

Summer 2011

## Volume 2011 - Issue 2 - Summer, 2011

Echoes Staff

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# Echoes

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

SUMMER<sup>2011</sup>

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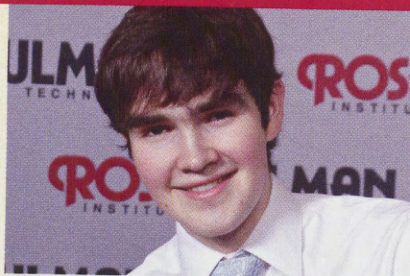


## *Student Life Changers*

Making a Difference  
Outside the Classroom



# OUR PRIDE IS IN OUR STUDENTS



## MECHANICAL ENGINEERING STUDENT EARNS GOLDWATER HONOR

James Breen's 4.0 GPA and interest in humanoid robotics helped him to be recognized as a Goldwater Scholar, the most prestigious academic honor for undergraduate students majoring in engineering, science, and mathematics. Breen's mentor at Carnegie Mellon's Robotics Institute called the mechanical engineering student "the best that I have seen at this age in a decade."



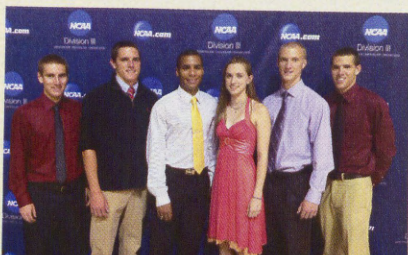
## BLACK ENGINEERS CHAPTER NAMED BEST IN THE NATION

Rose-Hulman's National Society of Black Engineers chapter was selected as the Small Chapter of the Year after earning the Region 4 Chapter of the Year Award. The honors were based on chapter leadership, membership growth, academic excellence, community service, and professional development activities.



## ADVANCED TRANSPORTATION TEAMS LEAVE IT ALL ON THE TRACK

The Human Powered Vehicle Team won the ASME West Coast Challenge, continuing a streak of four years with a regional title; the Efficient Vehicles Team had the top performance (1,476 mpg) by an American college at the Shell Eco-marathon Americas; Rose-Hulman returned to the SAE Formula Grand Prix; and the Design/Build/Fly Team completed its missions at this year's AIAA competition.



## ATHLETES EXCEL ON TRACK; EVANS 1ST FEMALE NATIONAL CHAMP

Six track and field athletes competed in this year's NCAA Division III Outdoor National Championships—the most competitors the college has had at the track nationals since 1986. Liz Evans won the high jump championship at the indoor and outdoor finals to become Rose-Hulman's first female national champion.

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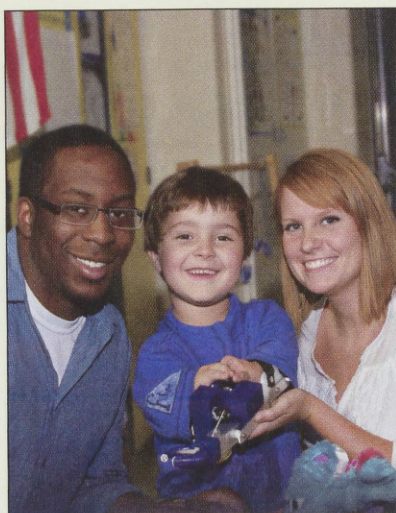
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#### Use mobile barcodes to connect with the digital world.

Mobile barcodes, commonly known as QR codes, are two-dimensional images that can be read by smartphones that have a 2-D barcode application/reader. When scanned, the mobile barcode at right will connect you with Rose-Hulman's website ([www.rose-hulman.edu](http://www.rose-hulman.edu)). Give it a try and stay connected with Rose-Hulman through the digital world.

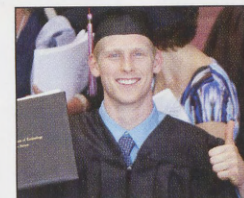


#### ON THE COVER

This issue of Echoes spotlights some of Rose-Hulman's best and brightest students and the difference they've made in the lives of others. The cover features 2011 biomedical engineering graduates EJ Oruche and Sara Telezyn with kindergartener Michael Ammerman. His life has been changed by the development of a robotic prosthesis, custom-made to fit his tiny arm. Not pictured is a third member of the project team, Clay Britton.



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#### PUBLICATION CREDITS

**President:** Matt Branam  
**Vice President of Communications and Marketing:** Mary G. Barr  
**Vice President of Institutional Advancement:** Rickey M. McCurry  
**Alumni Association President:** Richard Neal, Class of 1977  
**Office of Alumni Affairs:** Ali O'Leary, Assistant Director; Bretta McDaniel, Administrative Assistant  
**Office of Institutional Advancement:** Dick Boyce, Director of Corporate and Foundation Relations; Kim Perkins, Director of Annual Giving and Donor Relations; Scott Williams, Regional Development Officer; Hugh Baker, Regional Advancement Director; Jennifer Seddelmeyer, Assistant Director of Annual Giving and Donor Relations; Kathy Cooper, Administrative Assistant  
**Office of Communications and Marketing:** Dale Long, Director of News Services; Marianne Messina, Director of Web Content; Hyung-Jung Chang, Web Developer and Publications Specialist; Diann Ringo, Coordinator of Communications and Marketing; Stacey Muncie, Writer; Mary Beth Walls, Assistant Web Designer; Jessica Squires, Writer  
**Communications/Alumni Contributor:** Kevin Lanke, Assistant Athletic Director for Sports Information and Communications  
**Issue Editor:** Dale Long  
**Contact e-mail:** [Dale.Long@rose-hulman.edu](mailto:Dale.Long@rose-hulman.edu)  
**Contributing Writers:** Dale Long, Stacey Muncie, Jessica Squires, Marianne Messina, Diann Ringo, Kevin Lanke  
**Photographers:** Dale Long, Larry Ladig, James Garber, Chris Minnick, Shawn Spence, Mike Lanke, Ali O'Leary, Terry Miller, Matt Cole, Penske Performance Inc., Andretti Autosport, Mark Beckenbach  
**Design:** Williams Randall Marketing, Hyung-Jung Chang

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# Education is a Creative Process with Many Masterpieces... *Our Alumni*

As students, we were aware that Rose-Hulman gave us a once-in-a-lifetime opportunity to transform ourselves from high school kids into engineers, scientists, and leaders. Similar to the Self-Made Man sculpture that can be found in front of our Sports and Recreation Center, we chipped away at inexperience, ignorance and youth to make something new.

Our professors showed the way. However, we had to discover our own better self, to endure the struggles and shake off our own "rock of inexperience and ignorance."

Graduating from Rose-Hulman is not an easy process.

Our current students look forward to seeing Rose-Hulman in their rear-view mirror, just like we did. However, as they enter their new careers, take on greater responsibilities, start families and become leaders, they develop what Trustee Elizabeth Hagerman (ChE '00) calls a "fascinating perspective on how valuable and versatile a Rose-Hulman engineering degree can be."

Leonardo Da Vinci stated, "Go some distance away because the work appears smaller and more of it can be taken in at a glance, and a lack of harmony of proportion is rapidly seen."

As alumni, we have "(gone) some distance away," taken that crucial step back and can now evaluate how far we have come.

From my vantage point, standing on the dais and delivering diplomas this year, I took such great pride in the Class of 2011 and what they accomplished during their days on campus. I hope their parents can see how they have transformed, too. These graduates were once again in great demand by businesses and graduate schools, with 90 percent of the Class of 2011 spoken for on commencement day.

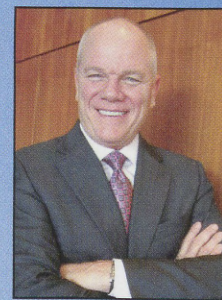
Shining examples are LeMoyne Habimana-Griffin and Molly Gillam. LeMoyne is a first-generation college graduate (summa cum laude) who is headed to Washington University in St. Louis to earn a medical degree and Ph.D. This will allow him to fulfill his lifelong dream of helping cancer patients. Meanwhile, Molly is an applied biology graduate (magna cum laude) who will be participating in a cancer research program at the University of Texas-Southwestern. (Read more about these and other outstanding students in the "Life Changers" feature section, pages 4-7.)

## Creation through Evaluation: A Process for the Future

Rose-Hulman is recognized in higher education for developing the RosEvaluation process, our careful and on-going self-analysis. We examine such areas as teaching methods, class offerings and curriculum content; equipment and physical plant needs; student life activities, athletics and recreational opportunities; service projects and spiritual life; as well as administration, institutional development, communications, and student support services.

The RosEvaluation process helps us gain that crucial "distance" for evaluation. The process allows us to continually adapt to the changing circumstances on campus, in higher education, in industry and in the world. Then, we address those needs.

For example, we have been tracking a strong demand for more on-campus housing. Therefore, I am proud to announce that we will be breaking ground this summer on a new 240-bed, suite-style residence hall to be open by the fall of 2012. We are also building a new 16,000-square-foot Student Innovation Center to house the Advanced



by President  
Matt Branam

The Self-Made Man sculpture reminds our students they are in control of their destiny. The powerful sculpture was donated by John and Norma Mutchner in 2008.





**“Rose-Hulman changed you, and now we ask that you change us.”**

*— President Matt Branam*

President Branam serves up high-fives to graduating seniors during the commencement procession.

Transportation Systems (ATS) Program. The building where ATS is currently housed is being lost to a new highway project. This has created the opportunity for a purpose-built center with advanced features (found through evaluation to be important for improving student success). All of our student project and competition teams will now be able to share space on campus.

Soon, we will be contacting you, our alumni, for a very important level of evaluation. We want to collect stories from your life and learn about your Rose-Hulman experiences and how those experiences have played out in the real world. This will provide us with valuable data points that we can turn into action items.

Ford Motor Company is currently offering an advertising campaign in which they disassemble an engine after 100,000 miles. We need to do something similar. We need to closely examine your experiences years after graduation—after you have had some hard-earned mileage in the real world. You can help us develop students who are better prepared for life after Rose-Hulman.

This is important. You are the experts on a Rose-Hulman education because you have lived it.

Rose-Hulman changed you and, now, we ask that you change us. We will be engaging alumni during the next four months in this new research initiative to “go some distance away” and gain perspective about your life beyond our campus.

We’re looking for answers to the following questions: What helps a Rose-Hulman graduate go the extra mile? What have been the secrets to your success?

So, as you read about our students’ successes in this issue, I ask you to reflect on our present and on your past. How have you integrated your Rose-Hulman degree into your life? What preparation or studies could have helped you more? What do you see coming on the horizon? How can our students be better prepared to meet those future challenges?

I hope you will accept this challenge to help your college and our students capitalize on the vast opportunities ahead. By doing so, you will help us improve the process to create even more future masterpieces.

*President Matt Branam is a 1979 civil engineering alumnus of Rose-Hulman. ■*

### Making a Difference Outside the Classroom

Serving others is an important part of the culture at Rose-Hulman. From fighting cancer to assembling bicycles, building wheelchair ramps, mentoring, tutoring, and even building a pint-sized prosthetic arm, our students are making a difference—on and off campus. Along the way, members of the Class of 2011 discovered that they've not only changed the lives of others, but their own lives have been forever shaped by their Rose-Hulman experience.

## REACHING FOR THE FUTURE> PROSTHETIC ARM PROJECT CHANGES CHILD'S LIFE



STORIES BY STACEY MUNCIE

“I learned a lot about biomedical design, project management, and manufacturing—skills that will undoubtedly help me as I enter the industry as a biomedical engineer. But I also learned that the hard work you put into a project can really have an impact on someone’s life.”

– Sara Teleyzn, 2011 Biomedical Engineering Graduate



"It's cool, it goes like *zhbbb zhbbb zhbbb*," kindergartener Michael Ammerman demonstrates with his left arm, his big, brown eyes twinkling with excitement.

Michael could easily be talking about a toy, but he's not. Instead, the six-year-old is imitating the movements and sounds of the new prosthetic arm which was specially designed for him by 2011 Rose-Hulman biomedical engineering graduates Sara Telezyn, EJ Oruche, and Clay Britton.

Michael was born with a condition known as bilateral radial and ulnar hypoplasia, leaving him with no forearms and only two tiny fingers on each hand. The students' project (supervised by professors Kay C Dee, Glen Livesay and Renee Rogge) involved creating a prosthetic limb that would work with the child's fully functional fingers. The resulting device extends Michael's reach and allows him greater independence, while being fun and simple to operate.

"He's very excited," says Michael's mother, Bobbi Ammerman. "He says, 'Mommy I look like a robot with this new arm! Can I keep it?'"

That statement brings a smile to Oruche's face. "We wanted it to be fun for him," he says, explaining that the fun factor was one reason the joystick was incorporated into the design. Michael uses the joystick to control the device.

The three Rose-Hulman students traveled to Michael's hometown of Clinton, Ind., weekly to observe him in the kindergarten class. Then they took measurements and documenting his level of mobility.

"In the first phase, we brainstormed several different design ideas to possibly help Michael perform his daily tasks with more

ease," Britton explains. As the development of the prosthetic device progressed, the team made adjustments to the

"Michael's case is so unique," Telezyn notes, adding that his condition is so rare that even a specialist they consulted at Riley Children's Hospital had never heard of it.

As the electronics specialist on the team, Oruche's biggest challenge was making the device operate on battery power. He cited trial and error, along with the professors' advice, as tools he used to overcome the challenge.

"I learned a lot about biomedical design, project management, and manufacturing—skills that will undoubtedly help me as I enter the industry as a biomedical engineer," Telezyn says. "But I also learned that the hard work you put into a project can really have an impact on someone's life."

Telezyn, Oruche and Britton say they looked forward to their weekly visits with Michael. "It amazed me how Michael never let his condition bother him," Britton says. "He motivated us as a group, and when we were frustrated with the project, it was nice to have the opportunity to go and see him to boost our motivation."

While the engineering experience they gained was valuable for the design team, one of the best parts of the experience was working to make a difference in a child's life.

"This is the culmination of what we went to school for," Oruche said. ■



Michael Ammerman

## MOLLY GILLAM > Getting the Most Out of College



Molly Gillam, a 2011 applied biology graduate, earned the Herman A. Moench Distinguished Senior Award

If Molly Gillam could have clicked her heels and been transported to any college, it would have been Rose-Hulman. "There's no place like Rose-Hulman," she says. The applied biology graduate will miss her campus life as she moves on to pursue a doctorate in cancer biology at the University of Texas-Southwestern Medical Center in Dallas.

