

# Engineering News

Kazuo Inamori School of Engineering  
Alfred University

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### Save the Dates!

The Inamori Kyocera Fine Ceramics Museum Opening Ceremony October 14, 2010

Engineering Materials Science Day Scholarship Exam October 28, 2010

go to [engineering.alfred.edu/newsletter](http://engineering.alfred.edu/newsletter) for complete information

## NY BEST Consortium promotes innovation in advanced energy storage Engineering faculty bring materials expertise

The Inamori School of Engineering has been named a founding member in the NY State Energy Research and Development Authority (NYSERDA)-funded NY State Battery and Energy Storage (NY-BEST) Consortium to improve sodium-sulphur (NaS) and sodium metal halide (NaMH) advanced battery technology.

In March 2010, NYSERDA announced awards over a 5-year period totaling \$8 million to help develop or commercialize 19 cutting-edge energy storage projects that will strengthen New York's standing as a national leader in the energy storage industry and help build New York's clean energy economy for the future. NY-BEST includes consortia focused on NaS, Li-ion and other battery technologies as well as smart technologies for energy management and the recycling of critical materials.

Research in the Inamori School of Engineering will focus on materials understanding and development for NaS and Na-metal halide batteries - the



*continued on page 5*

## Dr. John Marra to present 2010 McMahon Award Lecture



Dr. John Marra, Associate Laboratory Director; Strategic Initiative Development at the Savannah River National Laboratory (SRNL), Aiken, South Carolina, will present the distinguished McMahon Award Lecture for 2010 on November 4, 2010 in Harder Hall Auditorium. His lecture is "Advanced Ceramic Materials for Next-Generation Nuclear Applications."

## Linda Jones is new NYS College of Ceramics Unit Head LaCourse returns to research and teaching

Dr. Linda E. Jones, recent director of the Picker Engineering Program at Smith College and former AU professor of materials science, has rejoined AU and the NYS College of Ceramics as associate vice president for Statutory Affairs. Jones assumed her duties on July 1, 2010.

As Unit Head, Jones will lead the College to even greater recognition for both of its already internationally-known schools: the Inamori School of Engineering and the School of Art and Design. We look forward to her success in the years ahead!

With Jones's appointment, acting unit head Dr. Bill LaCourse, professor of glass science,

returns to the teaching faculty. Says LaCourse, "I am extremely happy to be going back to teaching and research with more interaction with students. I've already gotten some funding to support graduate and undergraduate research and despite being at Alfred for 40 years, I've still got a few ideas I'd like to pursue on the research front."



Dr. Linda Jones

LaCourse has earned our thanks and appreciation for his past 4 years of dedicated administrative service!

## Engineering challenges yield seriously fun competition

Hot Dog Day, a.k.a. "Spring Family Weekend" (April 23-25, 2010, kicked off with the excitement of the Pine Hill Derby - the Friday afternoon gravity vehicle race that tests the practical skills of undergraduate engineers each year. Watching hot dogs fly while awaiting the mud volleyball on Saturday afternoon, spectators also marveled at the ingenuity of our undergraduates in flinging that very ungainly projectile!



The Pine Hill Derby is comprised of three stages: 1- braking tests, 2- maneuverability (a five-cone slalom) and, 3 - finally - time trials down Pine Hill! 26 teams started the competition with only 18 teams making it to the final downhill excitement.

To inspire new competitors, this year's competition featured 11 prize awards, with 5 "New Guard" prizes (Best Freshman, Best Team, Best Custom, Crowd Favorite and Darwin - Not Likely To Survive - awards) in addition to the traditional racing prize awards of previous years. Awards were also given for Most Unique, Most Environmentally Friendly, and "What were you thinking!" To be eligible for all but the

Darwin award, a team had to finish (Nature is a hard master after all).

Gravity Heroes repeated their 2009 success in 1st place, but last years runner up Man Musher Crusher, was edged out by **Rich's Rawdawgs** (left) for 2nd place by a margin of just .08 points!

**Pre-Cakes** (14th overall, pictured top right) took 2 prizes - Best Team and Crowd Favorite!

Other "New Guard" award winners included:

Best Custom - Kick Astronauts (6th overall, middle right)

Best Freshman Team - The Whistlers (4th overall, bottom right)



In the Hot Dog toss (left), a lean field of competitors brought their entries to Tucker Field. Trebuchets reached new heights, but were out-distanced yet again by the more conventional slingshot!

## Current and recent students featured in ACerS Bulletin Education issue

The American Ceramic Society Bulletin's Annual Ceramic Education Issue (June-July 2010) features contributions from several current and recent students and is worth a look; the issue is also worthy to be passed along to young people considering an engineering career, whether or not they have yet considered materials science as a career option.

