last year, Dee took that devotion to a new level when they coaxed her into piercing her left eyebrow. She had hesitated to do this during her own undergraduate years for fear it would negatively impact her academic career.

“My seniors were having a bad day, and I mentioned that 20 years ago I wanted to get my eyebrow pierced and didn’t because I wanted people to think I was a serious researcher. My students said that I had to do it now because I’m not a serious researcher; I’m

a serious teacher,” Dee says, with a laugh. “My students were thrilled when they saw it...I keep it because it’s a reminder of how much I love my students.”

**“My students appreciate honesty and the genuine caring behind these conversations.”**

—Kay C Dee, PhD

Dee and her husband, Glen Livesay, PhD, (*see page 19*) joined the Department of Applied Biology and Biomedical Engineering in

2004 because they wanted to focus on undergraduate teaching.

“The opportunity to work with our students is unmatched,” Dee states. “I’m making a difference in these students’ lives. They want to get skills, and they want to grow in their knowledge. I get to help make it fun, and I get to help make it meaningful. They know I’m going to hold them to a high standard, but I don’t have to be mean to make this experience valuable and rigorous.”



While advising senior-year design projects, Dee often has to have difficult conversations with her students while teaching them real-world skills such as situational leadership and conflict resolution.

“If I tell my students something hard, or something they don’t want to hear, they know I’m not trying to hurt their feelings,” she says. “My students appreciate honesty and the genuine caring behind these conversations.”

The one lesson that Dee hopes to pass along to her students is the benefit of hard work.

“I want them to believe they can figure out any technical problem they face,” she says. “I want them to know they have the skills and capabilities they need to be successful and to have confidence in themselves.” ■

*Carolyn Duffy Marsan is an Indiana-based freelance writer.*

## **KAY C DEE, PhD**

Associate Dean of Learning and Technology

Professor of Applied Biology & Biomedical Engineering

**Years at Rose-Hulman: 9**

**Teaches:** Essential Biology, Biomaterials, Tissue-Biomaterial Interactions, Biomedical Engineering Design, Problem Solving in the Biological Sciences and Engineering

**Co-Author:** *An Introduction to Tissue-Biomaterial Interactions*, Wiley-Liss, 2002

**Classic Assignment:**

Students bedazzle posters, puzzles, and mobiles to demonstrate coagulation pathways

## Kline Helps Develop Innovation Workspaces

Bill Kline gets revved up when talking about what’s happening inside the Branam Innovation Center: the human-powered vehicles, EcoCAR, the concrete canoe, robotics projects, and other student-designed prototypes that showcase student innovation in national collegiate competitions.

**BILL KLINE, PhD**  
Professor of Engineering Management  
Dean of Innovation and Engagement

Kline sees these projects as the culmination of the Rose-Hulman experience, where students can apply

classroom learning in a real-world setting requiring collaboration with teammates, making design trade-offs, meeting deadlines and safety requirements, and staying within a budget.

“Rose-Hulman has always focused on practice-based experiences,” he says. “If you look at the stages of product development, we play in the innovation stage. We develop students to become technical leaders and innovators. We move research into commercial implementations.”

For example, the EcoCAR 2 project has students spending three years developing a plug-in hybrid electric engine for a Chevrolet Malibu. Fuel consumption and emissions are being reduced without compromising performance or safety.



“This is as real-world and hands-on as you can get,” says Kline, who joined the Rose-Hulman faculty after 20 years as an industrial engineer. “The students are integrating current technology into a solution that would provide more value in the marketplace.”

These practice-based experiences are a reason employers are anxious to hire Rose-Hulman graduates—many taking leadership roles in the innovative world of sustainable automotive technology.

“We’re preparing and inspiring our graduates to go out and identify the difficult technical challenges in the world and then solve them,” Kline says. ■

—Story by Carolyn Duffy Marsan

## DeVasher Lights Spark in Science Imaginations

A lot of teachers relish at the idea of molding their students and shaping their intellect and interests. “I couldn’t disagree more,” says Rebecca DeVasher.

She sees her role as more of a facilitator, helping students to achieve whatever sparks their imagination. “I want to be the person who supports and empowers them in what they want to do.”

**REBECCA DEVASHER, PhD**  
Assistant Professor of  
Chemistry and Biochemistry

So, DeVasher’s classes have an air of informality and fun, an environment she finds conducive to learning.

“We always have a molecule of the week,” she offers as an example. “We have an everyday example so we can look at it, eat it, taste it, or experience it in some way.”

One week focused on organic aldehydes, of which cinnamon is a familiar and edible example—along with snickerdoodle cookies. Another session took the theme of an alien invasion. Students had to master the concept of the day to save the planet.



DeVasher hopes to save the planet through “green chemistry,” reducing the use of chemicals that are hazardous to the environment or human health. It’s the subject of some of her research, and she has introduced the concept into Rose-Hulman’s science curriculum. ■

—By Steve Kaelble



## Coppinger Paves Way for Science Discoveries

“Ever since I was a little kid, I was an amateur botanist, collecting wildflowers and identifying them,” says Peter Coppinger. “I’ve always loved plants.”

That sense of scientific discovery is the focus of his teaching in the ever-changing world of biology. “I stress that science is a process, not a collection of facts,” he says. “What makes science interesting is to learn how those facts came to be and how we made discoveries.”

**PETER COPPINGER, PhD**  
Associate Professor of  
Applied Biology

That means getting students into the field whenever possible. For example, he and senior applied biology student Nathan Wheeler explored what’s infecting trillium plants near Coppinger’s Michigan hometown. He also started a project that teamed Rose-Hulman students with local high-school science students, studying the antimicrobial properties of tea.

The drive to inspire discovery also shows up through the Interdisciplinary Research Collaborative that Coppinger co-directs. It provides undergraduate students with special research opportunities each summer. And, finally, Coppinger



helped plan the campus’ new William Alfred Cook Laboratory for Bioscience Research, which provides students with hands-on research opportunities involving plant life.

Coppinger is living his dream of teaching at a small college, after earning his bachelor’s degree in biology from Kalamazoo College. “I wanted a job where I could think and talk about science all day long,” he says. ■

—By Steve Kaelble

## Leisher Has Passion for Lasers, Optics Teaching

Plenty of people think lasers are cool, but not too many change directions in their lives because of them. Paul Leisher did.

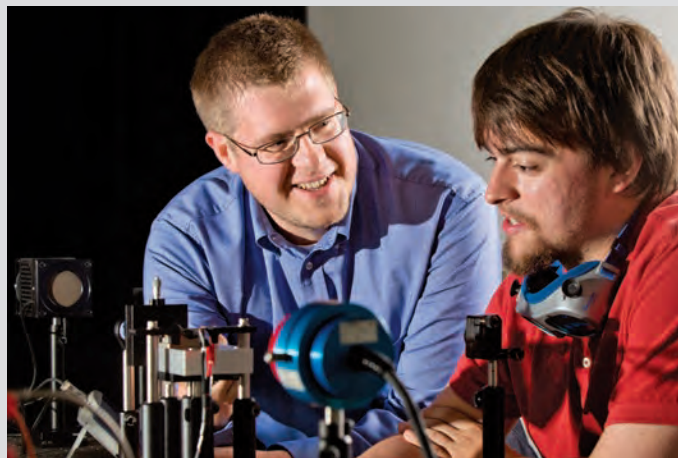
An interest in electrical engineering and software programming, particularly control systems, as an undergraduate student was left unfulfilled in graduate school. He turned to lasers and spent some time as a graduate teaching assistant in

**PAUL LEISHER, PhD**  
Associate Professor of Physics  
and Optical Engineering

the optics area before getting valuable industrial experience at the nLight Corporation, a west coast company. Leisher was in the company’s advanced technology group, being in charge of research and development on next-generation diode laser designs. But he always wanted to get back into college teaching.

In 2011, he got his wish and joined the Rose-Hulman faculty. “I knew Rose-Hulman was a place I could teach lasers to undergraduates. It was the only place I applied for a teaching position,” he says.

Leisher teaches a variety of courses, from introductory physics to semiconductor physics to senior design. And, of course, he teaches



about lasers. “I can’t believe I get paid to talk about lasers,” he states.

In class, Leisher tries to steer learning as much toward the practical as possible. He is known for assigning lots of homework. “We spend a lot more time working the problems than we do discussing the theory and writing down lectures,” he says. ■

—By Steve Kaelble

# Siahmakoun Opens New Microscopic Adventures

Story by Carolyn Duffy Marsan  
Photo by Shawn Spence

Azad Siahmakoun gets excited about the littlest of things.