"I'd like to end up studying translational research and cancer pharmacology," Gillam explains. Her senior thesis involved determining how compounds in the environment affect estrogen signaling in breast cancer cells. "There are compounds in the environment that are causing harm to animals and humans," she says.

Gillam made the most of her Rose-Hulman experience. Besides her academic work, she also was a resident assistant for two years and participated in several campus activities, including the Culinary Craftsmen Club.

The Lafayette native was instrumental in organizing a large campus concert and Up 'til Dawn, a philanthropic event benefitting St. Jude Children's Hospital. Rose-Hulman raised the most money of any Indiana college for the past two years. Gillam earned the Herman A. Moench Distinguished Senior Commendation, and was named the college's outstanding applied biology graduate.

"The difference here is the personal skills that I've developed," she says. "Because Rose-Hulman is a small school, I've had a lot of opportunities to learn about myself and others." ■

## BEN ZOBRIST > Building Bridges toward Success



"The overall thing at Rose-Hulman is giving back. As civil engineers, we serve people every day. That kind of thing is near and dear to me."

— Ben Zobrist, 2011 Civil Engineering Graduate

"We're joking about it now, but maybe when the time comes it won't be a joke anymore," Ben Zobrist chuckles. The civil engineering graduate is referring to the possibility of going into business with his father, who is a carpenter. Fatherly advice paid a key role in Zobrist's success at Rose-Hulman.

"I learned a lot about how buildings are built," he notes. "There were so many times I was in a classroom and the lessons I learned from my father helped."

Zobrist's interest in structures will continue at the University of Illinois, where he plans to pursue a master's degree in structural engineering. This will come after a summer internship with American Structurepoint.

For his senior project, Zobrist helped a team design a 24-foot-long covered bridge for the Whitewater Canal Trail Association

in Metamora, Ind. The project earned first place in the Indiana Society of Civil Engineers' (ASCE) Design Competition. Zobrist has enjoyed the service opportunities he's had at Rose-Hulman. As ASCE's student chapter president, he organized members to build several wheelchair ramps as community service projects.

"The overall thing at Rose-Hulman is giving back," he explains. "As civil engineers, we serve people every day. That kind of thing is near and dear to me."

Zobrist's Rose-Hulman career also featured being a two-year starting second baseman and Academic All-American for the baseball team. He served as a Homework Hotline tutor and earned the Shelton Hannig Award as outstanding graduating civil engineering student.

"The relationships I've had with my professors have been awesome. They cared about what I did outside the classroom," he says. "That really meant a lot to me." ■

— LeMoyne Habimana-Griffin, 2011 Graduate

The biomedical and electrical engineering double major plans to specialize in oncology while pursuing a medical degree and

The first-generation college graduate credits the supportive faculty and staff members with helping him achieve his goals. ■

## A portrait of a smiling man in a U.S. Air Force uniform. He is wearing a dark blue uniform jacket with a white shirt and a dark tie. The jacket has "U.S." insignia on the lapels and a pilot's wing badge on the left chest. He is standing in front of a large window that looks out onto a green landscape.

— Cody Barron, 2011 Biomedical Engineering Graduate

Then, Barron accompanied ROTC colleague Nathan Keeley in spending seven days and six nights during a summer break experiencing the life of a homeless person in downtown Indianapolis.

Rose-Hulman afforded Barron more opportunities for involvement in a wider variety of areas. He adds: "I would say the family and friendship atmosphere that you get from a small campus environment" was the best thing about studying at Rose-Hulman. ■

## EMMA BARRASSO > Extends Helping Hands to Others



"I love the look of joy on someone's face after we plant a tree in their yard or give them a brand-new bike so their son or daughter can have a great Christmas."

— Emma Barrasso, 2011 Physics Graduate

"What's more fun than getting a new bike on Christmas morning?" asks engineering physics graduate Emma Barrasso. Her Rose-Hulman experience included serving as president of the Alpha Phi Omega service fraternity, which spends a day each December assembling bicycles for the Bikes for Tykes community service project. This year, Barrasso

joined other students in providing 450 bicycles to underprivileged families.

"The families are so appreciative," she says of her Bikes For Tykes experience. Other service projects included working with Habitat for Humanity and assisting Rose-Hulman's Explore Engineering program, which encourages youths toward careers in engineering and science.

"I love the look of joy on someone's face after we plant a tree in their yard or give them a brand-new bike so their son or daughter can have a great Christmas," she says.

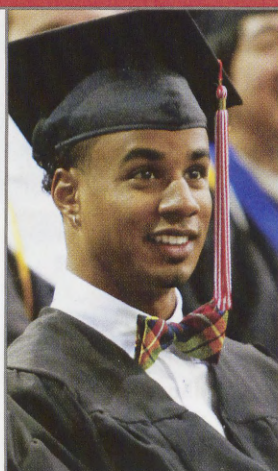
In the classroom, Barrasso spent her senior year improving the recording of images from telescopes at the Oakley Observatory. Her four-student team created a test system for calibrating the camera.

"We had flashlight bulbs and LEDs to cover the entire astronomy spectrum," she says. This procedure allowed for the use of "non-uniform light and diffuse it in a uniform manner... It's a great improvement on what's currently at the observatory," she adds.

Those experiences helped the Wyoming native secure a job as a systems engineer with Raytheon. She attributes part of her success to the support she's received from the Rose-Hulman faculty.

"The professors want to do what they can to help you succeed," she says. ■

## KEEGAN SUPERVILLE > Inspiring Others to Succeed



Keegan Superville, a 2011 biomedical engineering graduate, will study for a master's degree in innovation, strategy, and entrepreneurship in France.

Keegan Superville has a passion for educating and encouraging younger students. That's why the biomedical engineering graduate assisted the Minority Engineering Program of Indianapolis (MEPI) in encouraging youths toward careers in science and technology.

"The MEPI program reignites the minds of middle- and high-school students towards engineering by

participating in small hands-on, fun projects," he explains. "I wish I had more time to dedicate to each student."

Superville, a native of Trinidad and Tobago, has also served as a tutor at Chauncey Rose Middle School, through the National Society of Black Engineers (NSBE), and assisted youths involved

with Rose-Hulman's Explore Engineering program.

"My ultimate goal is to harness and nurture the students' desire to achieve their maximum potential with no restraints," he says. Superville has served as NSBE's vice president and membership chairman and helped the Society of Hispanic Professional Engineers chapter prosper as its president. He received the Martin Luther King Jr. Leadership Award for his efforts to improve campus diversity.

This year, Superville worked with a local mental health service agency to design and build a device that utilizes touch-screen technology to allow cerebral palsy patients to play music.

Superville completed several international internships during his Rose-Hulman career. Those international experiences will continue as he pursues a master's degree in innovation, strategy, and entrepreneurship at the Grenoble Graduate School of Business in France. ■

# On The Cutting Edge

by Dale Long

## TESLA MOTORS' INTERNSHIP PUTS CHAD CONWAY ON LEADING EDGE OF ELECTRIC CAR TECHNOLOGY

Chad Conway has seen the future of vehicles and is preparing to be among the engineers leading the electric wave.

The Rose-Hulman mechanical engineering student has spent two summers as a battery engineering intern for Tesla Motors, a California-based company that's producing increasingly affordable electric cars for mainstream buyers. It currently is the only U.S. automaker that builds and sells highway-capable electrical vehicles in serial production. The revolutionary Tesla Roadster accelerates faster than most sports cars, with no emissions.

"These are definitely exciting times to be involved in electrical vehicle (EV) development, a personal dream come true for me, and I was fortunate to be working for the cutting-edge company in this expanding industry," said Conway.

During the internships, Conway got a first hand look as Tesla became a publicly traded company, prepared to open its first factory for mass production of EV and agreed to produce an all-electric sport utility vehicle for Toyota.

Tesla's new factory will combine top automotive and Silicon Valley talent to produce the car for the 21st century—the Model S, the first premium sedan designed from the ground up to take full advantage of electric vehicle architecture. With an optional extended-range battery pack, the Model S will travel 300 miles per charge.

"Every day we were doing something important, new, and exciting. There was never a dull moment," Conway said. "I learned so much at Tesla. I was allowed to find my own opportunities to help the company and project development team. I was treated as a full-time engineer and someone with good ideas."

This summer, Conway is working at Tesla's European headquarters on a variety of battery pack and systems

engineering projects ranging from the Tesla Roadster, Mercedes A-Class, and the Mercedes Smart Car.

Conway has been fascinated with electrical vehicles since high school. He restored a 1980 Comuta-Car, a pioneering electric car built from 1975 to 1982, for driving in his hometown of Duxbury, Mass. He also expanded his interest in sustainable vehicles during an internship at Massachusetts Institute of Technology, where he worked on the City Car Project.

At Rose-Hulman, Conway was leader of the student team that developed a hybrid-electric SUV for the final year of EcoCAR: The NeXt Challenge.

"I believe that electric vehicles are the future of the automotive industry. I came to Rose-Hulman because of the EcoCAR project and its focus on allowing undergraduate students an opportunity to explore their interests in vehicle development, sustainability, and cutting-edge technology," Conway said.

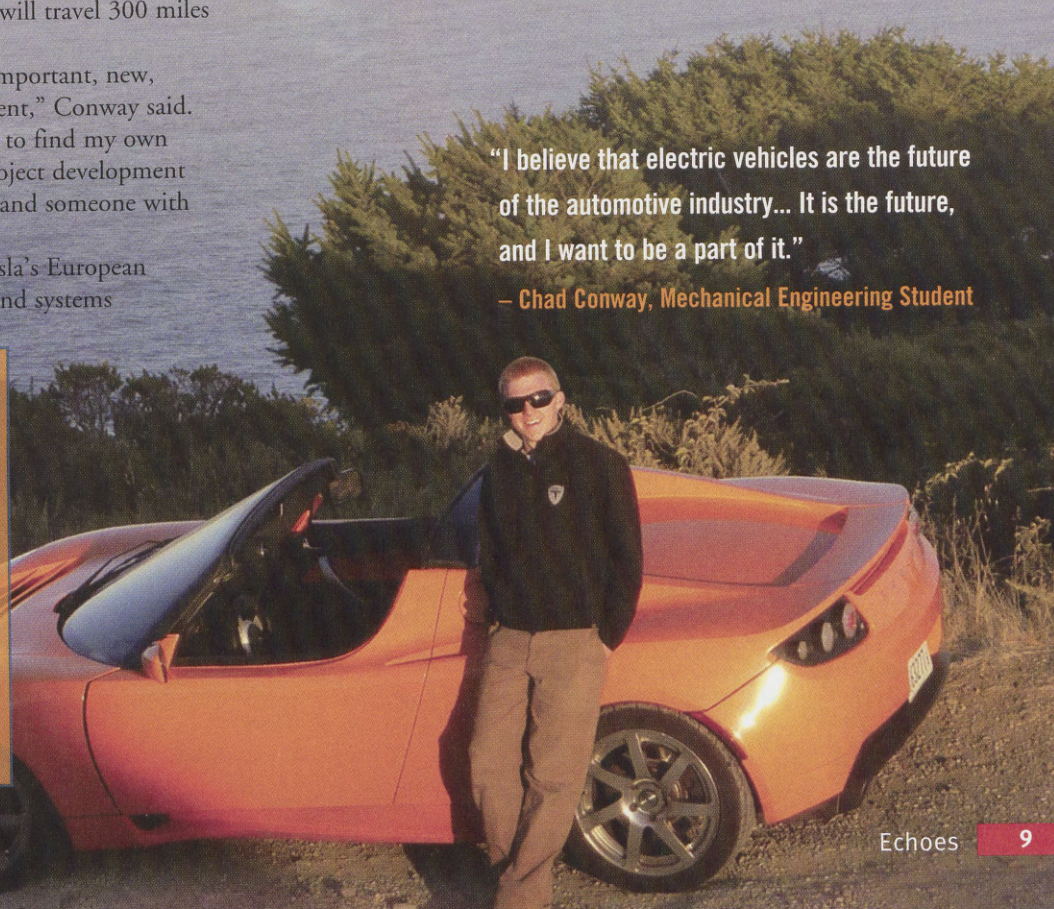
"My campus experiences opened the door for my Tesla internship, and that internship may put me in a position to work with other startup companies in the future. I want to make a difference, he said." "Where that will take me, I don't know right now. However, I definitely want to work in the electric vehicle industry. It is the future, and I want to be a part of it." ■

"I believe that electric vehicles are the future of the automotive industry... It is the future, and I want to be a part of it."

— Chad Conway, Mechanical Engineering Student

### Follow Chad's Electric Vehicles Blog

Chad Conway is a team player who excels when challenged and looks forward to making the world a better place through engineering. His real passion is electric cars and he writes the popular blog Electric Vehicle Revolution. Read what he's got to say at <http://electricvehiclerevolution.blogspot.com/>



# LIFE'S A SNAP FOR YOUNGEST LEGO MASTER

by Stacey Muncie

Andrew Milluzzi's mother recognized his potential at an early age. "Andy, you're going to be an engineer," she declared to her young son as he built objects with LEGO bricks one day at his home. Milluzzi chuckles as he relates his response, "I said, 'But Mom, I don't wanna drive a train!'"

Fast forward several years and you'll find Milluzzi driving not a train, but NASA's Enterprise space shuttle. Well, not THE space shuttle, but rather a working replica that the Rose-Hulman student has designed and assembled.

Working with LEGO isn't a hobby, but a labor of love for Milluzzi. He's one of 50 LEGO MINDSTORMS Community Partners throughout the world and the youngest in the U.S. The shuttle is the result of a four-month-long collaborative effort involving a team of Community Partners from throughout the U.S., Canada, and Denmark.

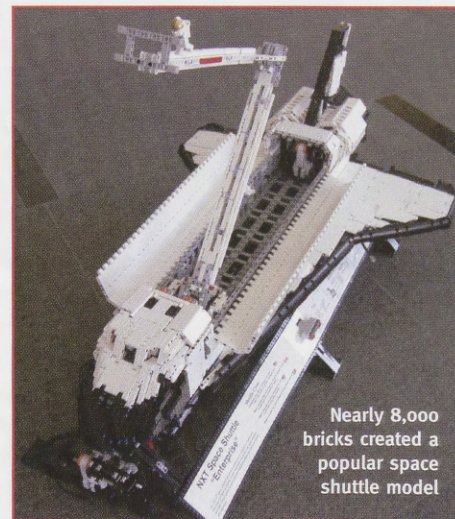
"My job is to encourage the community to get excited about LEGO MINDSTORMS," he explains. The computer engineering and software engineering major has combined his love of all things LEGO along with his programming ability to develop interactive, engaging robotic models that provide a hands-on way for children and adults to experience the fun of science and technology.