Presenting their views are PhD student **James Kelly** (left, CE '06) on "Choosing between MS and PhD degree paths"; **Jaime George** (center, BMES '09, currently a grad

student at Missouri S&T) on her experience "Studying the Sciences Abroad"; and **Sam Miller** (not



shown, sophomore MSE) on "Is Materials Science Engineering for you?" Contributions from students at Virginia Tech, University of Florida, Oregon State University and University

of Connecticut round out these informative articles on educational topics.

Current student research contributions in the issue include a "Review of Aurivillius photocatalysts" by current PhD student **Victoria Knox** (right).

Knox is a member of the ACerS President's Council of Student Advisors and is one of the organizers of the Symposium on "Student Career Development and K-12 Demonstration Exhibition" at MS&T 2010, October 17-21, in Houston, TX.



The 2010 Saxon Racing team was one of 61 student teams from the United States, Canada, France, India, South Korea, and Venezuela, in the final competition at the "2010 Wet World Challenge at RIT" held June 11-13, 2010. 89 teams had applied to compete but many failed to overcome the technical and logistical challenges entailed.

Last year, Baja SAE Wisconsin 2009 proved to be strictly a learning experience; Saxon Racing needed and got a lot of help from other teams.

This year's team (clockwise from lower left) included **Brad Canale**, **Ryan Pritchard**, **Mark Harstad**, **Jim Thierman**, **Weston Ulrich**, **Josh Kowalski** and **Harrison Hendricks** (seated).

The SAE Mini Baja is a real world engineering design project. The objective of the contest is to design and build an off-road vehicle that is capable of completing a variety of different challenges while meeting precise specifications. The tests include static, dynamic, and endurance - hill climbing and water - events.



Team advisor **Dr. Tim Wong** (assistant professor of mechanical engineering) remarked on the team's 2010 experience, "This year's team fulfilled all of its pre-stated design goals for improving upon last year's car; we would have gone further than a #56 ranking had our gear reduction been sufficient to clear SAE/Rochester's muddy hills. Although the AU car came up short on its climbing torque, it was exhilarating to be with the team: the kids worked their hearts out." AU's Saxon Racing is sure to build on this experience and advance in next year's 2011 SAE Baja Challenge!

This year's successful finish was enabled by the generosity of Olympic Steel (Cleveland, OH, courtesy of alum Ed Neimeier) and Ulrich family friend Jeff Sullivan (McGard LLC, Orchard Park, New York) for donated metal and laser machining time, and AISI 1020 frame tubing; and monetarily by ASME Olean Section, Dresser Rand (Olean, NY), the Inamori School of Engineering and Mechanical Engineering Department, individual faculty, the team and their parents. Thanks to all!

## Engineers win 2010 ASME and AU Convocation honors



The Olean (NY) section of ASME held its annual project presentation competition for engineering students from Alfred State College and Alfred University on April 29, 2010. Engineers **Max Feeman** (Junior ME, left) and team-mate **Andy Payne** (Senior ME, right) won the \$250 first prize for their project presentation on the development of a Stirling engine demonstration model. This model will be used specifically for thermal science classroom use, and generally for demonstration purposes.

Outstanding achievement in all areas was recognized at the Alfred University Honors Convocation, April 23, 2010. We congratulate all the winners on their fine work and achievements!

## Engineers in AU arts and sports

Engineers were among the 2010 Alfie award nominees: Saxon diver **Kameron Chambliss**, Outstanding Male Athlete (he earned All-American honors at the 2009 NCAA Division III swimming and diving championships, placing fifth in three-meter diving); **Lauren Pfeifer**, Outstanding Female Athlete (SR MSE, star equestrian and downhill skier); **Greg Badger**, Outstanding Campus Spirit by an individual (SR GES, Acafellas). **Adam Fiegl** (SR ME), **Mike Chrabaszcz** (JR CE) **Matt Phillips** (SR CE) were all nominated in the category Best Performer in a musical production.

Phillips is also a talented athlete, competing for the AU men's track and field team at the ECAC outdoor championship meet, held May 13-14, 2010, at Springfield College. Phillips was a member of the 4X400-meter relay, placing eighth, with a school record time of 3:20.85!

**The Acafellas** performed in this year's awards - they were the 2009 "Student Entertainers of the Year". The octet included some of our best engineers - Adam Fiegl, Greg Badger (SR GES), and Peter Metz (SR CE) - along with the talented Ginger (Ryan) Maggio, Ryan Link, Geoff Nassimos, Jon Villegas, and Ned Allen.