He loves teaching Rose-Hulman students how to build mechanical devices on silicon chips that are so microscopic that they can't be seen with the naked eye. Siahmakoun is in his 11th year of teaching Micro-Electro-Mechanical Systems (MEMS) courses in a cleanroom facility that offers an advantage to his students.

The Micro-Nanoscale Devices and Systems (MiNDS) facility, recently relocated in Myers Hall, "is a very unusual resource that's available to undergraduates," says Siahmakoun, adding that he makes sure the facility is highlighted on campus tours. "University cleanrooms are usually reserved for research and graduate-level projects. Having this facility helps us recruit quality students."

Siahmakoun's MEMS courses attract students majoring in engineering physics, chemical engineering, mechanical engineering, and biomedical engineering. These students explore the design, fabrication, and testing of solid-state MEMS, which dominate the sensor field.

"MEMS is one of those courses that bring many different fields together across the campus," Siahmakoun says. "Students work in multidisciplinary teams."

Siahmakoun believes MEMS will be the next wave in high-tech manufacturing, and students with experience in this area will have a distinct career advantage.

"The beauty of MEMS devices is that the power consumption is small, the weight is small, and we're using cheap metals," he says. "I'm excited about the idea that an entire optical system could be reduced to a single silicon chip."



As much as he loves introducing students to microdevices, Siahmakoun says his primary role is training students to think like scientists and engineers.

"Technical fields are not fields where you can do memorization," he says. "You need to know how to set up a problem, how to approach it, how to break it down, and how to get final results and a solution."

Later, he adds, "My style is to teach the fundamentals and ask the student to dig a little deeper to see more. Under the surface of fundamental knowledge there is a great deal of depth for students to discover and learn. As you dig deeper and deeper, your chances of discovery and innovation get higher and higher." ■

*Carolyn Duffy Marsan is an Indiana-based freelance writer.*

**AZAD SIAHMAKOUN, PhD**  
Associate Dean of Faculty/  
Director of Graduate Studies  
Professor of Physics and  
Optical Engineering  
Director of Micro-Nanoscale  
Devices and Systems Facility  
**Years at Rose-Hulman:** 26  
**Teaches:** Optical  
Engineering, Physics,  
Nanotechnology, and  
Micro-Electro-Mechanical  
Systems (MEMS)  
**Awards:** Board of Trustees'  
Outstanding Scholar Award  
**Classic Assignment:**  
Uses a simple pendulum to  
explain complex systems like  
modulating electric currents,  
weather forecasting, and  
fractal geometry.

## Ahmed Keeps Eye on Life's Big Picture

Jameel Ahmed loves sharing his knowledge of biomedical engineering with his students. But he's even more thrilled by watching them learn in ways that are not technical.

"You're helping students learn and grow, building something like scaffolding to help support them," he says. "In their junior and senior years, you take away that scaffolding and push them out of their comfort zones. You ask them to do things they might not think they're ready to do."

**JAMEEL AHMED, PhD**  
Head, Department of Applied  
Biology and Biomedical  
Engineering

This big-picture learning includes development of critical leadership and interpersonal relations skills. That's why Ahmed has been a leader of Rose-Hulman's

Leadership Advancement Program and the Summer Innovation Workshop, projects bringing students and faculty together for personal self-discovery and curriculum improvement.

Then there's the Making Academic Change Happen workshop, which brings together national higher education science, technology, engineering, and math educators who are trying to make positive change happen at their institutions. "We're looking



at something they're interested in making happen, and giving them tools to try to make that happen," he says.

This is all part of Rose-Hulman's rich learning environment that Ahmed finds energizing. "There's a great vibe here. We have a great faculty, great students, and a great relationship between the two," he says, expressing how fortunate he feels to be part of it. "You pinch yourself." ■

—By Steve Kaelble

## Bohner is Keeping Pace with High-Tech World

When asked, "What is your dream job?" Shawn Bohner didn't hesitate with the answer, "The one that I have!"

He continues, "You see, I found myself at a point in my career where I had already been a successful engineer, scientist, corporate executive, and academic researcher. What I really wanted to do was to teach really good students."

**SHAWN BOHNER, PhD**  
Professor/Director of Software  
Engineering

So, Bohner jumped at the opportunity to join the Rose-Hulman faculty in 2008.

"Rose-Hulman does what the rest of the nation's

schools need to do—work hard with students, challenge them to grow, and inspire them to reach for more than a job," he says.

Bohner notes that the mathematics for building tangible products, like houses, has been around for millennia. That's not the case with computing, which as a science, and even more so as an engineering discipline, is quite nascent. He believes



Rose-Hulman is building a computing curriculum to set the educational foundations for others to follow.

"My belief is that Rose-Hulman can expedite the material needed to teach these emergent computing topics to our students and, at the same time, become a national leader for computing education," he says. ■

—By Steve Kaelble

# Williams Helps Students Expand Cultural Vision

Story by Carolyn Duffy Marsan/Photo by Shawn Spence

Julia Williams relates Andrew Marvell’s 1650 poem “To His Coy Mistress” to a group of budding 21st century engineers.

“This is not an abstinence poem,” she tells students in her poetry class, as they translate it into modern English. “This is not a waiting-until-we-are-married poem. This is a let’s-go poem.”

Williams is among English professors at Rose-Hulman who are known for pushing their students to develop strong written and oral communications skills that alumni claim give them a distinct advantage in their careers.

“Thinking critically about a text has application to a lot of different things. You can think critically about a report you’re writing or a proposal you have received,” explains Williams, a member of the Rose-Hulman faculty for 21 years. “It’s also about finding connections with other people through music, literature, and the arts. I want my students to have rich, full, and interesting lives, and to see themselves as not merely defined by their jobs. All our classes are about developing the whole person.”

Williams’ commitment to the idea that alumni need more than superior technical skills extends to the Leadership Advancement Program that she helps lead each school year. The program teaches groups of students about basic leadership and communications skills through hands-on activities.

“This program bears fruit in our competition teams and service groups,” Williams says. “We approach leadership as: How do you help other people realize their potential? How do you motivate people to achieve a shared goal? Our students are very talented technical people who don’t see themselves in public service roles.”

Leading by example, Williams is completing a term as president of the Institute of Electrical and Electronic Engineers’ Professional Communications Society. She received the Rose-Hulman Board of Trustees Outstanding Scholar Award for creating and implementing the RosE Portfolio System, an online portfolio assessment tool that is still in use today as the RosEvaluation Tool. She also helps organize a Making Academic Change Happen conference annually on campus.

Williams enjoys teaching at Rose-Hulman because she has the freedom to try new approaches in the classroom.



She likes to bring in outside speakers and take students to see plays in Bloomington or Chicago.

“The culture for faculty is that you get to decide what you want to do as long as it serves the students,” Williams says. “We can do a lot of things that would be more difficult at another college.”

One value Williams hopes to instill in her students is flexibility, a trait that engineers sometimes struggle with due to the discipline of their training.

“The students who have the greatest relationships are the ones who value flexibility,” she says. ■

*Carolyn Duffy Marsan is an Indiana-based freelance writer.*

## **JULIA WILLIAMS, PhD**

Professor of English  
Executive Director, Office of Institutional Research, Planning, and Assessment

**Years at Rose-Hulman:** 21

**Teaches:** Poetry, British Literature, Drama, and Technical and Professional Communications

**Classic Assignment:** Students record each other reciting their favorite poems

**Breaking Ground:** Helped create and implement the RosE Portfolio System; facilitator for Making Academic Change Happen Conference, Leadership Advancement Program, and RosEvaluation Conference; founder of technical communication program

**National Attention:** President of IEEE Professional Communications Society; 2010 Sterling Olmsted Award (ASEE Liberal Education Division), 2008 Board of Trustees’ Outstanding Scholar Award; 2007 Council for Higher Education Accreditation Award, 2007 HP Technology for Teaching Award, and 2005 Microsoft Research Award

## Rickert Hits a Home Run with Math Problem Solving

Just how high does a fly ball fly? The architects designing Seattle's Safeco Field in the 1990s needed to know, because it seemed possible that the new baseball stadium's retractable roof might interfere with the game below if a fly ball would hit the ceiling.

The expert they sought was Rose-Hulman mathematics professor John Rickert. His calculations indicated that it was indeed possible, but no more than a couple times a season.

**JOHN RICKERT, PhD**  
Associate Professor of  
Mathematics

Architects didn't have to alter the stadium's design.

Rickert was the perfect person to ask. Two of his biggest passions are mathematics and baseball,

and there's probably no sport more fixated on numbers and statistics than baseball. "I started getting interested in it when I was about 6 years old," he recalls. "I got baseball cards and started playing with the numbers. I started to get interested in the stories that the numbers tell."

Membership in the Society for American Baseball Research was a natural fit for Rickert. And, he has brought his interest



in baseball into the classroom, creating a "Mathematics and the Physics of Baseball" course.