Modern robotics is a result of technologies developed through the space shuttle program, Milluzzi explains. "I thought it would be cool to pay tribute to the shuttle program." LEGO liked his idea and the shuttle model project began.

Milluzzi accompanied the LEGO Enterprise model to Florida in June for the completion of the next-to-last shuttle mission. The shuttle model was also displayed at the FIRST Robotics World Championships in St. Louis and Yuri's Night Party, hosted by NASA's Langley Research Center to commemorate the 50th anniversary of the first human space flight by Yuri Gagarin. The model attracts considerable attention wherever it goes.

"The owner of LEGO has played with the shuttle," Milluzzi says, but "the best part is seeing people's faces when they see it."

You might think that after investing four months in the building and programming of the shuttle, Milluzzi would discourage people from touching it. On the contrary, he's a firm

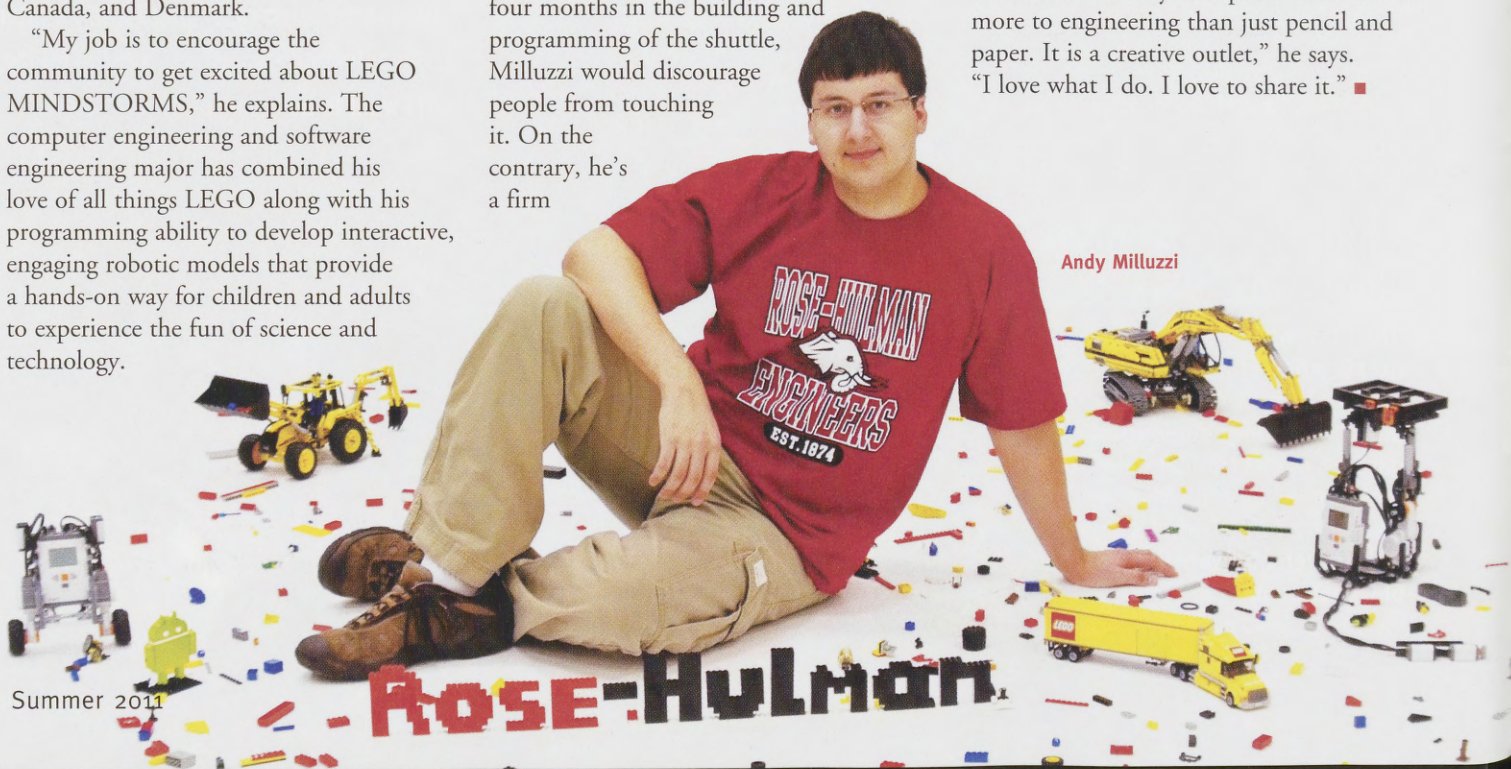


Nearly 8,000 bricks created a popular space shuttle model

believer in hands-on learning and enjoys seeing his creation "being played with and used" at public events. "You gotta have something that people can walk up and touch," Milluzzi says.

An enthusiastic proponent of making science and technology fun and engaging, Milluzzi has found himself in a position to share his knowledge with audiences of all ages. He encourages children to see the science in the interests they already have. "Junior high girls might say, 'I want to be a photographer.' I say, 'Great, you can do that, too, as an engineer. Why not work at Kodak?'" he said. "People are going to make their choices of what they've liked based on what they've experienced... there's more to engineering than just pencil and paper. It is a creative outlet," he says. "I love what I do. I love to share it." ■

Andy Milluzzi



# 'Homework Hotline' Tutors Answer the Call from Youths Needing Math and Science Help by Stacey Muncie

Its 8:30 on a Wednesday night and senior Deepak Bhojwani is scribbling equations on an LCD tablet, while simultaneously Googling the vertex form equation of a parabola. If that seems a little basic for a mechanical engineering student on the verge of graduation, there is a reason. Bhojwani is a tutor with Rose-Hulman's Homework Hotline, and on this spring evening, his caller needs help with algebra.

"There are two kinds of calls," Bhojwani explains in between callers, "One, they just ask us to confirm their answer, and another where they haven't even tried it, or they stop halfway in between."

The phone beeps and Bhojwani puts his headset back on to take the next call in the Homework Hotline's communications center, located on the ground level of the Logan Library.

After greeting the caller and determining her school, he then asks how he can help. The student needs help with her physics

## Endowment Continues Support

The Lilly Endowment Inc. has awarded a \$1.8 million grant to help continue the Homework Hotline through 2014.

assignment. "Are you working out of a book today, or are you on a worksheet?" Bhojwani asks. Colorful rows of textbooks line shelves nearby, giving tutors access to the same materials student callers are using.

In this case, however, the caller is using a worksheet. This means Bhojwani does not have the luxury of being able to actually see the student's assignment. He must not only rely on the caller's explanation, but on his own ability to communicate the concepts without the aid of textbook examples.

"Have you ever played Angry Birds?" the Dubai native asks the girl needing help understanding air resistance. Tutors are adept at using examples with which callers can relate, such as the popular iPhone application.

"It keeps you sharp on your skills," Bhojwani says of tutoring mathematics and science, "You get to talk to all these people, so it improves your communication skills."

The Homework Hotline is primarily a tool for helping middle- and high-school students with mathematics and science homework. However, there are cases when parents call to request help in assisting their child with a challenging problem.

The tutors' mission is to provide all callers with the tools needed to learn. "One of the things we try to focus on here is helping them learn how to use the textbook,"

Supervisor Julie Brennan explains. With that knowledge, she says, "Hopefully, they'll be able to get through the problems themselves and use the textbook better."

Brennan, a mechanical engineering major, enjoys the satisfaction of being able to help others. "About 50 percent of the calls are from people who are so close to getting the answer," she explains, adding, "Nothing is better than this job when you talk to somebody and they finally understand something."

The Homework Hotline is supported by the Lilly Endowment Inc. Find out more about the service at [www.AskRose.org](http://www.AskRose.org). ■

## Number Crunchers...

**47,976**

Number of tutoring sessions in 2010-11

**401,839**

Number of tutoring sessions since service started in 1991

**1.877.ASK.ROSE**

The toll-free telephone number

**15**

Hours open each Sunday-Thursday

**30**

Tutors available each night

**140**

Total tutors and supervisors employed in 2010-11



# The Student-Athlete

## ROSE-HULMAN HAS STELLAR HISTORY OF SUCCESS IN CLASS & SPORT

by Kevin Lanke

**Capital One**  
**ACADEMIC**  
**ALL-AMERICA TEAM**  
SELECTED BY  
**CoSIDA**

As students at Rose-Hulman, their days began early and ended late. Nick Race and Liz Evans mastered the delicate balance of maintaining near-perfect grade point averages while also earning national and regional honors in their sports.

Race, a four-year soccer player, received Capital One Academic All-American accolades in 2010, continuing the college's 25-year legacy of success in the classroom and athletics.

Meanwhile, Evans is the 2011 NCAA Division III indoor and outdoor high jump national champion and a three-time regional field athlete of the year.

The term "student-athlete" is taken very seriously at Rose-Hulman, with 92 current and former athletes being named Academic All-Americans. The institution ranks sixth nationally among all North American colleges and first among NCAA Division III colleges by having at least one honoree in each of the past 26 years. Two athletes were named Academic All-American of the Year—baseball player Kevin Kluemper in 1991 and pole vaulter Ryan Loftus in 1998.

Student-athletes having a minimum 3.3 grade point average (out of 4.0) are eligible to be nominated for the Academic

All-American team in their sport. There's a University Division for NCAA Division I institutions and a College Division for the more than 800 schools in the NCAA Division II, III (like Rose-Hulman), NAIA, Canadian and junior college ranks.

"The key reason I chose Rose-Hulman was the chance to get both an outstanding education and the chance to continue playing competitive soccer," said Race, a 2011 biomedical engineering graduate with a 3.95 grade point average.

Like most Rose-Hulman students, Race's days started shortly after sunrise and were filled with 18 intensive classroom hours each week. Late-afternoon soccer practice filled four weekdays throughout the fall, then there was a quick dinner before finding time to study for the next day's classes or tests—getting around to homework at 2 a.m. the next day. The soccer team had two matches each weekend during the season, starting in late August—before the school year begins—until early November. He also managed to find the time to serve as president for the Biomedical Engineering Society and the Triangle fraternity.

Race's lofty academic credentials resulted in his acceptance to the Indiana University

Most consecutive years with at least one Academic All-American:

<b>N</b>	NEBRASKA	41
<b>G</b>	GEORGIA	33
<b>B</b>	BUCKNELL	33
<b>W</b>	WISCONSIN	33
<b>P</b>	PENN STATE	31
<b>R</b>	ROSE-HULMAN	26

School of Medicine's MD/PhD Medical Scientist Training Program.

Meanwhile, Evans's "average" day during the track and field season includes "breakfast, class, lunch, more class, workouts, dinner, and studying," she says.

Evans also earned Academic All-American honors after compiling a 3.5 GPA as a mathematics and electrical engineering double major. ■

## New Residence Hall & Innovation Center Expand Campus Space



The new residence hall will add space for an additional 240 students to live on campus.

**Catch the grand opening of the Student Innovation Center during Homecoming.**

Rose-Hulman is expanding to meet the needs of its students with two new buildings. Construction is currently underway for a 240-bed, apartment-style residence hall and a 16,000-square-foot Student Innovation Center.

The new residence hall will be located near the present apartment-style residence hall and provide space for upper-level students who currently must live off campus because of space limitations. It will further enhance Rose-Hulman's already high-quality residence life operations, and will not take the place of

any other residence hall.

"We're addressing one of our greatest needs," stated Rose-Hulman President Matt Branam. "Living on campus enhances the Rose-Hulman community, and we want every student to have the best experience possible."

The new residence hall will be open by the fall of 2012.

Meanwhile, the Student Innovation Center (SIC) will be home to the Advanced Transportation Systems (ATS) program and several other student competition teams. Construction of a new

highway project has caused Rose-Hulman to lose the current ATS automotive development laboratory, located across from Rose-Hulman's South Campus on Indiana 46.

The new center will feature support for advanced technologies and flexible work spaces. It will also enhance synergies between students and their projects. Opening this fall, the facility will be conveniently located directly west of the current Facilities Operations Center.

"Our competition teams will no longer be scattered around campus. Bringing them all under one roof should enhance collaboration and allow more students to get involved in these valuable, hands-on experiences," Branam said.

Construction of the SIC will also allow the addition of several new state-of-the-art classrooms in Myers Hall. This will address a current shortage of optimally sized rooms, featuring seating for 15 to 25 students. ■

## ROSE-HULMAN ON MOST TECHIEST COLLEGES LIST

With technology proudly in its name, it shouldn't be surprising that Rose-Hulman Institute of Technology would be ranked sixth among the Top 10 Techiest Colleges in the U.S., according to BestCollegesOnline.com.

Joining Rose-Hulman on the list were Massachusetts Institute of Technology, California Institute of Technology, Stanford University, Carnegie Mellon University, and Georgia Institute of Technology.

BestCollegesOnline.com considered

those colleges that "offer students of all kinds a completely technologically holistic experience, offering proximity to major techie corporations and internships, a huge range of courses and majors."

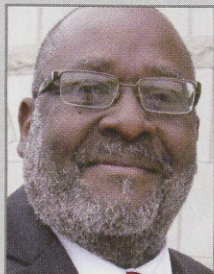
Regarding Rose-Hulman, the online educational service noted "this Terre Haute, IN, school is one of the best for undergraduate and master's degree-level techies. Biomedical engineering, electrical engineering and mechanical engineering are just a few of the majors offered at the well-ranked school." ■

### Top 10 Techiest U.S. Colleges:

1. Massachusetts Institute of Technology
2. California Institute of Technology
3. Stanford University
4. Columbia University
5. University of California-Berkeley
- 6. Rose-Hulman Institute of Technology**
7. Georgia Institute of Technology
8. University of Illinois
9. Purdue University
10. Carnegie Mellon University

Source: BestCollegesOnline.com

## New Leaders To Direct Development, Marketing & Global Programs



Rickey M. McCurry



Mary G. Barr



Luchen Li



Luanne Tilstra

Rose-Hulman has welcomed new campus leadership for institutional advancement, communications and marketing, while also expanding global and diversity initiatives.

Rickey M. McCurry brings skills in constituency development to the vice president of institutional advancement

position. He has spent the past 11 years as vice chancellor of the Southern Illinois University Foundation.

The new vice president of communications and marketing is Mary G. Barr, an experienced strategic marketer and branding leader. She has been the director of marketing at Ball State

University for the past five years.