Thanks for the fine performances!!



## Engineering and Science Outreach: many ways to find a new generation of engineers!



As engineers, we are all well aware of the innovation challenges that face our nation and world today and into the future. These challenges will require a new generation of creative scientists and engineers. The Inamori School of Engineering uses a broad range of programs to open the minds of our talented young people to the diverse and creative world of engineering. Throughout the year, our programs bring students to the Alfred University campus

for laboratory demonstrations and hands-on experiences. These diverse programs can be tailored for small to large groups and their academic needs. Most are a little or no cost to school groups.

Local classrooms have come to campus this year - as arranged by their high school science teacher with our faculty and staff - to participate in an engineering-oriented learning experience. Particularly valuable for sophomores and juniors, these days on campus encourage bright students to consider engineering and science as a career. Soon, the Learning Center in Binns-Merrill Hall will be complete and ready to welcome student groups of all ages to campus to learn about engineering and materials science.

We take the learning right to the school, too! **Science on Wheels** is a dedicated group of staff and students who take the fun of "gee-whiz" science to elementary

school classrooms in the Southern Tier area. This program encourages hands-on exploration of engineering concepts and the diverse properties of materials.

For high school juniors, there is also the annual **Engineering Materials Science Day**, bringing students from all over our region to campus for the day to participate in an engineering scholarship competition and to explore engineering through lab tours and



demonstrations. The 2010 Engineering Materials Science Day scholarship exam is scheduled for October 28!

Again this year, Alfred University has offered its **Summer Institute in Science and Engineering**. This residential program is always popular and combines classroom and laboratory instruction with a unique taste of campus life.



Contact Marlene Wightman, [wightman@alfred.edu](mailto:wightman@alfred.edu), for more information on all of our engineering outreach programs.

## McGee Pavilion set to rise Harder "Hole" where skateboards once held sway



Work has started on the McGee Pavilion, a new 17,000-square-foot addition to Harder Hall that will house exhibition spaces, a student gallery, flexible studio spaces for ceramic art, and a suite for the integrated electronic arts which will include a sound studio, video studio, interactive digital studio and editing facilities. Ground-breaking occurred in mid-semester; occupancy is expected in late 2011.



The pavilion is named in honor of the late State Senator Patricia K. McGee, a good friend to Alfred University and to the Southern Tier.

## High Temperature Materials Testing Facility near completion

The High Temperature Materials Testing facility, comprising both a dedicated lab for high temperature thermal property measurement and multifaceted X-ray characterization laboratory capabilities, is in its final stages of instrument installation and calibration.

The \$4M facility, announced in May 2008 by NY State Senator Catharine Young, is a high-temperature materials testing laboratory to support materials-based companies. The facility will allow both small and large companies access to faculty expertise and state-of-the-art facilities for measuring high-temperature properties materials in both bulk or thin film forms.

Instrumentation now installed clockwise from top left:

**Setaram thermal analysis system;** TGA(DTA)/DSC/mass spec to 2400°C, atmosphere control)

**Anter Flashline 5000:** thermal diffusivity/specific heat capacity/thermal



expansion (to 2400°C, atmosphere control).

Two high temperature **Bruker D8 DaVinci systems**; for powder XRD, reflection mode (left) and reflection/capillary and small angle acattering modes (right) to 1200 °C.

Bruker portable D2 Phaser powder XRD (left) and general use room temperature XRD instruments;

a Siemens D5000 and a Siemens D500 for thin films

**Electrical resistivity in the glass melt** (to 1500°C).

**Bruker S4 Pioneer XRF for chemical analysis:** automated analysis of powder, solid, and liquid samples.

Contact **Dr. Doreen Edwards**, for more information.

## NY BEST *continued from page 1*

Na- $\beta''$ -alumina electrolyte and the sealing glasses which are critical to performance and reliability. Five faculty and 3 new post-doctoral researchers will develop and test model materials systems in a collaborative feedback system with industrial partner GE (manufacturing and performance expertise and real-world testing).

Academic partners at Columbia University and Clarkson University will lend expertise in electrochemical performance modeling and nanoparticle synthesis while teams at SUNY Stony Brook and Brookhaven National Laboratory will apply advanced characterization and analysis using the synchrotron radiation source.

The work represents a 3-year, \$1.25M, commitment by NYSERDA and AU.