Rickert is also known on campus as a general trivia buff. "I know a lot of other useless facts," he admits. That knowledge helped lead some victorious college Quiz Bowl teams during his days as a student. "When Trivial Pursuit came out, no one would play me." ■

—By Steve Kaelble

## Olson is Passionate about Undergraduate Research

Brain-controlled wheelchairs. Supersonic nozzles. Robotic cockroaches. These are some of the innovative research and design projects that Lorraine Olson is helping Rose-Hulman students accomplish through a program she co-founded two years ago.

Olson, a professor of mechanical engineering, leads the Independent Projects and Research Opportunities Program (IPROP). It gives students access to quality undergraduate research opportunities in Rose-Hulman's flexible educational environment.

**LORRAINE OLSON, PhD**  
Professor of Mechanical  
Engineering

The program, funded with a \$15,000 annual grant from ArcelorMittal, supports 40 students each academic year.

Olson plans to employ dozens of undergraduates on

her research, which is aimed at earlier detection of breast cancer. She and her husband/Department of Electrical and Computer Engineering Chair Robert Throne, PhD—both cancer survivors—are developing a mathematical model to examine breast tissue. They joined Department of Chemical Engineering Chair Adam Nolte, PhD, in receiving a three-year, \$300,000 grant from the National Science Foundation to create a robotic device that can identify stiffness in simulated breast tissue associated with cancer.



"By the end of the three years, we hope to have a computer system that can accurately predict what's going on with the breast tissue phantoms that we are using in this research," says Olson. She received the Board of Trustees' 2013 Outstanding Scholar Award in recognition of her research and IPROP leadership.

"I am thankful that the trustees continue to emphasize the importance of scholarship and professional development. It's important that Rose-Hulman faculty members are continuous, life-long learners," she states. ■

—By Carolyn Duffy Marsan

# Teaching is No Stretch for Livesay

Story by Steve Kaelble/Photo by Shawn Spence

In a way, it's a bit surprising to find Glen Livesay, PhD, at the front of a classroom. "I'm a total introvert. I don't even call for pizza," he says. "When I step into a classroom, I become 'Professor Man.'"

Livesay, a professor of applied biology and biomedical engineering, may be a different person when he's teaching, but that person is genuine. "It's like acting, but I'm not an actor—I really care," he says.

It probably helps that his teaching style is more of an exploration than a performance. "When I first started teaching, I taught the way I was taught: lecture, lecture, lecture. And, I was stunned when the students didn't learn anything," he recalls.

Now, Livesay is a big proponent of active and collaborative learning. "Students work together, which is how engineers work," he explains. He would rather that students cooperate to learn, rather than compete. "It's not (student) against me or (students) against each other. It's us against the material."

Livesay's interest in human structure goes back as far as the third grade, when, for about a year and a half, his arm was paralyzed. "I fell off the monkey bars," he says. Flash forward to his undergraduate studies at the University of California-Los Angeles (UCLA), where his engineering major was biostructural mechanics. "Initially, I was interested in making prosthetic limbs," he says.

By the time he finished his doctorate in civil engineering at the University of Pittsburgh, he could really appreciate the contrast between the engineering of solid things—such as buildings and bridges—and that of the human body, where many of the components are not solid at all.

"These days I study stretchy stuff," he says, soft tissues such as skin and ligaments. "Anything that is not bone in the body is something that I like to study and analyze.



## **GLEN LIVESAY, PhD**

Professor of Applied Biology and Biomedical Engineering  
**Years at Rose-Hulman: 9**

**Teaches:** Biomedical Engineering Design, Biomechanics, Mechanics of Collagen, Statics and Mechanics of Materials

**Areas of Specialization:** Orthopaedic Biomechanics, Continuum Mechanics, and Engineering Education

**Research Activities:** Experimental and theoretical soft tissue mechanics (ligaments & tendons), joint mechanics (focus on the knee), and morphometrics/mechanics interaction

**Awards:** Samuel F. Hulbert Faculty Chair of Biomedical Engineering, 2010-12; fellow, American Society of Engineering Education (ASEE) National Effective Teaching Institute

All the rules that apply to steel, brick, and concrete don't apply to soft tissue."

Livesay became interested in biomechanics and tissue engineering in the late 1980s. "People were starting to figure out the basics of what made up tissues. Once we learn what they're made of, we can replace them," he states.

Fascinating as research into the subject is for him, Livesay has a true passion for teaching biomechanics. That's why he came to Rose-Hulman in 2004, along with his wife and fellow biomedical engineering professor Kay C Dee. (*See profile on page 12.*)

"At a big research enterprise, faculty members may not interact with undergraduates, ever. Here, I know all of their names, and get to know them not just once but multiple times," he says. ■

*Steve Kaelble is a freelance writer who has been a frequent Echoes contributor.*

# HOMECOMING RECAP

**HAPPY HOMECOMING:** Football players sing “Dear Old Rose” after defeating Defiance, while students show their support on the sidelines at this year’s game. (Photos by Nicole Watkins)



## HOMECOMING '13





**SUPPORTING ENGINEERS:** A proud parent isn't bashful about showing what team she was rooting to win the homecoming football game.



**PEP RALLY CHEER:** Female students and alumnae came up with delightful cheers to support the football team.



**OFF TO STRONG START:** Alumni Advisory Board leader Jeff Trang (EE, 1983) meets with Al Morrison of the Office of Institutional Advancement at the first Varsity R Club pre-game tailgate event.

## Alumni Across All Ages Return to 'Dear Old Rose'

From members of the Class of 1963 enjoying their 50th reunion to classmates from 2008 celebrating their first gathering, this year's homecoming was special to alumni, family, and friends returning to campus on September 20-22.

And, of course, there were the pep rally and bonfire, a homecoming queen (senior Katherine Moravec), academic open houses, and a thrilling victory by the football team.

The Young Alumni Council (YAC), after the bonfire, hosted a gathering for more than 100 graduates from the last decade. The event was organized by YAC Outreach Committee Chair Meredith Woodard (OE, 2010) and Class of 2008 reunion committee members Ashley Erffmeyer (ME), Tyler Masterson (OE), Andrea Bollinger (CE), Thomas Reives (ME), and Michael Morris (ME).

President James C. Conwell brought alumni up to date on the latest campus developments during the Alumni Awards Breakfast. Distinguished Young Alumni Award winners recognized were Sarah Sanborn (CHE, 2004), Emily Sontag (CHEM, 2005), Michelle Witt (ME, 2005), and Brad Woodcox (ME, 2004). This year's Honor Alumni Award recipients are featured on pages 4-10.

Meanwhile, the Alumni Association bestowed honorary status to Kay C Dee, PhD, associate dean of learning and technology/professor of applied biology and biomedical engineering, and Rob Coons, senior vice president and chief administrative officer. ■



**ON THE HUNT:** Senior defensive lineman Mark Fitz (70) battles to put pressure on Defiance College's quarterback, helping contribute to the football team's 23-19 victory.



# ‘RoseWood’ Couples Find True Love

Homecoming Brunch Brings Back Special Memories Story by Dale Long/Photos by Terry Miller

Blind dates, first dances, and fraternity parties have brought together Rose-Hulman and Saint Mary-of-the-Woods College (SMWC) alumni in wedded bliss for decades. Several of these couples gathered for a special RoseWood Couples Brunch, organized by the Office of Alumni Affairs, as part of the colleges’ homecoming festivities this fall.

“He went home that night and told his mother he had met the girl he was going to marry,” Trudy states.

The couple became engaged three dates later and married in 1973. One of their sons, Jeffery, is a 1995 Rose-Hulman graduate, while a daughter is a SMWC alumna.

It was another storybook romance for James Chinni (ME, 1988) and his wife,

A 15½-hour blind date has resulted in the 36-year marriage of James Tribble (CHE, 1974) and his wife, Judy. It started with an Indiana State University homecoming party, then traveling to attend an Indiana University football game in Bloomington, and dinner before returning to Terre Haute for a concert by 1960s pop idol Frankie Valli.



Stan and Trudy Mickey



Paul and Clare Troy



Richard and Kymberli Payonk

“A mercy date” for a Rose-Hulman party brought Stan Mickey (ME, 1971) together with his wife of 40 years, Trudy.

“My roommate asked me to go out with Stan that night. When he came to pick me up, I sent her down to scope him out. With her approval, I came down the stairs and said, ‘I’m your date for the night. If you don’t like it, I will turn around and go back upstairs,’” says Trudy.

Stan approved. They had a good time at the party and talked well into the night.

Gina. They met when he came to drive five SMWC students to campus for a party.