Luchen Li begins Aug. 1 as the first associate dean for global programs. The former Kettering University professor will play a key role in creating and strengthening international collaborations, study abroad opportunities, cross-culture professional training, international student recruitment, and dual-degree programs with partner universities.

Meanwhile, Luanne Tilstra, professor of chemistry, is the first director of the Center for Diversity. She will coordinate and promote activities and programs designed to enhance awareness and appreciation of multi cultural points of view on campus. ■

## Rose-Hulman Plugs into Future with EcoCAR2

The U.S. Department of Energy (DOE) has again endorsed Rose-Hulman's efforts in advanced transportation technology by selecting the college to participate in the EcoCAR2: Plugging into the Future competition. We're one of 16 North American universities chosen for this three-year educational partnership with General Motors and DOE.

U.S. Sen. Dan Coats and U.S. Rep. Larry Bucshon attended a campus ceremony announcing Rose-Hulman's participation in EcoCAR2.

EcoCAR2 strives to help prepare future engineers for opportunities in clean energy and advanced vehicle industries. Rose-Hulman students will explore a variety of powertrain architectures and follow a real-world engineering regimen modeled after GM's Global Vehicle Development Process.

A Chevrolet Malibu, donated by GM, will be used as the integration platform for the advanced vehicle design.

EcoCAR2's combination of cutting-

edge engineering practices, hands-on experience, exposure to world-class organizations, and knowledge sharing gives students a head start toward future career success.

"The EcoCAR competitions mimic what is really going on in the automotive industry today," states Rose-Hulman EcoCAR Technology Mentor Arthur L. McGrew Jr. (ME '81), design system engineer for GM's EV/hybrid powertrain engineering. "GM and the automotive industry are changing the DNA of the automobile to address the energy concerns of today and the looming energy crisis of tomorrow." ■



Learning About Project: U.S. Sen. Dan Coats (top photo) and U.S. Rep. Larry Bucshon (with Coats in bottom photo) attended a campus ceremony announcing Rose-Hulman's participation in EcoCAR2.

# The Future is Yours

Dr. Michio Kaku Challenges  
2011 Graduates to 'Create the Future'



"Boundaries are being broken by technology," world-renowned theoretical physicist and futurist Dr. Michio Kaku told Rose-Hulman Institute of Technology's Class of 2011 during the college's 133rd commencement ceremony.

Making his words seem even more appropriate was the fact that Dr. Kaku used technology to deliver his speech from a hotel lobby in Moscow. His flight to America had been grounded by mechanical failure.

Rose-Hulman, which was recently counted among America's Top 10 Techiest Colleges, broke the boundaries of geography to bring Dr. Kaku's commencement address to its graduates in spite of the challenging and unforeseen situation.

## Looking Toward Future Technology

Dr. Kaku, best-selling author and host of the award-winning Discovery Channel television series, "Sci Fi Science," gave three examples of advancing technologies that will help transform the future. These are:

**Internet In Your Contact Lens:** In 10 to 15 years, the Internet will be available in your contact lens. Within a blink of the eye, you will be able to go online and obtain information during an important business meeting or social gathering.

**Intelligent Wallpaper:** Physicists are now making transistors out of plastic, creating the possibility for intelligent wallpaper in the future, Dr. Kaku stated. In these cases, the wallpaper will be a large computer screen from which anyone could

retrieve information at any time. "You see, chips will cost a penny in the future. They'll be everywhere," Dr. Kaku said.

## A Look Inside The Human Body:

Nano-scale computer chips will someday be digested into the human body and guided by a magnet to explore areas for physicians during medical testing. In biotechnology, a human body shop will grow skin, cartilage, blood vessels, and body organs—from a person's own cell structure—for replacement parts.

## Science Can Bring Prosperity

"Science is the engine of prosperity," Dr. Kaku told the audience, speaking about civilizations which prospered because they embraced technology, versus those who struggled because they did not.

Referencing the effect of technology on current events, Dr. Kaku stated, "Technology spreads democracy... With the coming of Twitter, we have a revolution in the Middle East right now. For 50 years, these dictatorships have had a stranglehold over these people in the Middle East. Fifty years! Then, in five months, Twitter and Facebook unleash a revolution throughout the Middle East."

Finally, Dr. Kaku closed by telling the Class of 2011, "The future is yours. Live a life as somebody who understands science and technology, and you will create the future."

## Branam Urges New Alumni to Help College Prosper

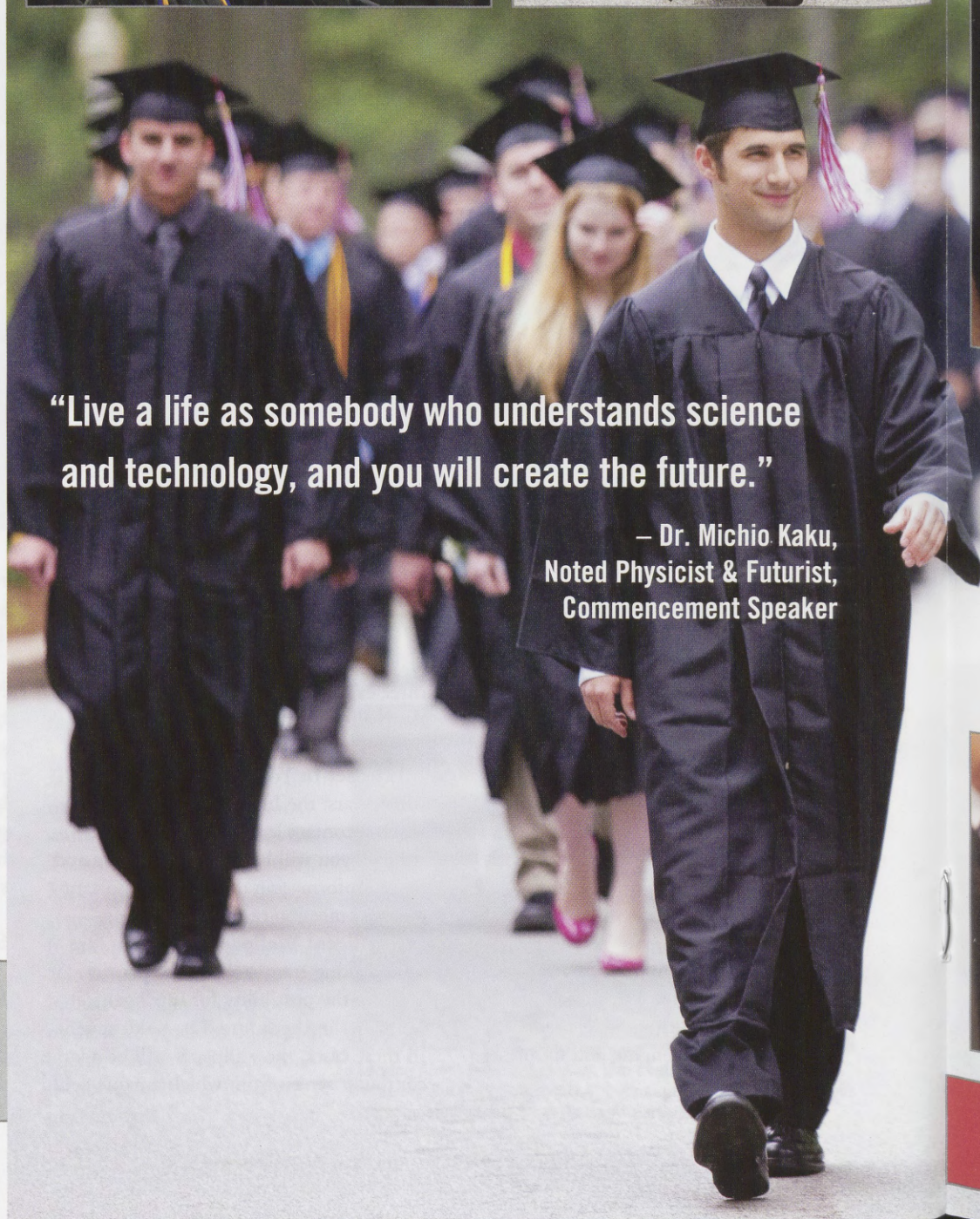
Rose-Hulman President Matt Branam told the graduates, "You are about to become the shapers of a technological revolution that only the most visionary among us, like Dr. Kaku, can imagine." He added, "I have total faith that you will succeed. Because if anyone can do it, I know that a Rose graduate can."

President Branam called upon the Institute's newest alumni to help Rose-Hulman grow and prosper and support their alma mater throughout their professional careers.

"The students here will need you. Your mind, your discoveries, and your experiences will be as valuable to them as anything you received from this institution," he said. "The world will look to you for the technological solutions that will make it a better, healthier, and safer place for the next generation. I know that's a heavy load to carry. But you have endured the heat—and become the vessel of these expectations. A Rose graduate can do it." ■

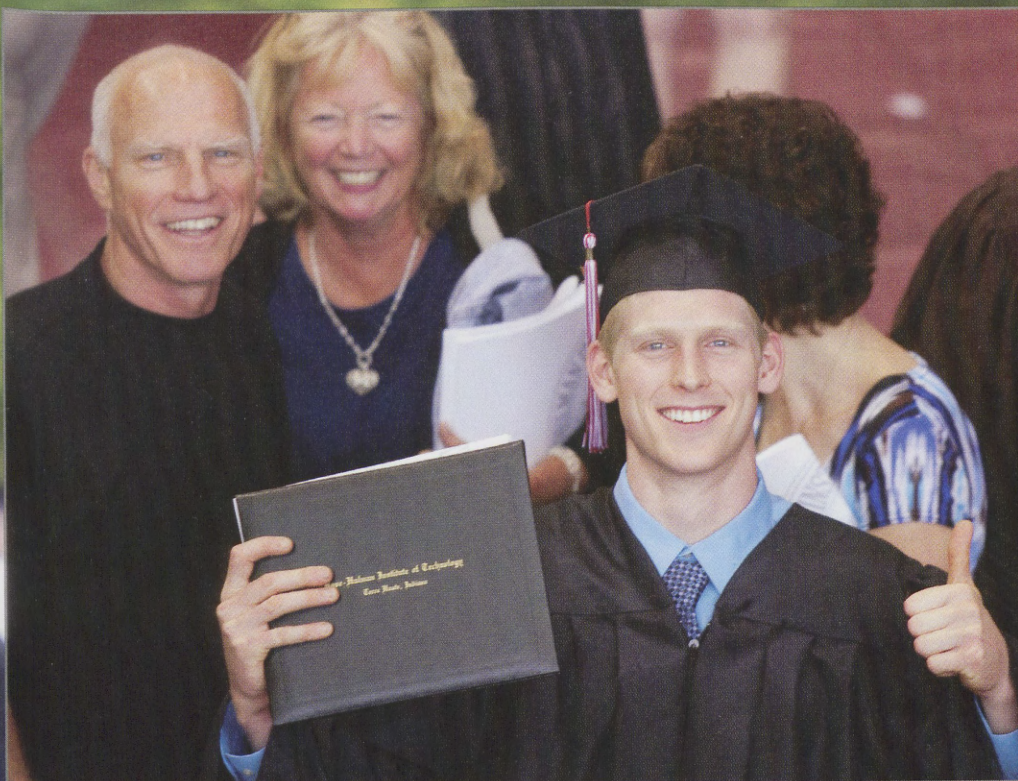
## Watch All The Fun

View a video about this year's commencement highlights at [www.rose-hulman.edu/news/on-campus/2011-commencement-highlights-the-video.aspx](http://www.rose-hulman.edu/news/on-campus/2011-commencement-highlights-the-video.aspx)

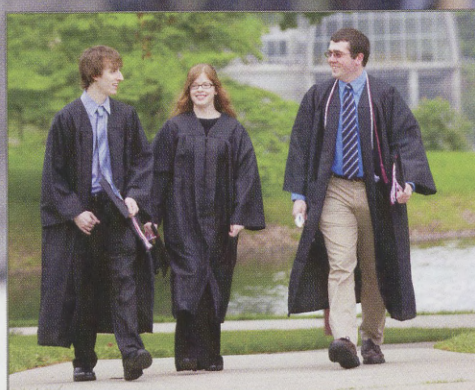


**"Live a life as somebody who understands science and technology, and you will create the future."**

**— Dr. Michio Kaku,  
Noted Physicist & Futurist,  
Commencement Speaker**



Commencement was a time for pomp and circumstance, memories and lots of good times as the Class of 2011 culminated their undergraduate and graduate careers. This year's commencement speaker was noted physicist and futurist Dr. Michio Kaku (bottom, right).



## Gilman Among Trio Earning Honorary Degrees



Awarded honorary degrees were James Gilman, Gian Paolo Dallara and Michael Evans.

Alumnus Dr. James K. Gilman (Biology '74) joined Dr. Michael A. Evans and Gian Paolo Dallara in receiving honorary doctorate of engineering degrees during this year's commencement.

Gilman is the commander of the Army Medical Research and Materiel Command and Fort Detrick in Frederick, Md., the latest assignment in a distinguished 33-year military service career. Under Dr. Gilman's leadership, the medical command has led many efforts to field the best possible products to protect soldiers and save lives.

Evans is founder, president and chief executive officer of AIT Laboratories, an independent reference laboratory specializing in compliance monitoring, forensics, clinical, and pharmaceutical testing. AIT has been repeatedly recognized both locally and nationally for its commitment to employees, culture, education, and training.

Dallara, a native of Italy, has been synonymous with innovation, the pursuit of experience, excellence, and winning in motorsports. The Dallara-designed chassis have been in the winner's circle in all forms of racing. Now, he's building the 2012 car for the IZOD IndyCar Series from a new, state-of-the-art technology center located in Speedway, Ind. ■

### Everything Commencement

View Dr. Kaku's commencement address, President Branam's message to the Class of 2011, photo albums, and news stories at [www.rose-hulman.edu/news/rose-hulman-commencement-2011.aspx](http://www.rose-hulman.edu/news/rose-hulman-commencement-2011.aspx)

# Comeback Kids

Human Powered Vehicle Team Wipes Away  
Disappointment to Win West Coast Challenge



## Rose-Hulman has placed first overall in seven of the last eight ASME human powered vehicle events.

The thrill of victory overcame the agony of defeat for the Human Powered Vehicle Team this racing season.

The student team continued its success on the track, winning the American Society of Mechanical Engineers' West Coast Challenge in Bozeman, Mont. This came two weeks after the team finished a disappointing fifth in the East Coast Challenge at the Indianapolis Motor Speedway. The West Coast victory marked the fourth straight year that Rose-Hulman has won either the east or west coast events, or both.