“I couldn’t keep my eyes off this girl I saw in my rearview mirror,” he says. Later, he got up the nerve to ask for a formal date. The couple married in 1989.

Another blind date brought together Paul Troy (ME, 1973) and his wife, Clare.

“We were friends, first, and it blossomed into something worthwhile,” she says.

Finally, it was fate that Richard Payonk (CHE, 1986) would meet and eventually marry his wife, Kymberli. His mother had attended SMWC in the early 1940s and always admired the young women pictured in the college’s alumni magazine.

“Mom sat me down one day and said I should marry one of the ‘fine young girls’ pictured in the magazine,” he says.

Little did Mom know that Richard had been dating one of the smiling faces, after being brought together by mutual friends.

“Mom was always right,” says Richard. ■

# We Refuse to Feel Comfortable

By Don M. Ings, Chairman, Board of Trustees

I am confident Rose-Hulman is standing at the threshold of some of our strongest, most exciting days.

I feel Rose-Hulman is not only part of a national conversation on the value of higher education, but we provide real answers in the midst of a STEM education crisis. Rose-Hulman clearly demonstrates value—we have a near 100 percent career placement rate with our graduating seniors and their

mathematicians, entrepreneurs, scholars, and thought-leaders. We refuse to feel comfortable resting on past or current successes. We are always looking for more innovative solutions to both help society and keep our competitive edge. Within the Strategic Plan that the Board of Trustees unanimously endorsed last year is our vision to be regarded, not just as the nation's leader in undergraduate engineering education, but a *global* leader.

To improve our already high value, we must maintain the best faculty, the top facilities, technology, equipment, and experiences for our students. I've been impressed by what our administrators consistently ask: What is best for our brand of student? Also within the Strategic Plan is a call to examine our financial model and

## INGS' SERVICE CONTINUES AS TRUSTEES' CHAIRMAN

Don M. Ings has succeeded Bill Fenoglio, who stepped down as chairman of Rose-Hulman's Board of Trustees during their annual fall meeting.

"Don has extraordinary expertise in the business of global engineering as well as fundraising, and he has a true passion for the enhancement of Rose-Hulman," says Fenoglio, who served as a trustee for 21 years, including the last 4½ years as chairman.

Ings has served as a trustee since 2009, and served as chair of the institutional advancement committee.

"I am honored to serve my alma mater and give back to a place that sparked my engineering imagination as an undergraduate, and without question, like many alumni, helped launch my career success," says Ings, who resides in San Diego. "Today, Rose-Hulman is on an ideal path to be a recognized global leader in science, engineering, and math education." ■

starting salaries are among the highest in the nation.

We don't ache from other issues with which many other college and universities are burdened—even the nation's top privates. Other fine institutions are challenged to attract the academically gifted; are challenged to fill classes; are challenged to retain students; and fight for a spot in national rankings—we don't have these problems! Rose-Hulman is fortunate to be offering in-demand degrees with personalized attention to allow our students to succeed. We are doing something right, and we are proud of this success.

But that is not enough for us because among our proud alumni, we have some of the finest scientists, engineers,

strive to offer more scholarships so we can continue to attract a caliber of student who has many college choices.

Part of Rose-Hulman's secret to success is our tight community. Yet, because Rose-Hulman doesn't have the vast ranks of alumni compared with larger schools, it's even more important for you to remember "dear ol' Rose" in your philanthropy. Your impact has a larger, more visible mark, literally transforming the lives of some of the nation's best young engineers and the scholars who teach them.

Our fine alma mater is truly positioned at the threshold of greatness on a global landscape. With you, we can make that next brave step into a remarkable future. Join us in one of the most fulfilling investments you could make. ■



### DON M. INGS

Chairman, Rose-Hulman Board of Trustees  
Mechanical Engineering, 1970  
Honorary Doctor Degree of Engineering, 1999

#### CAREER HIGHLIGHTS:

- Retired in 2004 as Vice President of Caterpillar Inc., responsible for the Building Construction Products Division
- Former president, Solar Turbines Inc., a Caterpillar company; Career with company included responsibilities in Sales, Engineering and Manufacturing; Started working for Solar Turbines after graduating from Rose-Hulman
- Led Solar Turbines to earn prestigious Malcolm Baldrige National Quality Award

#### ROSE-HULMAN RECOGNITION:

- Athletic Hall of Fame, 1993
- All-Time Leading Basketball Scorer
- Distinguished Young Alumnus Award, 1989

#### COMMUNITY LEADERSHIP:

- San Diego Strategic Roundtable, chairman
- La Jolla Country Day School, past chairman
- San Diego Regional Economic Development Corp., past chairman

# TEDx Comes to Campus

Innovative Presentations Inspire Students To Utilize Skills in Careers They Love



**ON CENTER STAGE:** Student Travis Tatlock developed a case study that inspires people to see things “left out.” (Photos by Terry Miller)

It was a night of innovative speeches, interesting conversation, and a touch of inspiration as the campus hosted its first TEDxRoseHulman event this fall.

Six different speakers, ranging from students to alumni to industry professionals, came to the Hatfield Hall Theater to showcase the variety of applications of a technical degree in

the real world. It was hoped that the speeches would motivate students to find a unique career path that features their skills.

“We wanted to show that an engineering, science, or mathematics background shouldn’t limit future possibilities to purely technical jobs, but should enhance them,” says Ranjana Chandramouli, a senior chemical engineering major and TEDx event co-organizer. “Over a third of CEOs today have engineering degrees. This just shows that engineers have the skills to succeed in whatever career paths they choose.”

As an independently organized TED event, TEDxRoseHulman organizers had the freedom to shape their program around the theme of inspiration. Vincent Dixon, a professional photographer with a degree in molecular biology, talked about how artists and scientists work to “replace a preconceived idea with a better one.” He noted that his skills as a scientist have framed his photographs in a number of different ways.

Celeste Lee, a professional in the fragrance industry, spoke on the key technical challenges to provide basic needs to every human, such as providing sufficient future food resources.

From alumni, Thomas Adams (ME, 1990), PhD, professor of mechanical engineering, spoke on his weekend goal of learning to play a song on the ukulele. He plays, composes, and arranges

## TAKE NOTE

### FALL CAREER FAIR ATTRACTS RECORD NUMBERS

A record 209 companies from across the country came to the Fall Career Fair to interview student prospects for full-time employment, internship, and co-op opportunities. “We’re seeing increased interest from companies—large and small—seeking our students to fill needed positions,” says Kevin Hewerdine, director of career services and employer relations. His office was ranked No. 6 nationally in BestColleges.com’s 2013-14 survey for assisting students in career preparation. “Rose-Hulman graduates bring a special set of skills to any workplace,” states Nate Subbert (CPE, 1998) of Rockwell Collins.



### FIRST ROBOTICS COMING BACK IN SPRING

The premier international youth robotics competition returns to campus March 6-8, 2014, when the FIRST Crossroads Regional comes to the Sports and Recreation Center.

It took just two days for high school teams from nine states to fill the first 35 openings available, with

another 10 first-year teams joining later. These teams will measure the effectiveness of their robots and test the power of collaboration during the regional round of the competition. Alumni wishing to help us host the event can register at [www.rose-hulman.edu/first](http://www.rose-hulman.edu/first).





**INSPIRED BY MUSIC (left):** “Why Engineering is like Playing The Doors on Solo Ukulele” was the topic of a talk by mechanical engineering professor Thomas Adams (ME, 1990). **SEEKING GREATNESS (below):** Steve Jobs’ death inspired student Ray Anderson to embark on a journey to meet 20 Nobel Laureates, Pulitzer Prize winners, MacArthur Fellows, and other distinguished people.



music for solo guitar, often in tunings he considers too silly for anyone else to use. He drew parallels between music and engineering. Herb Bailey (MA, 1945), PhD, emeritus professor of mathematics, described his love for mathematics and the problems he continues to solve in his life.

Finally, perspectives were provided by two current students: Travis Tatlock, a senior mechanical engineering student, who shared how being a left-handed engineer has shaped his perspective of the world. He developed a case study that inspires people to see things “left out.” Meanwhile, Ray Anderson, a junior electrical engineering student, recounted his recent quest to interview today’s greatest living contributors in technology, science, and literature. What he learned was the focus of his talk,

“Is Albert Einstein Still Alive?” Their classmates were impressed by the students’ confidence and charisma.

“Great people are driven by a purpose,” says event co-organizer Nate Moore, a senior computer science major who is hoping to attend medical school. “We wanted students to find their purpose.”