This year's racing performances were noteworthy because the team suffered significant membership loss to graduation over the past two years. Now, an inexperienced team was being asked to carry on the team's proud tradition of excellence in this engineering competition.

At Montana State University, first-year rider Crystal Hurtle won the female sprint race with a speed in excess of 33.19 mph. Meanwhile, another newcomer, Drew Robertson, placed second in the male sprint event at 39.95 mph. The team captured first place in the utility endurance race, with riders Andrew Bomar, John Daly, Patrick Woolfenden, Hurtle and Robertson leading the way.

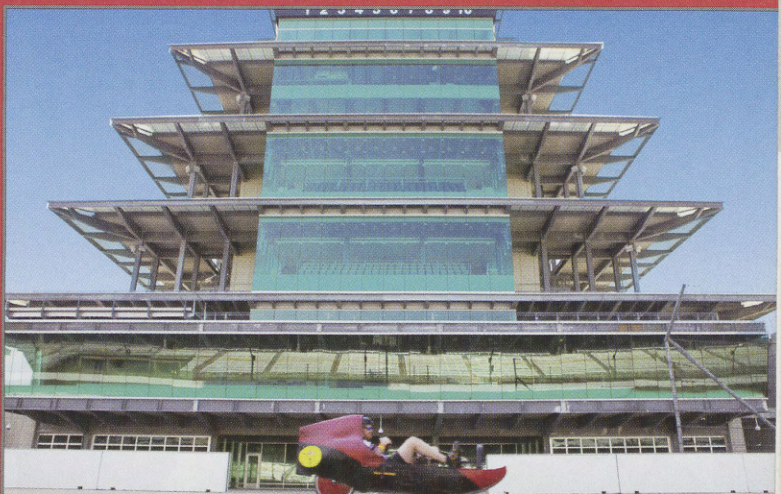
Battling 45 mph wind gusts and frigid temperatures, Rose-Hulman proceeded to finish third in the speed endurance race with riders Aaron Vaslow and Claire Stark joining Woolfenden, Robertson, and Daly in taking turns on the track. A first-place finish in the design report contest combined to give the team the overall regional title.

Despite their challenges, Rose-Hulman also received the Sportsmanship Award for providing help to competing teams needing assistance to repair their vehicles. Female riders Stark and Hurtle also received special honors for stepping in to ride for teams without female riders.

In Indianapolis, the team's hopes of winning the East Coast Challenge were dashed when the custom-built vehicle suffered a critical mechanical malfunction. The fork to the front wheel assembly broke during the utility endurance event. Team members worked tirelessly throughout the night to build a replacement fork in order to complete the next day's speed endurance race. Those valuable points allowed the team to place fifth overall.

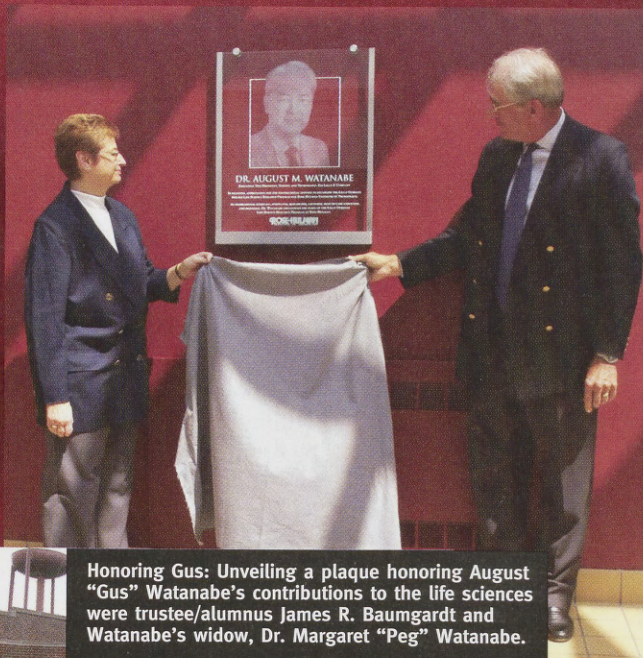
A record 36 teams competed at the East Coast Challenge, hosted by Rose-Hulman and ASME at IMS. The sprint race featured all teams crossing the Speedway's famous yard of bricks finish line and riding on portions of the track's road course. Rose-Hulman is grateful to the Indianapolis Motor Speedway and IMS President/Rose-Hulman Trustee Jeff Belskus for helping Rose-Hulman host this national event. ■

**On The Track:** Members of the Human Powered Vehicle Team are pictured at the famed Indianapolis Motor Speedway (left) before the East Coast Challenge. At right, team members are shown during the sprint, utility endurance and speed endurance events in the two-day competition.





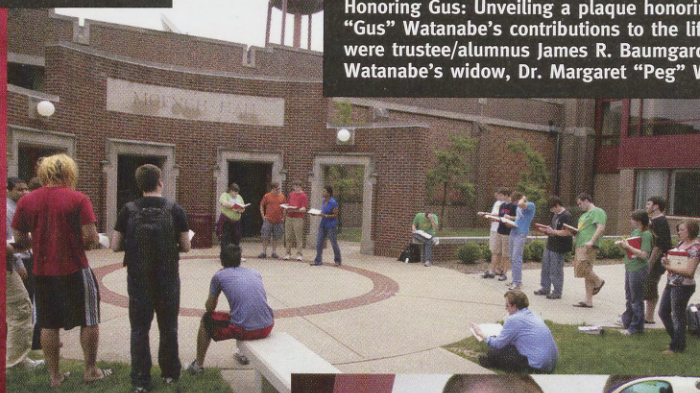
**Pulling Together:** Caroline Andersen helps the Chi Omega sorority win the Greek Games' female tug-of-war contest.



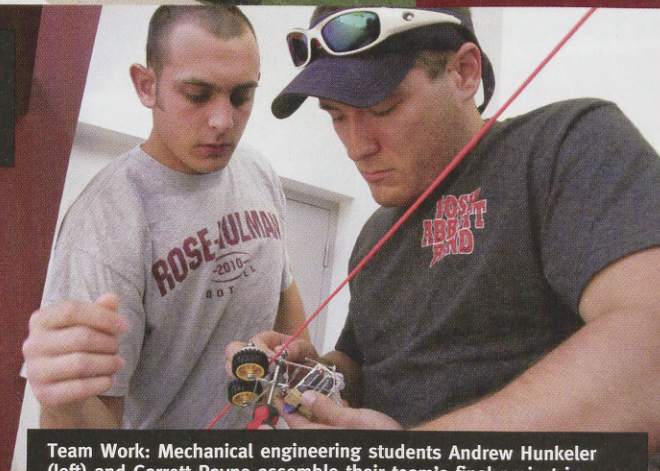
**Honoring Gus:** Unveiling a plaque honoring August "Gus" Watanabe's contributions to the life sciences were trustee/alumnus James R. Baumgardt and Watanabe's widow, Dr. Margaret "Peg" Watanabe.



**Thrill Of Victory:** Liz Evans takes a moment to enjoy the accomplishment of winning the 2011 NCAA Division III Indoor high jump national championship.



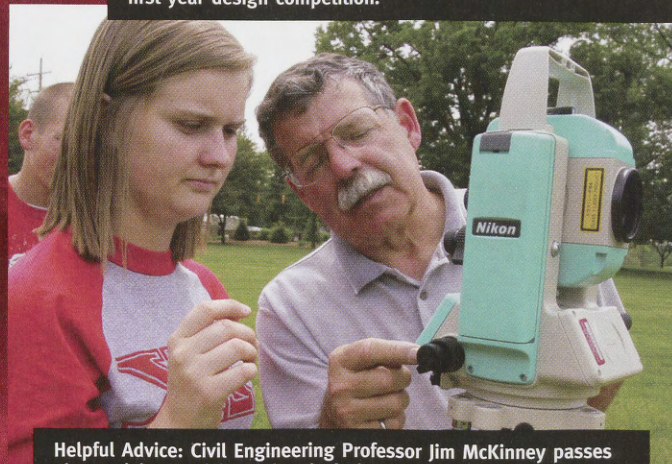
**Outside Learning:** Students taking a Shakespeare's Europe course used the Root Quad this spring as a stage to present one-act plays.



**Team Work:** Mechanical engineering students Andrew Hunkeler (left) and Garrett Payne assemble their team's final project in a first-year design competition.



**Campus Visit:** Physics and Optical Engineering Professor Sergio Granieri explains aspects of an optics lab to leaders from South Korea's Seoul National University of Science and Technology.



**Helpful Advice:** Civil Engineering Professor Jim McKinney passes along advice to Elaine Schaudt during a surveying lab experience.



# SUMMER LEARNING

Chemistry Professor **Dan Morris** Leads Students in Scientific Discovery

Dan Morris combines his love for teaching with the inquisitive nature of research to open new worlds of scientific discovery for Rose-Hulman undergraduate chemistry and biochemistry students.

Besides teaching courses in general chemistry, analytical chemistry, and engineering chemistry, Morris has helped a long list of students complete research projects for industry clients and developed presentations/papers for national science conferences.

"There's a balance between teaching and research at Rose-Hulman that I enjoy and find very rewarding," says the professor of chemistry.

This summer, Morris is supervising chemical engineering student William Hart in a project to better understand how selenium compounds act as anti-oxidants and prevent oxidative DNA damage. This research will provide a better understanding of how selenium works as an anti oxidant, provide a better understanding of how to prevent and treat certain diseases, and offer a possible partnership with the University of Cincinnati for further research into oxidative damage.

"We have exceptional students who desire undergraduate research experiences that complement their classroom studies," states Morris, who earned the Board of Trustees' Outstanding Scholar Award in 2010. "Research opens opportunities for me, but students also benefit greatly... summer is a great time for students to get totally immersed in an area in which they might be interested for a career or graduate studies."

Morris joined a group of Indiana University (IU) faculty on a project examining the nanoscale assembly of biomolecular complexes. This project was funded through the National Science Foundation's Collaborative Research in Chemistry Program. The grant included summer support for Rose-Hulman undergraduate students to be involved in the project.

One of the students, Steve Marczak, received a travel grant from IU to present his research at the Second Annual Undergraduate Research Symposium in Chemistry and Biochemistry at Florida State University.

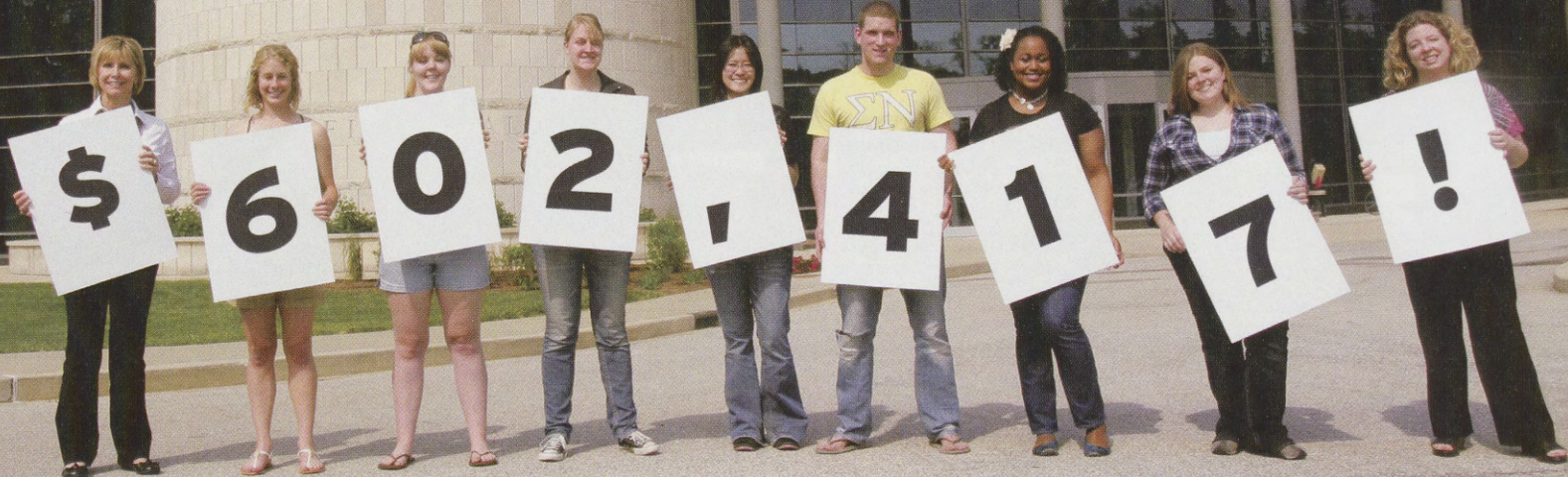
In other projects, Morris supervised chemistry students to help Beckman

Coulter Inc. investigate current microfluidics technology for potential future products. A literature search into soybean processing helped the Central Soya Company determine ways to reduce or eliminate sulfur emissions during processing. Another project developed a prototype to help CSL Limited determine ionic cleanliness of circuit boards.

Morris, who joined the Rose-Hulman faculty in 1996, has also been an Innovation Fellow at Rose-Hulman Ventures, a visiting scientist at Eli Lilly & Company, West Virginia University, and University of Virginia. He has one patent and projects funded by NSF, the W.M. Keck Foundation, the Camille and Henry Dreyfus Foundation, and Joseph and Reba Weaver Undergraduate Research Program.

"Research provides valuable insight through a student's exploration into new areas of science," Morris says. "It might be tedious at times, but I find myself enjoying the research experience, especially when I'm engaged with students." ■

Many Gifts, Big Impact: Below is the total giving this fiscal year by our generous donors to Rose-Hulman's phonathon. Each and every dollar has an incredible impact on our students, programs and facilities. So, many thanks—602,417 of them, in fact!



## Thanking Our Donors

### Phonathon Helps Engage Alumni, Support Students

Student callers for Rose-Hulman's phonathon engage in more than 5,500 conversations each year to create the most personal and direct communication channel as the college reaches out to engage its alumni, parents, and other friends. The annual event also raises valuable resources necessary for scholarships, facility improvements, and technology upgrades.

Without the phonathon, it would be difficult, if not impossible, to achieve this kind of broad and meaningful outreach outside of the annual calling campaign. Not everyone accepts the invitation to support Rose-Hulman, but the contacts can still be very positive, according to Kim Perkins, director of annual giving and donor relations.

The phonathon helps Rose-Hulman update our alumni's personal information (thousands of updated addresses/telephone numbers/emails), learn more about what alumni are up to, and where they're

working—fostering stronger connections with the Institute. A phonathon typically “outperforms” other communication channels, including direct mail and electronic messaging. A decent direct mail response rate might fall in the two percent range, while Rose-Hulman's phonathon participation rate is much higher.

That success has led to Rose-Hulman's phonathon experiencing a nearly ten-fold increase over the past two years, resulting in a record \$602,417 during the 2010-11 fiscal year.

“The phonathon is a vital component of Rose-Hulman's institutional advancement efforts because it gets so many alumni actively involved in the fundraising process,” states Perkins, noting that the alumni giving percentage showcases support for the Institute and its mission. “The Annual Fund sets the tone for a great fundraising year.”

Student callers benefit in many ways from the phonathon experience. Besides

raising money for student scholarships and academic program support, the students enjoy the opportunity to learn more about alumni and their successes.

Caller Sara Traucins is among the 98 percent of Rose-Hulman students receiving financial aid. This fact is part of her motivation to assist the phonathon in achieving its annual goals.

“Scholarships made it possible for me to attend Rose-Hulman,” stated the biomedical engineering student. “Phonathon also offers awesome networking opportunities.” Calls to alumni have helped Traucins make valuable connections for internships and other career opportunities.

Freshman chemical engineering and math major Katie Dial notes that donor contributions make it possible for students like her to attain a world-class education. “We're very appreciative and thankful for the support,” she adds. ■

# Bailey Challenge

By Professor Emeritus Herb Bailey

I retired from teaching mathematics nearly 19 years ago. The only trauma resulting was that no one would listen to me any more. The students had been a captive audience. I made one more try to get my wife to listen and she did, resulting in her partial solution of the addition problem below.

## PROBLEM 1

If you add three mathematicians, end to end, you get one eel. This is demonstrated in the diagram with each letter representing a different digit. The letters E and M cannot represent zero. Find M, A, L and E so that the addition is correct. Prove (translate to "convince yourself and me") that there are exactly three distinct solutions.

$$\begin{array}{r} \text{MA} \\ \text{MA} \\ + \text{MA} \\ \hline \text{EEL} \end{array}$$

## BONUS PROBLEM

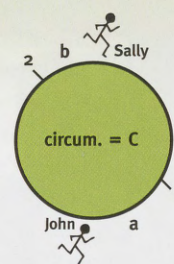
A hiker starts at S, walks along a level path at 4 mph and then walks up a hill at 3 mph to a point T. The hiker then returns to S. The rate down the hill is 6 mph and the level rate remains at 4 mph. If the hiker starts at noon and gets back at 6 p.m., find the number of miles that she walks during the trip.

What can be said about the trip distance if the data is the same as above, except that the downhill rate is 5 mph? Note that the trip distance is not always uniquely determined by the three walking rates.

What relationship between the walking rates must be satisfied to assure a unique path length for a given trip time?



**SOLUTION TO THE SPRING ISSUE PROBLEM:** Some people found **Problem 1** (the map coloring problem) more difficult and others found **Problem 2** (the radius of a track) harder. A solution to the track problem follows. The Problem 2 solution is as follows: For the trip from the initial point to point 1, Sally's distance divided by John's distance was  $(C/2-a)/a$ . For the trip from the initial point to point 2, this ratio was  $(C-b)/(C/2+b)$ . These two ratios are both equal to the ratio of Sally's speed to John's speed. Equating the ratios and solving gives  $C = 520$  or Radius =  $260/\pi$ .



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

Solvers of the Spring issue problems were:

**ALUMNI:** B Bosshardt, 1953; R. Runyan, 1955; D. Bailey, 1959; J. Tindall, 1961; J. Snyder, 1962; C. Divine, 1967; J. Albertine, 1969; J. Born, 1970; S. Jordan, 1970; R. Collins, 1973; P. German, 1975; M. Bailey, 1976; D. Schultz, 1976; R. Hanson, 1978; R. Priem, 1979; K. Borgman, 1982; M. Talley, 1985; M. Lancaster, 1987; T. Doerr, 1988; M. Taylor, 1988; B. Burger, 1991; B. Bechtel, 1992; M. Pilcher, 1998; J. Mathison, 1999; C. Cole, 2001; H. Narayana, 2003; P. Beasley, 2003; and B. Ross, 2004.

**FRIEND:** W. Gosnell, M. Weese, D. Voltmer, B. McDonald, J. Schultz, J. Segal, J. Ley, J. Marks and D. Johnson.

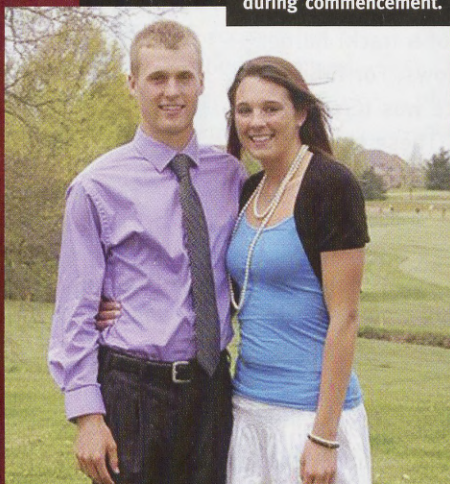
# ALUMNI | PHOTO ALBUM



**In Winner's Circle:** Andretti Autosport Engineer Nick Snyder (ME '05) gets a hug from driver Mike Conway after the team won the IZOD IndyCar Series' Toyota Grand Prix of Long Beach.



**Thanks For Memories:** Dale Raquet (EE '64) gets some help while robing for this year's 50-year commemorative degree ceremony during commencement.



**Athletic Blood Lines:** Patrick Yoakum, son of James Yoakum (ME '87), and Lindsay Troike, daughter of Carl Troike (ChE '88), were named Athletes of the Year by the Champaign News-Gazette and Okaw Valley Conference after standout careers at Tuscola (Ill.) High School.



**Ring Bearers:** Alumni helping officiate Rose-Hulman's Order of the Engineer Ring ceremony were (from left) James Wyeth (ME '00), Denis Radecki (Math '72), Matt Branam (CE '79), Jake Wagler (CE '07) and Daniel Conley (CE '05).



**Giving Back:** Alumni and other American Structurepoint employees gather with this year's scholarship recipients. In the front row (from left) are Jeremy Kashman (CE '03), Todd Stout (CE '07) and Ben Brawn (American Structurepoint). In the back row are Greg Henneke (CE '75), Nicholas Addante, Matt Ross and Nick Murphy (CE '10).



**Mini-Finishers:** Several alumni and friends joined the thousands completing this year's Indianapolis Mini Marathon. Among the finishers were (from left) Kathy Neal, wife of Bob Neal ('77); Tracey Lockhart ('02); Greg Holler ('79) and Elaine Holler, Greg's wife.



**Global Thinkers:** Alumnus/Trustee Robert Pease (ChE '80) chats with Ernesto Lizardo and Carlos Tejada during a reception for students participating in the Saudi Arabia-sponsored KAUST education program.



## Hill Named Bank Director, Leads Nevada Governor's Transition

Steven D. Hill's support for southern Nevada businesses and community service agencies will be enhanced as a member of the board of directors for Las Vegas' Western Liberty Bancorp, the bank holding company for Service1st Bank of Nevada. He also led the economic development efforts on the transition team for Nevada Gov. Brian Sandoval.

Hill, a 1981 mechanical engineering alumnus, has been a director and the vice chairman of the corporate governance committee since Service1st Bank's opening in 2007. In 2010, he became chairman of the board for Service1st, along with being senior vice president and division manager of the California Portland Cement Company, located in Las Vegas.

From 1987 to 2008, Hill was founder and president of Silver State Materials

Corp., located in Las Vegas. He also was operations manager and general manager at Moraine Materials Company in Dayton, Ohio, from 1981-87.

Hill's involvement in the Las Vegas community features serving on the growth management task force, chairman of the Young Presidents Organization and Coalition for Fairness in Construction, and member of the Las Vegas Chamber of Commerce. ■

## Young Alumni Take Entrepreneurial Dreams West

Young entrepreneur and 2010 Rose-Hulman engineering physics alumnus Matthew Fouts has adopted the saying "Go West, Young Man." He has relocated to the Los Angeles area with fellow alumni, a current student and an Indiana State University graduate. They hope to further develop Prof-desk, a startup company offering a revolutionary online learning management system for schools.

Touted as "Blackboard meets Facebook," the software provides a way for teachers, students, and parents to interact, share, communicate, and learn.



**Prof-Desk Team: Matt McGhehey, Tabitha Russell and Matt Fouts**

Fouts, the company's chief executive officer, explains that unlike other course management programs, "Ours is free to use for all schools."

Joining Fouts in the endeavor are Rose Haft (PH '08), chief technology officer, Matt McGhehey, chief financial officer, a chemical engineering student; and Tabitha Russell, vice president of marketing, an ISU alumnus.

"The ability for schools to interact seamlessly and instantly through the Internet is a big step forward," McGhehey notes. "Students, teachers, and parents will be able to interact in ways that will be beneficial to all users." ■

## Dobbs Leading Consumer Energy's Generation Efforts



Dennis Dobbs has brought 20 years of experience in the utility industry to his new position as vice president of generation engineering and services for Consumers Energy, a provider of gas and electric service to nearly 6.5 million customers throughout Michigan.

Dobbs has served as the general manager for the company's Karn/Weadock generating complex, near Bay City, Mich., since 2008. In his new position, the 1987 civil engineering alumnus will be responsible for engineering support for the company's generating fleet, the development of new renewable and conventional generating units, and environmental compliance and strategy. He also will be responsible for administrative support and strategic planning for the utility's power plants.

Dobbs joined Consumers Energy as a senior engineer in 1999 and has held a series of increasingly responsible positions at the company. He began his utility career at Illinois Power in 1991 after serving in the U.S. Army during Operation Desert Storm. ■

## Cindric Hailed among Nation's Top Mechanical Engineers

Tim Cindric, president of Penske Performance Inc., was among six of America's top mechanical engineers whose career achievements were featured by *Inventors Digest* magazine.

A 1990 Rose-Hulman mechanical engineering graduate, Cindric has managed Penske's racing operations, including NASCAR and IZOD IndyCar Series teams, since 2005. During that time Penske has won five Indianapolis 500 races, including a record-tying three straight victories from 2001-03, and the 2008 Daytona 500.

Cindric received the inaugural Herb Porter Memorial Award in 2002. The award recognizes the person who, through innovation, technical advancement or other accomplishments, has enhanced the philosophies and goals of the Indianapolis Motor Speedway.

Asked to describe his dream project, Cindric told the magazine: "I'm living it... When you win at Indy (Indianapolis 500), you become part of a different club."

Read Cindric's profile at [www.inventorsdigest.com](http://www.inventorsdigest.com) ■



# Rose-Hulman LEGACY photos



Front row, from left: **Shalini Saxena '11**, **Aaron Blankenbaker '11** and **David Sanborn '11**. Middle row, from left: **Pooja Saxena '10**; **Zachariah Blankenbaker '08** and **Sarah Sanborn '04**. Back row, from left: **Brian Buetow '11**, **Christopher Buetow '09** and **Thomas Buetow '08**



Front row, from left: **Stephen Galler '05**, **Jeremy Nickol '11**, **Sue Nickol '08**, **Randy Ekl '83**, **Tim Ekl '11**, **Robert Ekl '97**, **Mark Swanson '11** and **Matthew Swanson '07**. Middle row, from left: **Chris Galler '11**, **Donald Galler '77**, **John Knust '83**, **Amber Knust '11**, **Ryan Bormann '11**, **Zachary Pligge '11** and **Floyd Yager '89**. Back row, from left: **Don Jones '80**, **Steven Jones '11**, **Mark Bormann '85**, **Phillip Edwards '11** and **Mitch Edwards '84**



Front row, from left: **Tyler Kimbrell '11**, **Fred Morgan '62**, **Stuart Berry '09**, **Kathleen Berry '11**, **Shalini Saxena '11**, **Jeana Eviston '11**, **Zachary Hawkins '11** and **Cameron Twarek '11**. Middle row, from left: **Trent Kimbrell '11**, **Caleb Anderson '11**, **Jessica Muhlenkamp '11**, **Christina Muhlenkamp '09**, **Chad Eviston '00**, **Bill Perkins '60**, **Jeff Perkins '90** and **Andrew Twarek '05**. Top row, from left: **Michael Taylor '85**, **Ryan Taylor '11**, **Michael Cherbak '76**, **Jesse Cherbak '11**, **Sara Teleyzn '11** and **Laura Teleyzn '06**.

## Class Notes

1950

**Robert Haswell (ME)** hasn't let retirement stop him from making a difference. He received the prestigious Bell Award last year in the Louisville community for outstanding volunteer efforts and for showing the "spirit of Louisville." He has helped Habitat for Humanity for more than 17 years, helping construct more than 200 homes.

1963

**R. Neil Irwin (CE)** of Phoenix, Ariz., was named an Academy of Law Fellow, the highest honor that Indiana University's Maurer School of Law can present to its alumni. He earned his law degree in 1971 and is now senior partner in the international law firm of Bryan Cave LLP. He is a recognized leader in the Phoenix community. Irwin served in the Army before attending law school, where he served on the staff of the Indiana Law Journal.

1970

**Marshall Goldsmith (MA)** a leadership coach and executive educator, has expanded his list of clients to include Dartmouth College President Jim Yong Kim. Goldsmith is working with the former director of the HIV/AIDS division of the World Health Organization as a pro bono client this year. Goldsmith has been a leadership coach for over 30 years and is the author of two best-selling books on leadership: *Mojo: How to Get It, How to Keep It, How to Get It Back if You Lose It* (2010) and *What Got You Here Won't Get You There* (2007).

1974

**Michael Mussallem (ChE)** was named one of the 50 most influential people in Orange County, Calif., as selected by the Orange County Business Journal. He is chairman and chief executive for Edwards Lifesciences Corp., which employs 2,400 in the region and is expecting sales of \$340 million this year.

1975

**Dave Bundy (ME)** retired on October 1, 2010, after 35 years as an Army civilian employee. His last position was a project director in foreign military sales for projects in Jordan, Egypt, and Saudi Arabia. He is now residing in Orlando.

**Mike McEvoy (CS)** has been appointed senior vice president of engineering for Streetline, Inc., the leading global provider of smart parking solutions to cities, airports, universities, and private organizations. He formerly worked for Adobe Systems, Johnson & Johnson, and Cybotech.