Donnita Robinson, a senior chemical engineering major and a co-organizer, adds, “I hope TEDxRoseHulman inspires students to think about what truly inspires them and encourages them to act on it. The speakers came from different backgrounds, but have the same message: They’re doing what they love. This allows them to get so much more out of life.” ■

**DIVERSE FRESHMAN CLASS PART OF RECORD ENROLLMENT**

The second largest number of new students in history, plus returning students, means the institute started the school year with record enrollment. Notable attributes of this year’s freshman class include:

Median SAT and ACT scores were the highest in more than a decade; there was a record number of women (125); and a record number of international students (63). The incoming class was selected from a record total applications (5,046).



**STAMPER NAMED DEAN OF FACULTY**

Rick Stamper, Ph.D., (ME, 1985) has been named Dean of Faculty, a position that he had served on an interim basis since July 1, 2012. “Rick has led important steps which are instrumental to maintaining our world-class status,” says President James C. Conwell. Those efforts included helping facilitate a successful ABET reaccreditation, was a key contributor to the institute’s Strategic Plan, and helped define and track funds for equipment, laboratory and safety improvements.



**ALUMNI ON FAST TRACK TO HIGH-PAYING CAREERS**

Rose-Hulman is among the best bet for landing a high-paying job from college, with a median starting salary of \$65,100, according to the online salary information company PayScale. That puts the college No. 7 on this year’s list. The institute ranked 10th in last year’s PayScale starting salary survey and may move up as the Class of 2013 began jobs with an average salary of \$65,867. When considering median mid-career salaries, Rose-Hulman ranks 20th among 1,016 colleges and universities.

# Bailey Challenge

By Professor Emeritus Herb Bailey, PhD

**THE YEAR WAS 1944.** Four Rose-Hulman calculus students wasted Saturday and Sunday before their Monday calculus final with loose living in the windy city. They appealed to Professor Souselly for an extra study day, claiming that a flat tire on the return trip precluded their intended Sunday study session. He granted their request and put them in four separate rooms for Tuesday's exam session. The first problem was easy and only worth five points. The second problem, worth 95 points, was "Which tire?" Remark: Professor Souselly was my calculus teacher in 1944, but I was not one of the four students taking that trip.

## FALL PROBLEM NUMBER 1

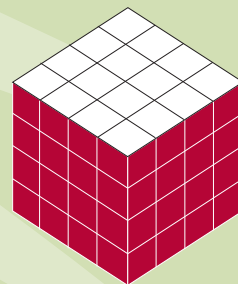
If they guessed at random, then show that the probability for all of the students in getting As (guessing the same tire) on the final was greater than the probability of three fair dice coming up all sixes.

## FALL PROBLEM NUMBER 2

Sally asked Bill for the ages (all integers) of his three daughters. He told her that the product of their ages is 72 and that the sum is his house number. Sally knew the house number and did some calculations. She then said that she needed more information. What is Bill's house number?

## FALL BONUS

A cube has edges of length  $n$ , where  $n$  is an integer. The figure shows the cube with  $n = 4$ . Two faces with an edge in common are painted red. The cube is then cut into  $n^3$  smaller cubes with edge length 1. Let  $n_0$ ,  $n_1$  and  $n_2$  be the number of cubes with exactly 0, 1, and 2 red faces, respectively. If  $n_0/n_2 = 1600$  then find  $n_1$ .



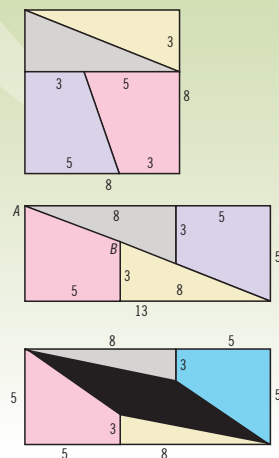
## SOLUTIONS TO SUMMER BONUS PROBLEM:

In government and mathematics we strive for transparency and full exposure.

Most of you found the fallacy in the rearranged square problem. The square shown in the figure has an area of 64 square inches. When the four parts are reassembled as a rectangle, then the area is 65 square inches. Where did the extra square inch come from?

The original drawing of the rectangle does not give full exposure and hides the fact that the pieces do not fit. One way to show the fallacy is to calculate the slope of segment  $AB$ . From the pink side this slope is  $2/5$  and from the grey side the slope is  $3/8$ . Close, but not equal.

Another drawing of the rectangle, not to scale, emphasizes the fallacy. The black parallelogram, which was hidden in the original rectangle, is now magnified so that all can see it. The area of the black parallelogram is the rectangle area less the areas of the two triangles and the two trapezoids or  $65 - 2 \times 12 - 2 \times 20 = 1$ .



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

We surpassed my goal of 50 solvers for the summer problems. Congratulations to the following problem solvers:

**ALUMNI:** C. Baker, 1947; T. Jones, 1949; C. Hirschfield, 1954; B. Hall, 1955; H. Brown, 1957; P. Cella, 1958; A. Clark, 1958; D. Bailey, 1959; G. Heimann, 1960; J. Ray, 1961; J. Snyder, 1962; S. James, 1965; B. Lanke, 1966; J. Skeel, 1966; R. Dutton, 1969; M. Jackson, 1969; J. Born, 1970; S. Jordan, 1970; D. Jordan, 1971; B. Van Kempema, 1972; S. Sims, 1974; D. Wheaton, 1974; M. Bailey, 1976; J. Schroeder, 1976; D. Walker, 1976; B. Bayles, 1977; P. VandeMotte, 1977; D. Davis, 1978; T. Greer, 1978; M. Clouser, 1979; R. Priem, 1979; R. Joyner, 1980; B. Lonnberg, 1981; R. Roll, 1981; R. Spung, 1981; J. Tindall, 1981; G. Klimek, 1984; C. Wilcox, 1985; M. Talley, 1985; M. Lancaster, 1987; D. Johnson, 1987; M. Pilcher, 1988; E. Cegielski, 1990; S. Barndt, 1990; G. Heimann, 1990; B. Burger, 1991; R. Hochstetler, 1991; D. Rettig, 1994; D. Close, 1996; P. Swickard, 1998; A. Primozych, 2000; K. Hassler, 2006; D. Straub, 2010; and K. Vershay, 2013

**FRIENDS:** S. Atkin, S. Bonney, B. Burchett, S. Compton, V. Cottom, T. Cutaia, J. Hasselbring, J. Ley, N. Marks, C. Priem, L. Puetz, and D. Voltmer

**LEADING GLOBAL PROGRAM:** Gautham Venugopalan (below) launched the Future Scientist program to empower global communities to improve quality of life through science, health, and engineering education.



## Venugopalan Teaching Others to Change Lives

By Steve Kaelble

“I like to learn about new things,” says Gautham Venugopalan. He also likes to teach others how they can make a difference in the world.

That’s why the 2007 mechanical engineering alumnus helped launch Future Scientist, a non-profit organization striving to “improve the world through science education.” The idea is to take teams of graduate school and medical school student volunteers, along with professional engineers, to resource-poor areas and help local residents identify problems. Then, they design sustainable solutions.

A pilot project installed solar panels at an orphanage in the Peruvian Amazon during 2009. Volunteers also conducted hands-on science lessons and visited a clinic to assess its needs for future projects.

“We empowered community members by getting them involved in the design process and learning experience,” he says. “I believe that science isn’t just for scientists. Everyone has the ability to learn

skills that can create something useful.”

Success with that project led Venugopalan and his Future Scientist colleagues to determine a major need throughout the world for clean water, sanitation, and power. So, another project in Peru contributed to building a biogas digester to transform waste into fuel and fertilizer. Projects in Haiti and Panama have installed a solar power system for a school and helped local villagers improve their safe water supply.

Venugopalan became captivated by engineering design through his studies at Rose-Hulman. He worked briefly as a process engineer for Boston Scientific before earning a doctorate in bioengineering from the University of California-Berkeley.

As a graduate student researcher, he developed a device that applies compression to cells in biologically relevant extracellular matrix gels—which called upon a variety of skills, covering

mechanical design, microscopy, mechatronics, and cell biology. He also helped others to learn, mentoring students on biomedical design projects, and teaching others to build microscopes.

Those efforts helped inspire Future Scientist. “I wanted to use my engineering and science experience and my ability to educate—to use that teaching experience to help people in developing areas,” he says.

Future Scientist ([www.futurescientist.org](http://www.futurescientist.org)) recruits student volunteers of various disciplines to take part in the trips. “They’re students mostly from the U.S.,” he says. “We teach engineering design to them and we take them around and get them familiar with the culture. We teach them to go into the communities, talk to people, make observations, and identify problems that people want to solve. They’re going to build something that people want.” ■



Gautham Venugopalan

# ALUMNI PHOTO ALBUM



**LOYAL SUPPORTERS:** Proudly wearing their plaid jackets as new members of the Chauncey Rose Society are (from left) Tom Trueb (EE, 1969), Dea and Elmer Guerri (CHEM, 1965), and Bill Johnson (EE, 1960; MSEE, 1961).