**David Whiteley (EE)** is the new executive director of Eastern Interconnection Planning Collaborative, which he helped form as a consultant. Prior to starting his own company, Whiteley BPS Planning Ventures, he served as executive vice president for the North American Electric Reliability Corporation. He also was senior vice president of energy delivery services for Ameren Corporation. He started his career as an assistant engineer with Union Electric Company.

1981

**Steven Hill (ME)** was appointed to the Board of Directors for Western Liberty Bancorp Inc. in Las Vegas. (See story on page 25)

1983

**Kevin Cvengros (ME)** wrote a column in his hometown newspaper, *The Clintonian* (Clinton, Ind.), about his fortunate opportunity to have a personal lunch with legendary college basketball coach and player John Wooden. The column was published after Wooden's death last year.

**Edward Evers (CE)** provided project oversight in raising the 12th Street Bridge for the construction of a new structure over the Ohio River near Covington, Ky. The entire shoring/jacking system was designed over eight weeks by Evers, president of Evers Steel Construction of Cincinnati.

**Michael Fowler (ChE)** was one of 54 persons named Woodrow Wilson Fellowship Foundation Indiana Teaching Fellows. He received a \$30,000 stipend to complete an intensive master's program at the University of Indianapolis before making a commitment to teach for at least three years in an Indiana high-need urban or rural school. Fowler has 27 years of experience in corporate engineering, hiring, and production management and training.

**Greg Schiefelbein (ChE)** is the new Midwest district sales manager for KBA North America, a printing press manufacturer located in Dallas. He has 24 years of experience in the graphic arts industry.

1987

**Dennis Dobbs (CE)** has been named vice president of generation engineering and services for Consumers Energy. (See story on page 25)

1988

**David Urbanek (ME)** was inducted into the 2011 Lorain Sports Hall of Fame. He was a basketball and baseball standout at Lorain's Admiral King High School, and became a NCAA Division III All-South Region, and Academic All-American basketball player at Rose-Hulman. Urbanek is a general manager for Eli Lilly & Company in Indianapolis.

1990

**Tim Cindric (ME)** was named to Indiana's 2011 Silver Anniversary Basketball Team, based on his outstanding accomplishments at Pike High School 25 years ago. He was also named one of America's top mechanical engineers by *Inventors Digest* magazine. (See story on page 25)

1991

**Todd Brown (ChE), Mike Crist (CE)** and **Joe Matthews (EE)** received the 2011 Career Achievement Awards from the Rose-Hulman Alumni Association. (Learn more on page 29)

1995

**Joe Wendel (EE)** was recently recognized by Triangle Fraternity with the Ellison Onizuka Young Alumnus Award. This award is presented to Triangle alumni within 20 years of their initiation in recognition of career accomplishments.

**1996**

**Ashvin Lad (ChE)** has been appointed the Director of Economic Opportunity by the Illinois State Treasurer. He is managing a team that creates approximately 25 economic and community development initiatives annually to help spur growth throughout the state.

**1998**

**Zach Johnson (ME)** helped retool the Terre Haute Convention & Visitors Bureau's website. It now offers new graphics and visitor information that can be accessed quickly from mobile smartphones.

**Jeffrey Schitter (ChE)** was a candidate for a seat on the Denver City Council. He is a chemical engineer turned inventor, entrepreneur and small business owner. At Rose-Hulman, Schitter invented a machine and production process which creates candles by recycling wax from old candles. He founded the Healing Glow Candle Studio in 2002-03 and his business is now located in the Denver area.

**1999**

**Rahul Iyer (ME)** is now working as a senior manufacturing engineer for Power-One Renewable Energy Solutions LLC in Phoenix, Ariz.

**Chris Repa (ChE)** organized "Running Down A Dream," a 24-hour relay run by members of Cross Countries. The organization of high school and college students is dedicated to making a difference in impoverished nations. The 166-mile event started in Clinton, Iowa, and ended at Oak Lawn High School (Ill.), where Repa is the boys cross country coach. The cause secured funds for a June 2012 service trip to Bolivia,

where a group will help complete the construction of a rural hospital. It's the type of cause Repa has devoted himself to since 2001. The goal is to raise \$50,000 to pay for the trip and supplies for the hospital. If you want to assist, contact Repa at (708) 203-2254 or crepa@olchs.org.

**Mark Wlazlo (CPE)** has joined the finance group of the New York City law firm Paul, Weiss, Rifkind, Wharton & Garrison LLP. He will represent private equity megafunds and their portfolio companies in leveraged finance transactions. He earned his law degree, magna cum laude, from the New York University School of Law in 2002.

**2000**

**Wes Bolsen (EE)** was named the top Chief Marketing Officer in the U.S. for companies with less than \$250 million in revenue, by the CMO Institute on www.CMO.com. Bolsen is CMO of Chicago-area renewable energy company Coskata. He was evaluated across several categories of performance, including market orientation and customer intimacy, accountability for results, commitment to innovation, and overall contribution to the success of the company.

**2002**

**Anthony Roach (ChE)** has been hired as engineering and maintenance manager for FONA International Inc. in Geneva, Ill. He spent the past five years in corporate project engineering and management roles.

**2003**

**Daniel Gallagher (ME)** has been promoted to proposal development manager with Raytheon Technical Services Company in Indianapolis. He

is also serving as chair of the executive committee for the American Society of Mechanical Engineers' Central Indiana section.

**2003**

**Beverly Knaup (ME)** and **Brian Knaup (ME)** are conducting a fundraising drive to support the Lupus Federation of America. Beverly was diagnosed with lupus shortly after graduating. Make donations to Beverly's personal fundrasing site: <http://donate.lupus.org/goto/bevknaup>. Checks can be made out to the Lupus Foundation of America (place Beverly Knaup - Los Angeles in the memo section) and send to Beverly Knaup, 2868 Dartmouth Drive, Lancaster, CA 93536. She hopes to raise \$5,000.

**2006**

**Justin Droba (MA)** is in the final stages of earning a doctorate in applied mathematics from Michigan State University. His dissertation covers numerical solvers for problems in nonlinear optics. Last year, he participated in an international conference in China and spent a week at Sandia National Laboratory in Livermore, Calif.

**Stefani Vande Lune Meyer (AB)** was featured in George Washington University's Law School magazine. She was a summer associate at Kirkland & Ellis LLP. Following graduation, she will join the firm's Washington, D.C., office, focusing on intellectual property litigation.

**2007**

**Dr. Christina Chrisman (BE)** earned a medical degree from the Indiana University School of Medicine in May. She will spend the next year as a neurology resident physician at St. Francis Hospital in Chicago, Ill.,

Wes Bolsen



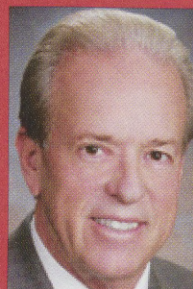
Jeremy Clarke



Amanda Grantz



R. Neil Irwin



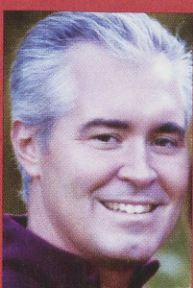
Jonathan Rogers



Stefani Vande Lune Meyer



Joe Wendel



before moving to the Barrow Neurological Institute in Phoenix for three years.

#### 2008

**Amanda Grantz (ChE)** was the top female runner completing this year's Pasadena Marathon, finishing in 2 hours, 45 minutes and 50 seconds. This is the second straight year that Grantz has been the top female runner in the 26.2-mile race. There were over 8,000 participants. She started running marathons two years ago as a way to relieve the stress of being a doctoral chemical engineering student at California Institute of Technology.

#### 2009

**Jeremy Clarke (CS/SE)** is now developing software for Formstack, a privately held company in Indianapolis that creates powerful forms for clients in 110 countries around the world. Clarke is actively involved in the Indianapolis startup scene and still operates his own web-based businesses, many of which he started as a Rose-Hulman student.

#### 2010

**Kendra Albers (OE)** is a research engineer at Georgia Institute of Technology's Electro-Optical Systems Laboratory.

**James Duke (ME)** has been commissioned as an officer in the U.S. Navy after completing Officer Candidate School at the Officer Training Center in Newport, R.I. During the 13-week program, Duke received extensive instruction on a variety of specialized subjects.

**Colin Shipley (ME)** was featured in a *St. Louis Post-Dispatch* profile about engineers working in robotics. He is a robotics development engineer in the robotics division of Bastian Material Handling.

**Jonathan Rogers (ME)** received the National Interfraternity Council's Award of Distinction. This award spans across all fraternities in the National Interfraternity Council. He is a former officer of Rose-Hulman's Alpha Tau Omega chapter. ■

## Weldy Establishes Scholarship Fund

Alumnus **Cary Weldy** has established a scholarship fund with the goal of making a Rose-Hulman education available to deserving students of diversity. The focus is to support students that are openly gay, lesbian, bisexual or transgendered.

Candidates for this scholarship shall be selected based on the following criteria: Eligible applicants must: be openly lesbian, gay, bisexual or transgendered (LGBT); display leadership ability; showcase academic excellence; and have a vision for making the world a better place.

Weldy (ChE '88) is enjoying nationally recognized success with Cary Weldy LLC, a leading Chicago-based architecture, design and construction firm. He created the scholarship to motivate other Rose-Hulman alumni of the LGBT community to step forward and provide additional scholarship support for Rose-Hulman students. ■



## '91 Trio Receive Career Achievement Awards



CAA Award winners Mike Crist, Joseph Matthews and Todd Brown

Three 1991 alumni received the Alumni Association's Career Achievement Award for their successful careers in chemical, civil and electrical engineering. This year's honorees featured:

**Todd Brown**, a chemical engineering alumnus, is site leader for a network of manufacturing sites in The Dow Chemical Company's Kentucky and Ohio regions. He has spent the past 18 months infusing the company's culture and work processes into all operations, while also improving product quality and productivity. Brown has earned Dow's Environmental Operations Special Recognition Award, Technology Center Award and Engineering Plastics Operations Award.

**Michael Crist**, a civil engineering alumnus, is vice president for Moffatt & Nichol and manager of the company's Virginia Operations since 2001. He has been responsible for all facets of projects, ranging from transportation, ports and harbors, energy, coastal and water resources for public and private clients. His latest project is the 34-mile, express lane Hampton Roads Bridge Tunnel, a public-private highway improvement project partnership that includes a 7,200-foot-long immersed tunnel. The project has a construction value of over \$4 billion.

**Joseph Matthews**, an electrical engineering graduate, is purchasing manager for the Gentex Corporation, the world's leader of auto-dimming mirrors for the automotive industry. He is currently responsible for the sourcing of over \$350 million in direct materials and indirect goods and services. His 12-member team successfully navigated the volatile electronic component parts industry that last year experienced 50 percent sales growth from the previous year. ■

## Marriages

2004



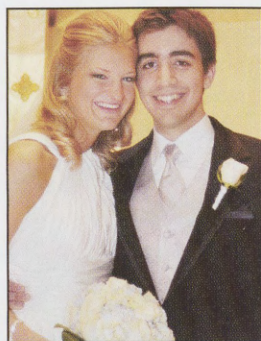
**Dianna Artigue (ChE)** and **Kyle Overmyer (ME, 2009)** were married on April 16, 2011, in the White Chapel at Rose-Hulman. Dianna is employed by Cornerstone Controls as a project engineer and Kyle is employed by Design and Analysis, Inc. as a mechanical engineer.

2006

**Pamela Dopka (EE)** married Nicholas Trombly on December 11, 2010, in Elk Grove, Ill. Pam is a medical technical sales representative for Avago Technologies. The couple is currently living in Chicago.

2009

**Kevin Beals (EE)** and **Jessica McKinley (ME, 2010)** were married on June 4, 2011, in Avon, Ind. Both work for Texas Instruments: Kevin is a channel marketing engineer and Jessica is a wafer fabrication engineer.



**Rachael Nestor (BE)** were married on March 5, 2011, in Carmel, Ind. Eric is employed at Raytheon Technical Services and Rachael is employed at St. Jude Medical. The couple resides in Carmel.

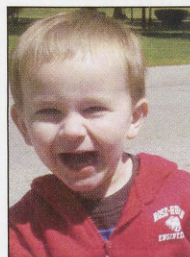
2010



**Candice Brown (ChE)** and **Bradley Wehmeier (SE/CS)** were married on January 1, 2011, on the Rose-Hulman campus. The couple now resides in Indianapolis. ■

## Rosebuds

2001



**Andy Engle (CS)** and his wife Morgan welcomed Will Engle into their family on April 24, 2009. Andy works at Sony Digital Audio Disc Corporation as a software engineer.



**Rob Buxton (ME)** and **Erica Snyder Buxton (ChE 2002)** welcomed Tyler Robert Buxton on February 26, 2011.

2003

**Daniel Gallagher (ME)** and **Marcy Hammer Gallagher (ChE 2005)** welcomed their first child, Maggy, on April 23, 2011. Dan is a proposal manager for Raytheon, while Marcy is a senior validation engineer at Performance Validation. The family lives in Brownsburg, Ind.

2004



**Steven Hoelle (CS)** and his wife Andrea welcomed their second son, Andrew Sirius Hoelle, on August 17, 2010. He joins big brother, Isaac, who is 2. ■

**We Want Your News—Promotions, Achievements, Weddings and Birth Announcements!**

Submit articles and photographs to [dale.long@rose-hulman.edu](mailto:dale.long@rose-hulman.edu)



Fifty years ago the Class of 1961 shared an amazing four years together. Those experiences are being told through words and pictures in a special Golden Modulus website compiled by The Gang of Six: **Russ Archer, Bill Carter, Jack Gilmour, Larry Pitt, Charlie Smith and Dave Trueb.**

The website features biographies of 30 classmates, stories about personal campus experiences and special memories, and photographs from 1957-61. The project was assisted by Hyung-Jung Chang, Rose-Hulman's web developer and publications specialist.

View the class' Golden Modulus website at [www.rose-hulman.edu/alumni-affairs/goldenmodulus](http://www.rose-hulman.edu/alumni-affairs/goldenmodulus). ■

## Obituaries

1940

**Frank G. Pearce (ChE)** died on March 27, 2011, at the age of 92. After attending Rose-Hulman, Pearce received his doctorate from MIT. He worked for Amoco Oil Company for 35 years as a chemical engineer and information systems executive. He is survived by his second wife, Marjorie; son Stephen; daughters Judith Hill and Christine Camin; stepchildren Jack and Cathy Raycraft; seven grandchildren; and two step-grandchildren. Donations can be made to the Class of 1940 Scholarship Fund.