**SEATTLE SOLVERS:** Logan Bowers, left, (CPE, 2003) and Alex Mullans (SE/CS, 2013) enjoy playing a game during this summer's Seattle alumni event.



**LOVE OF RACING:** Several 2011 mechanical engineering alumni reunited to form Larry Tech Racing, modifying a 1985 Porsche to compete in the Chumpcar World Series. The group includes (from left) Brace Bade, Casey Povelones, Tom Ksandr, Ross Kippenbrock, Kent Schonberger, and Elliot Bokeno.

**ALUMNI NETWORK:** Greg Hawkins (ME, 1997), an engineer at Chrysler, was among alumni returning to recruit students at the Fall Career Fair.



**ATHLETIC HALL OF FAMERS:** Inducted this fall were (front row, from left) Chuck Howard (former Dean of Admissions), Christina (Forsyth) Drake (EE, 2002), and Robert Chandler (CE, 2002). In the back row (from left) are Andrew Schipper (ME, 2003), Matthew Smith (ME, 2003), and Chris Unton (CS, 2002).



**PASSING ALONG ADVICE:** Jeff Burgan (CHE, 1977), Sara (Brown) Zembrodt (ME, 1999), and Caleb Eiler (ECON, 2013) participated in a campus panel that showcased alumni with alternative career tracks.



**MEETING LEGEND:** Don Lincoln (PHY, 1986) enjoyed meeting 2013 Nobel Prize-winning physicist Peter Higgs (left) in Europe this summer.



**YOUNG DONORS:** President Jim Conwell (top, left) and Vice President for Institutional Advancement Rickey McCurry (top, right) welcomed six new members of the President's G.O.L.D. Circle: Heidi (Brackmann) Davidson (CHE, 2003), Michelle Einhorn (CPE, 2003), Gerald Rea (ME, 2004), LaMarr Taylor (EE, 2003) and Christopher Meyer (CHE, 2004).

**1970**

**Charles Boesenberg** (ME) has been appointed to the board of directors at Websense. He is currently a board member for Boingo Wireless, Callidus Software, Keynote Systems, and Silicon Graphics International Corporation.

**1971**

**Roger Ward** (BIO) retired after 40 years at HNTB. He is working part time for his son's company, Roger Ward Engineering, Inc.

**1974**

**Bruce Faucett** (ME) retired from Allison Transmission in June after 32 years. His many assignments included senior test and development engineer and senior applications engineer.

**Gregory J. Smith** (ME) has been promoted to principal engineer for Nextera Energy Corporation's Wind Fleet Engineering Division.

**1976**

**Michael A. Passafiume** (ME) has recently started his next career as a personal life coach.

**1977**

**Paul Brandenburg** (CS), a senior consultant with Brillig Systems, had a paper published in the International Society of Automation's InTech Journal. The paper's topic was "Keys to Integrating Automation, MES, and Business Systems."

**Jeff Burgan** (CHE) has been elected to the board of directors for the Lambda Chi Alpha Educational Foundation, supporting leadership development and education programs.

**1979**

**Jeffrey S. McCreary** (EE) is interim president and CEO at Integrated Device Technology.

**Dan E. Phebus** (CE) is the new president of Oerlikon Fairfield, a major gear manufacturer located in Lafayette, Indiana.

**1982**

**Damon Ground** (CHE) has joined Watlow as chief marketing officer. Her formerly worked at TSI Inc., Hutchinson Technology, and 3M Corporation.

**1985**

**Mark Federle** (CE) has been named the associate dean for academic affairs in Marquette University's College of Engineering.

**1987**

**Scott Orr** (CS) has earned a master's degree in computer science at Indiana University-Purdue University Indianapolis.

**1991**

**Kurt Breischaft** (EE) is the new president of SDI LaFarga, a copper rod mill located in New Haven, Indiana. He brings more than 20 years of experience in the copper industry with Cerro Plumbing Products, the Essex Group, and Belden Inc.

**1995**

**Tony Locker** (EE) is the product management manager for Littelfuse protection relays. He has two patents.

**1997**

**Eric Tryon** (ME), hydraulic engineer at Allison Transmission, is a finalist for Indianapolis' 2013 Best and Brightest Award, presented by Junior Achievement of Central Indiana.

## ALUMNI NEWSMAKERS



### LEGO BRINGING PAKBAZ'S ROVER IDEA TO TOY MARKET

**Stephen Pakbaz** (ME, 2006) took his real-world experience working on the Mars rover Curiosity and applied it to a more down-to-earth project, designing a LEGO version of NASA's vehicle. He is a senior mechanical

designer for the Orbital Sciences Corporation in Dulles, Virginia, after working on Curiosity for NASA's Jet Propulsion Laboratory in California. Pakbaz designed the model to feature many of the details of the real rover, including its "rocker-bogie" wheel suspension that enables Curiosity to navigate the Martian surface. "My hope was to have a set produced while the real rover was still active on Mars so that the model could help kids learn about the real rover's discoveries as they occurred," Pakbaz told collectSPACE. The kits are scheduled to be part of LEGO's CUUSOO product line in early 2014.



### BRAZZELL PROMOTED TO CHIEF OPERATING OFFICER OF BIOFUELS LEADER

**Keith Brazzell** (CHE, 1987) has been appointed chief operating officer of Genera Energy Inc., a recognized leader in biomass feedstock supply advancements. He has more than 25 years of experience in food and industrial chemical processing, and previously served as Genera's vice president of operations and technology. In his new role, Brazzell will play an

instrumental role in ramping up Genera's operational capability and improve systems and processes. He formerly was plant manager of DuPont Danisco Cellulosic Ethanol biorefinery in Vonore, Tennessee; plant manager for DuPont's biotech joint venture in Loudon, Tennessee; and helped Tate & Lyle with new biotech product development.

**1999**

**Rahul Iyer** (ME) is the Remelt improvement engineer/process engineer at Sapa Extrusions North America. He resides in Mesa, Arizona.

**2000**

**Wes Bolsen** (EE) is leading global strategic partnerships for Cool Planet Energy Systems, based in Denver.

**Jason L. Zielke** (BSME, 2000; MSEM, 2002), President of Precise Path Robotics, is a finalist for Indianapolis' 2013 Best and Brightest Award.

**2001**

**Chris Bauer** (CE) has been promoted to construction manager of Hunt Construction Group, and has been assigned to management team renovating the Florida Citrus Bowl stadium.

**2002**

**Dan Allen** (CE) is the assistant city administrator/utilities director for the City of Spring Hill, Tennessee. He had been assistant director of engineering in nearby Franklin, Tennessee, since 2009.

## WE WANT YOUR NEWS

Share news and photographs to [alumniaffairs@rose-hulman.edu](mailto:alumniaffairs@rose-hulman.edu).



## CLASS NOTES

**2003**

**Thomas Lautenschlager** (EE) earned a MBA in marketing from Golden State University (California) in August 2012. He has been an enterprise sales engineer at ThomasNet in New York City since May 2013.

**2004**

**Jessica (Farmer) Albert** (CHE) is a new process improvement engineer at The Lubrizol Corporation in Houston.

**2005**

**Scott Tourville** (CE) is the city engineer for Pickerington, Ohio. He had been a civil engineer for Westerville, Ohio, and American Structurepoint.

**Max Zuckerman** (CPE) has joined Russell Reynolds Associates as a technology business sector consultant in the Palo Alto, California, office. He formerly worked for Livefyre, a social media startup, and Microsoft.

**2007**

**Riley Buttry** (ME) is now a project manager for Roche Diagnostics' STRIDES rotational development division in Indianapolis.

**Eric Volz** (ME) is now an associate attorney specializing in intellectual property for Wood Herron & Evans, a Cincinnati-based law firm. He earned his law degree from Indiana University in 2011.

**2008**

**Nate Bloss** (CE) continues to serve as a volunteer for the Peace Corps' Bridging the Gap Africa program. He lives in Kenya.

**Dan Brunner** (PH) has earned a doctorate degree in applied plasma physics at Massachusetts Institute of Technology. He is helping develop a new plasma-based photolithography system for ASML, a Dutch company.

**2012**

**Stephen Mayhew** (CS) has been recognized as a Siebel Foundation Scholar for excellence as a graduate student in business, computer science, or bioengineering. He is studying natural language processing and machine learning at the University of Illinois. ■

## Marriages

**1992**



**Ken Koziol** (CE) married Joyce Reinhardt on May 18, 2013 at the White Chapel on campus. Ken is a senior project manager at Transportation Consulting and Management. The couple

resides in Greenwood, Indiana with their melded family of six children.

**2009**

**Betsy Marschand** (OE) married Brad Buckman on December 1, 2012. Betsy is an optical engineer for the Naval Warfare and Support Center at Crane, Indiana. The couple resides in Bloomington, Indiana.

**Bob Warden** (ME) and **Rebecca Winer** (ME) were married on March 2, 2013. The

## ALUMNI NEWSMAKERS



### STANGL BEGINNING NEW ROLE AS TIMKEN'S RAIL BUSINESS MANAGER

**Mark Stangl** (ME, 1997) has been appointed business manager of rail for the Timken Company, a global industrial technology leader. He most recently served as manager of product management for the Ohio company's automotive aftermarket business. Stangl joined Timken after graduation as an automotive customer engineer, and has had the positions of senior application engineer, principal sales engineer, product manager, and regional manager.



### LONG NAMED FUTURE SPORTS/FITNESS INDUSTRY LEADER

**Keenan Long** (ME, 2010) was among five young sports and fitness industry professionals recognized by the Sports and Fitness Industry Association and attended the group's Industry Leaders Summit this fall. The former baseball standout is a research and development engineer for Easton Bell, helping design, test, and developing the sporting goods of the future.

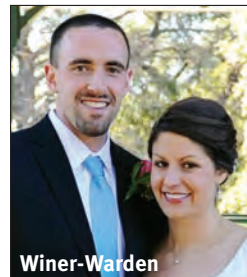
Long has spent a significant amount of time in China developing new products and process controls, and attended the Little League World Series. "All of these great opportunities inspire me to think big," he says.



### REID GETS IEEE-USA ENGINEERING PIONEER ACHIEVEMENT AWARD

**Kenneth Reid** (MSEE, 1994) was awarded the 2013 IEEE-USA Professional Achievement Award for "pioneering undergraduate engineering education curriculum" as director of Ohio Northern University's engineering education and first-year engineering programs. He is also an associate professor of electrical and computer engineering at the college.

ONU's degree program in engineering education is the first of its kind in Ohio and one of the first in the nation. ■

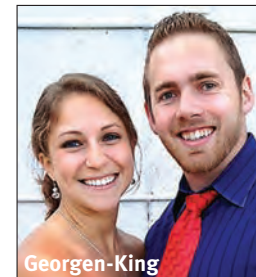


Winer-Warden

couple resides in San Antonio, Texas, where they work at the Southwest Regional Institute.

**2010**

**Bridget Goergen** (CHE; MSEM, 2011) and **Daniel King** (BE;



Goergen-King

MSBE 2011) were married on August 31, 2013 in Alexandria, Minnesota. Bridget is a process engineer for GEA Corporation in Columbia, Maryland. Daniel is a product development engineer at ACell Corporation in Columbia. ■

Rosebuds

1996

**Wesley Hamilton** (ME) and wife, Kelly, welcomed a daughter, Clara Rose, on February 11, 2013.

1997

**Kevin Bair** (ME) and wife, Karen, had a daughter, Isabella Marie, on August 12, 2013. He joined brother Michael to the family.

2001

**Adam Homan** (ME) and wife, Melissa, welcomed daughter, Olivia Ray, on May 16, 2013. She is joined by big brother, Joseph Leon.

2005

**Katherine (Wyrzykowski) Miller** (ME) and husband, Don, welcomed their second child, Joseph Raymond, on September 6, 2013.

2006

**Matt Lovell** (CE) and his wife, Lindsey, welcomed a son, Wilson Matthew, to their family on July 26, 2013.



**Joe Williams** (ME) and wife, **Katrina (Gingerich) Williams**

(ME), welcomed twin girls to their family, Adonyah Faith and Blakley Grace, on August 20, 2013.

2007



**Rachael (Hannum) Lynch** (BE) and her husband, Patrick, had a daughter, Annabelle Grace, on July 31, 2013 in Mishawaka, Indiana.

**Adam Hirsch** (CHE) and wife, **Jennifer (Frey) Hirsch** (CHE),

welcomed a daughter, Hannah Marie, on July 25, 2013.

2009

**Kyle Bramlage** (ME) and girlfriend, Lindsey Kendall, had a son, Connor David Bramlage, on June 20, 2013.



**Christina (Muhlenkamp) McGraw** (CHE) and husband, Matthew,

welcomed their first child, Megan Marie, on July 6, 2013. ■

Obituaries

1949

**Edward C. Bockhold** (EE), 89, died on September 3, 2013, in Sarasota, Florida. He had a lengthy career with General Motors, retiring as Works Manager from the Inland Division in Dayton, Ohio.

1943

**Dwight P. Heath** (ME), 88, died on June 8, 2011. He worked 38 years for Union Carbide Corporation, retiring as head of the distribution department.

1943

**Richard H. Raab** (ME) died on September 25, 2013, in Baltimore, Maryland. He was president of the European division of the Roper Corporation in the Netherlands before forming his own company, Interface Associates. He received an honorary doctorate degree in 1995.

1951

**William G. Cummings** (CE), 84, died on July 29, 2013, in Louisville, Kentucky. He spent his career with Louisville Gas

& Electric Company, retiring as assistant vice president.

1954

**William B. Lamb** (EE), 81, died on November 27, 2012, in Petersburg, Indiana.

1956

**John H. Bradshaw** (ME), 80, died on September 21, 2013, in Brazil, Indiana. He worked for DuPont and 3M.

1957

**Paul R. Harder** (EE), 77, died on August 3, 2013, at his home in Brea, California. He earned a law degree from George Washington University and worked for Beckman Instruments.

1966

**Richard W. Johansen** (CHE), 68, died on August 24, 2013, in Lafayette, Indiana.

1968

**Edwin M. Izumi** (ME), 67, died on August 29, 2013, in Las Vegas, Nevada. He worked for General Electric for 31 years.



**Robert Kahn**, a 1939 chemical engineering alumnus and 1981 honorary doctorate recipient, died on August 20, 2013, at the age of 95. He received the Honor Alumni Award in 1979 and was a member of the Alpha Tau Omega fraternity. Kahn served as chairman on the board for St. Clair Resources, a brainchild of Kahn's, from 1999 until 2004. He is survived by his wife, Louise, who resides in

Pittsburgh, Pennsylvania. The Kahn Rooms in Rose-Hulman's Hulman Memorial Student Union are named in recognition of the couple's support to the institute. ■

1988

**Lynn D. Crockett** (CS), 47, died on May 3, 2013, at his home in Dayton, Ohio. He worked for Lexis Nexis' Strategic Data Systems division.

1994

**Jerry Gene Stanley** (CS), 41, died on September 14, 2013, in Indianapolis. He lived in Marion, Indiana.

**Faculty/Staff**

**Gary D. Burgess**, 66, died on March 20, 2013, in Terre Haute,

Indiana. He was manager of Myers Hall during a 36-year career in which he worked with several students and student groups. He earned the President's Outstanding Service Award in 1993.

**Donald G. Morin**, 76, died on May 14, 2013, in Pennington, New Jersey. He was a mechanical engineering professor for 33 years and a pioneer in introducing mechatronics to undergraduate engineering education. ■

Check latest events at  
[rosestem.rose-hulman.edu/events](http://rosestem.rose-hulman.edu/events)

## SPECIAL ALUMNI EVENTS

Colts at Cincinnati Bengals | **December 8**  
 Indianapolis Mini-Marathon | **May 3**  
 Career Achievement Awards Ceremony | **May 10**  
 Armed Forces Bump Day, Indianapolis Motor  
 Speedway | **May 18**  
 Class of 1964 50th Reunion Commencement  
 Celebration | **May 30-31**  
 Summer Scholarship Scramble | **June 5**

## SUPPORTING THE ARTS EVENTS

Hatfield Hall Receptions, Alumni Center  
 Van Trapp Christmas Show | **December 3, 6:30 p.m.**  
 Moscow Ballet: Swan Lake | **January 8, 6:30 p.m.**  
 Blues Brothers Revue | **February 7, 6:30 p.m.**  
 Motionhouse: Scattered | **March 29, 6:30 p.m.**  
 (Purchase tickets at [www.hatfieldhall.com](http://www.hatfieldhall.com))

save the date for  
**HOMECOMING**  
**2014**  
**OCTOBER 3-5**

## Alumni Help Welcome President Conwell

Alumni have helped welcome President James C. Conwell and his wife, Angela, to the special Rose-Hulman community through a series of receptions this summer and fall seasons. More events are planned this winter and spring.