1945

**Henry F. Schoemehl (EE)** died on March 20, 2010, in Laguna Woods, Calif. After a brief time in the elevator industry, Schoemehl was employed by the Radio Corporation of America in Indianapolis, working in a lab that researched sound recording. Later, he was a civilian engineer for the U.S. Navy. He retired from Teledyne Inet in 1991. He is survived by his wife, Barbara; sons Frederick and Mark; and daughter Karen Reinsel.

1948

**William G. Blount (ME)** died on February 10, 2011. He served in the Army during World War II and the Korean War. He is survived by daughters Nancy Blount-Keyser and Barbara Anderson, and three grandchildren.

1949

**Michael G. Schaefer (ME)** of Indianapolis died on March 2, 2011. He worked for Mitchum-Schaefer Inc., a company that his father co-founded in 1932. He was chairman of the renamed Schaefer Technologies Inc. He is survived by his wife,

Doris; sons Michael, Patrick, Steven and Kevin; daughters Rebecca Arnold and Susan McClain; 15 grandchildren; and 21 great-grandchildren.

1952

**Carl R. Vaughn (CE)** died on April 29, 2011, in Brownsburg, Ind. He worked for Castleton and Hall House Lumber for over 50 years, retiring in 2000. He was preceded in death by his wife, Barbara. He is survived by sons Michael, Scott and Timothy; daughter Judy Northern; three brothers; two sisters; grandchildren; and great-grandchildren.

1957

**Donald G. Woehler (CE)** died on February 12, 2011, after being owner and president of Guthrie and Woehler, an Indianapolis consulting engineering company. He is survived by his wife, Barbara; sons Terry, Jeff, David, Kevin, Kenneth and Jim; daughter Julie Brown; 16 grandchildren; and a great-grandchild.

1959

**Jerry Schmits (CE)** died on February 19, 2011. He served two years in the Army and 28 years in the Army Reserves, retiring as a lieutenant colonel. A licensed professional engineer, Schmits worked for Feigel, J.H. Rudolph, Koester Companies and his own consulting company. He is survived by his wife, Mary; daughters Jen Thomas and Laura Noe; and son Joe; five grandchildren; and three brothers.

1972

**Edward W. McCarthy (CE)** died on February 20, 2011, in Pflugerville, Texas after a short battle with metastatic lung cancer. He was an

environmental engineer for Sundstrand Corporation (1973-1982), an industrial safety and health consultant/industrial hygiene supervisor for the State of Illinois (1983-1988), and a senior industrial hygienist/plant safety manager/senior EHS engineering manager for corporate environmental, health and safety at Motorola/Freescale Semiconductor (1988-2011). He is survived by his wife, Cindy; his mother, Marie McCarthy; three sisters; numerous nieces; nephews; and great-nieces.

1979

**Blair T. Atherton (ME)** died on April 3, 2011, in Oakwood, Ohio, after living many years in Kendall Park, N.J. He was the owner and founder of Absolute Filtration. He is survived by his wife, Lyn; parents Chuck and Janet; son William; daughter Jenny; sons-in-law Brock, Gabriel and Ethan Schoenlein; a sister and two brothers; and business associate Larry Salinas.

## Special Friends

**Robert W. Bishop, 88**, died on February 19, 2011, in Terre Haute. He worked for General Motors, Philco Corporation, Westinghouse and J.I. Case Company, where he served as general manager.

**Dr. Fred Isaacs, 86**, died on March 5, 2011, in Terre Haute. He was a member of Rose-Hulman's Century Club.

**Ronald L. Spratz, 77**, died on February 21, 2011, in Beaufort, S.C. The former National Starch and Chemical employee formerly served on Rose-Hulman's Board of Managers. ■



Stuart

Leipziger

This former chemical engineering professor inspired legions of

students, and served as a trusted mentor and faculty colleague. He died on April 7, 2011, at age 72 in North Aurora, Ill. He was a member of the Rose-Hulman faculty from 1984-2002, specializing in gas engineering, thermodynamics and transport phenomena. His research activities featured the measurement and prediction of properties of fluid mixtures and thermodynamics analysis of processes, and brought valuable experience into the classroom after serving as a research consultant for the Institute of Gas Technology from 1965-84. Leipziger is survived by wife, Karen, and nephews Ron and Andi.



Joann Ragle

The wife of former Rose-Hulman Board of Trustees Chair Jack Ragle died on April

24, 2011, at age 84 in Terre Haute. She was proud to join Jack in supporting Rose-Hulman's Decade of Innovation Celebration in 2010 and several academic initiatives. In addition to Jack, survivors include sons John and Gregory; daughter Lisa Murray; six grandchildren; one great-grandchild; sister-in-law Connie Smith; several nieces; and a nephew. Friends may make contributions to The Joann & Jack Ragle Scholarship Fund, c/o Rose-Hulman Institute of Technology, 5500 Wabash Ave., Terre Haute, IN 47803-3920. ■

## William Cook Leaves a Grand Legacy

Rose-Hulman lost one of its dearest supporters on April 15 when **William A. Cook** died in his Bloomington home. He founded the Cook Group global network of companies and was a pioneer in the development of life-saving minimally invasive medical device technology. Survivors include his wife Gayle Karch Cook, son Carl and his wife Marcy, and a granddaughter Eleanor.

William Cook provided a major philanthropic gift to Rose-Hulman's Vision to the Best campaign, and supported the expansion of the life sciences on campus. In his last campus appearance, Cook joined longtime friend and former Rose-Hulman President Samuel Hulbert at a campus forum in 2009 on visionary leadership.

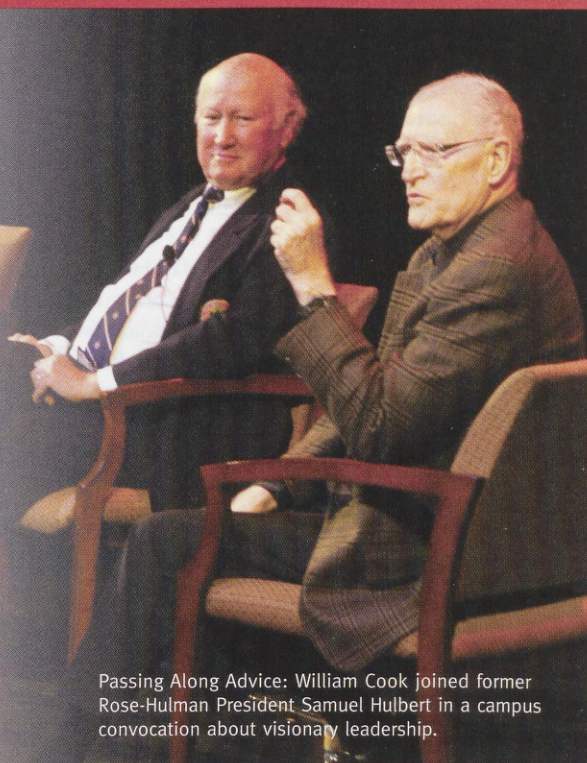
Rose-Hulman's football stadium was dedicated in honor of William

and Gayle Cook in 1996.

"Bill Cook left a lifetime legacy of giving that will last forever," stated Kem Hawkins, president of Cook Group, in a company news release. "His philosophy of putting people and patients first is responsible for our company's 48 years of unprecedented growth and success."

Started in the spare bedroom of his Bloomington apartment in 1963, the Cook family of businesses has grown into a global entity of 42 companies employing more than 10,000 people (several being Rose-Hulman alumni) with manufacturing, sales, logistics and administrative facilities throughout the world.

Carl Cook, a Rose-Hulman trustee, is now leading the privately held company as its chief executive officer. ■



Passing Along Advice: William Cook joined former Rose-Hulman President Samuel Hulbert in a campus convocation about visionary leadership.

## STAY CONNECTED...



### Website Features:

- Latest News
- Videos
- Photo Albums
- Alumni News
- Sports Results

### Special:

- Homecoming Website

Visit the **NEW** [www.rose-hulman.edu](http://www.rose-hulman.edu)

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## HOMECOMING HAPPENINGS

### FRIDAY, SEPTEMBER 23

ALUMNI GOLF OUTING | 8:15 a.m.  
ROSE-HULMAN VENTURES TOUR | 2:30 p.m.  
ALL ALUMNI PARTY | 5-7:30 p.m.  
VOLLEYBALL, VS. FRANKLIN COLLEGE | 6 p.m.  
OAKLEY OBSERVATION STARGAZING | 8 p.m.  
PEP RALLY/QUEEN CORONATION | 8:30 p.m.  
BONFIRE | 9:30 p.m.

### SATURDAY, SEPTEMBER 24

ALUMNI AWARDS BREAKFAST | 8 a.m.  
BASEBALL ALUMNI GAME | 10 a.m.  
SOCCER ALUMNI GAME | 10 a.m.  
ALUMNI ASSOCIATION ANNUAL MEETING | 10:30 a.m.  
WOMEN'S TENNIS, VS. TRANSYLVANIA | 11 a.m.  
ACADEMIC DEPARTMENT OPEN HOUSES | 11 to 1 p.m.  
RESIDENT ASSISTANT HOSPITALITY TENT | 11:30 to 1:30 p.m.  
NSBE LUNCHEON | 11:45 a.m.  
CLASS AGENT LUNCHEON | Noon  
STUDENT INNOVATION CENTER GRAND OPENING | Noon to 2 p.m.  
VARSITY R CLUB TAILGATE | Noon to 4 p.m.  
ROSIE'S KIDZONE | Noon to 4 p.m.  
WOMEN'S SOCCER, VS. TRANSYLVANIA | 1 p.m.  
FOOTBALL, VS. HANOVER COLLEGE | 2 p.m.  
NSBE HOSPITALITY TENT | 2-4 p.m.  
MEN'S SOCCER, VS. TRANSYLVANIA | 3 p.m.  
50 PLUS CLUB GOLDEN GALA | 5:15-6 p.m.

### CLASS REUNIONS:

#### FRIDAY, SEPTEMBER 23

CLASS OF 1961 50TH REUNION DINNER | 6 p.m.  
Kahn Room, Hulman Union

#### SATURDAY, SEPTEMBER 24

CLASS OF 1986 25TH REUNION DINNER | 6 p.m.  
Kahn Room, Hulman Union

CLASS OF 2001, 1996, 1991, 1981,  
1976, 1971, 1966 REUNION PARTIES | 6 p.m.  
The Ohio Building, Downtown Terre Haute

CLASS OF 2006 REUNION PARTY | 8 p.m.  
The Copper Bar, Downtown Terre Haute

Visit <http://alumni.rose-hulman.edu> for updates

### REUNION CHAIR CONTACT INFORMATION:

2006: Josh Hogan, [josh.hogan@bgibson.com](mailto:josh.hogan@bgibson.com);  
Mike Reeves, [reevesmc@gmail.com](mailto:reevesmc@gmail.com)  
2001: Kris Chaney, [knchaney@yahoo.com](mailto:knchaney@yahoo.com);  
Nicholee Nietch, [nnietch@gmail.com](mailto:nnietch@gmail.com)  
1996: Ashvin Lad, [ashvinlad@hotmail.com](mailto:ashvinlad@hotmail.com)  
1991: Tony New, [tony.new@sonydadc.com](mailto:tony.new@sonydadc.com)  
1986: Robert Stone, [rstone@fele.com](mailto:rstone@fele.com)  
1981: Sam Reed, [sreed@bsalifestructures.com](mailto:sreed@bsalifestructures.com)  
1976: Doug Disher, [ddisher@sbcglobal.net](mailto:ddisher@sbcglobal.net)  
1971: Jim Baker, [james.r.baker@rose-hulman.edu](mailto:james.r.baker@rose-hulman.edu)  
1966: Ed Jirousek, [zoarjiro@wilkshire.net](mailto:zoarjiro@wilkshire.net)  
1961: Bill Carter, [wacarter57@sbcglobal.net](mailto:wacarter57@sbcglobal.net)

## LOOKING AHEAD

# Echoes

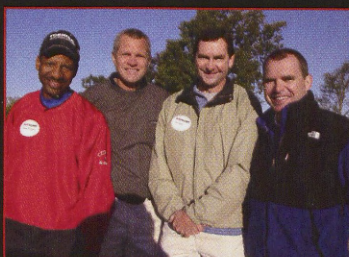
ROSE-HULMAN INSTITUTE OF TECHNOLOGY

## Homecoming 2011



### Continue the Bonfire Tradition

Get fired up for homecoming festivities by attending the pep rally, witnessing the crowning of this year's homecoming queen and enjoying one of the Institute's proudest traditions, the homecoming bonfire.



### Meeting Old Friends

Whether it's a round of golf, the All-Alumni Party or class reunions, homecoming is a great time for you to meet classmates and their family, and recall the "good old days" on campus. There will be reunions for the Class of 1961, 1966, 1971, 1976, 1981, 1986, 1991, 1996, 2001 and 2006.



### Cheer For The Engineers

Join the campus community in supporting the Fightin' Engineers as they host Hanover College in this year's homecoming football game. There will also be home matches for the volleyball, women's tennis, women's soccer and men's soccer teams.



### Find Out What's New On Campus

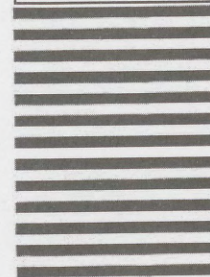
Make plans to see the exciting things happening at Rose-Hulman. Visit your academic department to meet your former teachers, view our state-of-the-art laboratories or take a simple troll through the Root Quad one more time. The new Student Innovation Center will be open for tours, and you can stargaze at the Oakley Observatory.

Find out Homecoming Happenings  
[www.rose-hulman.edu/news/homecoming-news.aspx](http://www.rose-hulman.edu/news/homecoming-news.aspx)

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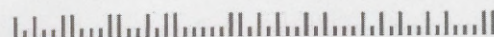
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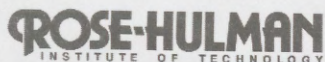
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**For Additional Information:**

☐ I am interested in information regarding planned giving.

☐ I have Rose-Hulman in my estate plan.

☐ I am interested in learning more about corporate and foundation giving.

☐ I would like to speak to someone regarding making a gift to Rose-Hulman.

# Echoes

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## PARTING SHOT

### Our Engineers Can Dance!

Drama Club members kick up their heels while showcasing their singing and dancing skills during the spring musical production of "The Drowsy Chaperone" on the Hatfield Hall Theater stage. (Photo by Bill Forehand)