The Conwells have been special guests at the following events:

- The Wabash Valley Alumni Club had a Meet the President reception in the atrium of Hatfield Hall.
- President Conwell threw out the ceremonial first pitch at the Indianapolis Indians minor-league baseball game as part of 4th of July festivities at Victory Field in downtown Indianapolis. He also attended a pregame picnic for alumni, faculty, staff, and their families.
- Rose on the Road events were hosted by alumni in Chicago, Fort Wayne, and San Francisco.
- An event at Ruth's Chris Steak House got alumni ready for the Indianapolis Colts game against the Seattle Seahawks.
- Other Meet The President alumni receptions were conducted at Software Engineering Professionals (Carmel, Indiana), BSA Life Structures (Indianapolis), and Banker's Life Fieldhouse (downtown Indianapolis).

President Conwell also helped celebrate alumni achievements at this year's homecoming alumni awards breakfast and 50-Plus Golden Gala, along with the Athletic Hall of Fame induction ceremony. ■



President James C. Conwell and his wife, Angela, were guests of honor at alumni events this fall at Software Engineering Professionals' offices in Carmel, Indiana (top) and Fort Wayne (below).



## WOLODKIEWICZ LEADING ALUMNI ASSOCIATION

Dan Wolodkiewicz (ME, 1982) took over as Alumni Association president during this year's homecoming festivities. "Wally" has been involved with the institute for more than a decade, serving as secretary of the Alumni Advisory Board, helping organize activities for the Dayton, Ohio alumni chapter, and being a keynote speaker for graduating seniors' Countdown to Commencement series. He followed his older brother, Steve (ME, 1975), to campus. At Rose-Hulman, Wolodkiewicz earned varsity letters in football, baseball, and track. He is now president of Pinnacle Financial Associates, has been recognized to Equity Services, Inc.'s Circle of Excellence, and lives in Beavercreek, Ohio, with his wife, Janet. ■



Dan Wolodkiewicz

## Athletic Hall of Fame Grows with Six Inductees

Rose-Hulman honored the following alumni and retired administrators with their inductions into the Athletic Hall of Fame:

**Robert Chandler** (CE, 2002) – The pitcher had a 19-9 record and ranks fourth in program history with 213 strikeouts. He works for CONTECH, supporting site development projects in Nashville, Tennessee.

**Christina (Forsyth) Drake** (EE, 2002) – Ranks among the women's basketball program's career scoring and rebounding leaders. She is a manager for Midcontinent Independent System Operator (MISO) in the Indianapolis area.

**Andrew Schipper** (ME, 2003) – Was a six-time All-American track and field athlete, twice placing second in the pole vault at the NCAA Division III championships. He works as a senior water engineer for the City of Fort Wayne.

**Matthew Smith** (ME, 2003) – Was the institute's first Division III national champion outside track and field by winning the 100-yard breaststroke at the 2003 championships. He is a staff engineer at Burns and McDowell in California.

**Chris Unton** (CS, 2002) – Earned first-team Academic All-American honors in basketball (4.0 grade point average), and helped teams capture two conference titles. He is a senior manager at MISO in central Indiana.

**Chuck Howard** – Spent 37 years on the admissions staff, including 23 years as the Dean of Admissions and eight years as Vice-President for Admissions.

See this year's Athletic Hall of Fame class photo on page 28. ■

# MAKE YOUR GIFT TODAY!

As we approach the calendar year end, we want to share some of the ways you can support Rose-Hulman and ensure we remain No. 1 in the nation.

## GIVE TO THE FUND FOR ROSE-HULMAN

Your gift to The Fund for Rose-Hulman supports the institute's mission to provide its students with the world's best undergraduate science, engineering, and mathematics education.

## SUPPORT THE YOUNG ALUMNI CHALLENGE

Graduates of the Last Decade (G.O.L.D.) have until December 31 to participate in the Young Alumni Challenge. Many young alumni already have responded to the "Challenge" by renewing their gift or making their first-time gift to Rose-Hulman.

INTELLECT  
INDIVIDUAL  
ATTENTION  
INNOVATION  
INVEST

Your gift to The Fightin' Engineers Fund ensures student-athletes continue to play in the best facilities at the Division III level, safely travel off campus, use the most state-of-the-art equipment, and have the best coaches to help them succeed.

Make Rose-Hulman the beneficiary of your Individual Retirement Account, and become a member of the 1874 Heritage Society.

Individuals 70½ years or older may make an otherwise taxable distribution of up to

\$100,000 paid directly from the IRA to Rose-Hulman by December 31, 2013.

## BECOME A VARSITY R PATRON

## JOIN THE 1874 HERITAGE SOCIETY



To INVEST in the lives of Rose-Hulman's exceptional students, and renowned faculty and staff:

- Use the enclosed return envelope and mail your check to Rose-Hulman by December 31.
- Call us at **812-877-8217** to make your gift via a credit card.
- Visit [www.rose-hulman.edu/give](http://www.rose-hulman.edu/give) to make your contribution electronically.
- Contact Director of Planned Giving Chris Aimone at **812-877-8498** to make a gift using your IRA or join the 1874 Heritage Society with a deferred gift commitment.

5500 Wabash Avenue  
Terre Haute, IN 47803

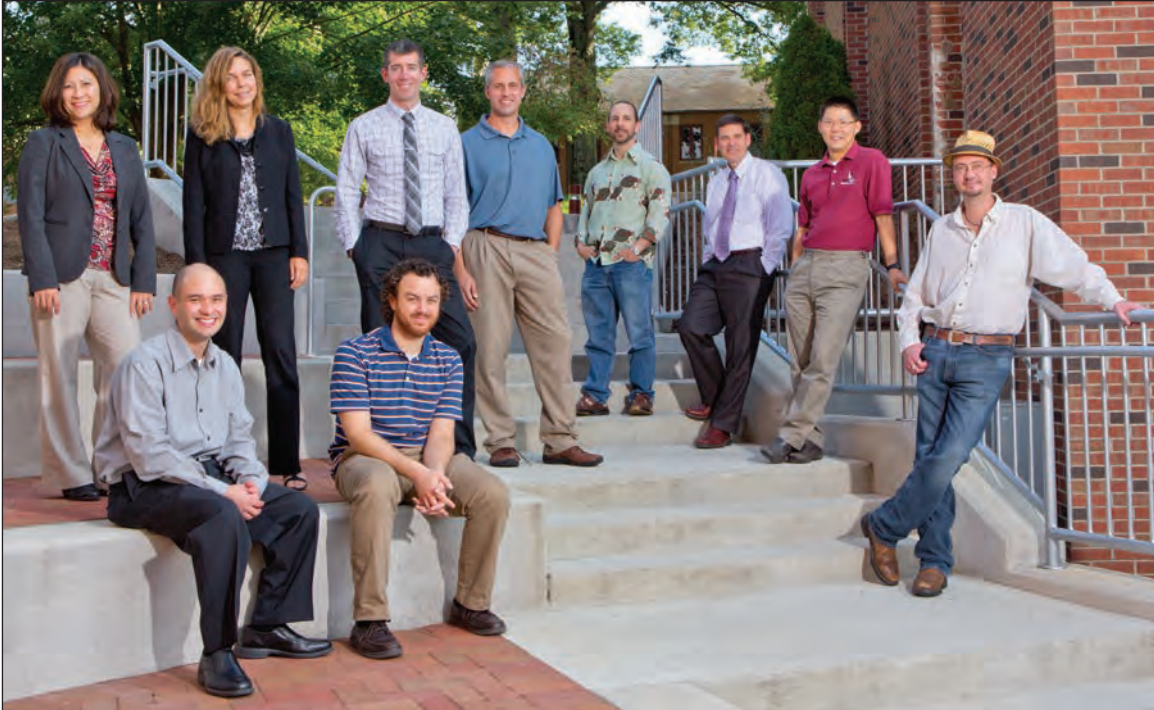
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## Stay connected

Stay connected with Rose-Hulman through our website ([www.rose-hulman.edu](http://www.rose-hulman.edu)).

You can also keep informed by becoming a fan of Rose-Hulman's Facebook page or following us on Twitter (@rosehulman or #rhitpride).



## PARTING SHOT

### Alumni Return to Inspire Future Leaders

Fourteen alumni have returned to serve on our faculty. The group includes (from left) Kimberly (Hayden) Henthorn (CHE, 1999), Eric Reyes (MA, 2006), Ashley Bernal (ME, 2006), Micah Taylor (CS, 2004), Matthew Lovell (CE, 2006), David Fisher (ME, 2000), Thomas Adams (ME, 1990), Richard Stamper (ME, 1985), Calvin Lui (ME, 1991), and Zach Chambers (ME, 1994; MSME, 1996). Missing from photo are Rick Ditteon (PH, 1974), Keith Hoover (EE, 1971), Erin Phelps (CHE, 2003), and Ed Wheeler (EE, 1982). Photo by Shawn Spence.