**Dr. Alastair Cormack** and **Dr. Bill Carlson** (not pictured) are applying advanced computer simulation modeling methods to the materials and thermomechanical aspects of the NaS battery. Cormack will use molecular dynamics modeling to investigate crystal structure and transport

properties; Carlson will model systems behavior using multiphysics finite element analysis (MP-FEA) - multi-field transient models to evaluate battery responses, focusing on electrodes and layer interfaces in batteries.

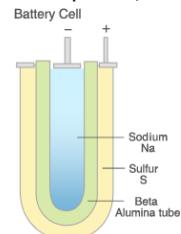
**Dr. Doreen Edwards** and **Dr. Scott Misture** will focus on experimental studies for physical property and structural determination. Cormack and Carlson will work closely with Edwards and Misture as their experimental results will provide essential feedback to improve and validate theoretical models, improving models which may lead to new insights into materials and systems behavior.



**Dr. Matt Hall** and Misture will explore new solutions for the problem of sealing glasses. These glasses or glass ceramics must be strong and resilient in a highly corrosive environment, must match the thermal expansion characteristics of the electrolyte and

containment materials, and must be readily fabricated as leak proof, durable, seals in the industrial setting.

A 50kW NaS battery module is comprised of 320 individual cells, at right, making system reliability and dependable materials performance a critical concern. Carlson will also develop MP-FEA models for system performance evaluation.



Industrial partner GE manufactures NaS and Na-MH battery modules in their revitalized Schenectady, NY, manufacturing facility - its first batteries will be in the GE Evolution® Series hybrid locomotive this year.

NaS and Na-MH battery technology is also essential for the stationary applications for smart energy to bring solar and wind energy sources effectively onto the national power grid.

GE and the five academic partners will work closely together to improve the manufacturing technology and service reliability of these essential components of our advanced clean energy future.

## Inamori SOE Faculty Honored for Research and Teaching

**Dr. Olivia Graeve**, associate professor of materials science and engineering, has been selected to receive the American Ceramic Society's Karl Schwartzwalder-Professional Achievement in Ceramic Engineering (PACE) Award. Graeve

will be honored at the 112th Annual Meeting Honors and Awards Banquet, October 18, 2010, in Houston, TX.

The Schwartzwalder-PACE award recognizes the nation's outstanding young ceramic engineer whose achievements have been significant to the profession and to the general welfare of the American people.

**Dr. Mark Towler**, Inamori Professor, was awarded University of Limerick Research Award. The award, presented by the University of Limerick Materials and Surface



Science Institute (Limerick, Ireland), recognizes the Institute member with the highest number of publications with ISI impact factor over 1.5. The award recognizes Towler's outstanding and continuing contributions to high impact research in biomedical materials at the Institute and beyond. Towler came to Alfred University from Limerick in August 2009.

**Dr. Nathan Mellott**, assistant professor of materials science and engineering, has been awarded a

"3M Non-Tenured Faculty Award". This award, given by 3M, recognizes outstanding new faculty for the quality and relevance of their research. The award comes with an

unrestricted grant of \$15,000 per year which may be renewable for up to three years.



**Dr. Matt Hall**, CACT director and associate professor of biomedical materials engineering science and glass science, is this year's recipient of the John F. McMahon Ceramic Teaching Excellence Award. The award is presented annually in honor of the late Dr.

John F. McMahon for his many years of service to Alfred University as both professor and dean of the NYS College of Ceramics.

**Dr. Scott Misture**, Inamori Professor, was awarded a 2010 Joseph Kruson Trust Fund Award for Excellence in Teaching.



Misture is also a member of the 2010 Denver X-Ray Conference Organizing Committee. This year's conference is to be held 2-6 August 2010 at the Denver Marriott Tech Center.

**Dr. Jianxin Tang**, professor of electrical engineering, presented his research paper

"Active and Passive Control Systems for Magnetic Bearings with Application to Wind Turbines" at The 25th International Technical Conference on Circuits/Systems, Computer and Communications (ITC-CSCC 2010), Pattaya, Thailand (July 4-7, 2010).

**Dr. Arun Varshneya** presented the invited talk "Strengthened Glass Frontiers" at the 25th anniversary Celebration of Research conference at Turkiye Sisecam, Istanbul, Turkey, on May 7, 2010, and traveled on to present a research seminar at the Department of Amorphous Materials, Institute of Physical Chemistry, Sofia, Bulgaria, at the invitation of Professors Ivan Gutzow and Isak Avramov.

Varshneya gave an invited workshop on "Chemically Strengthened Glass for Transparent Armor Application" at the 5th Military Armor Protection Conference at the Institute of Defense and Government Advancement, Washington DC. (May 24, 2010). His seminar highlighted the Inamori School of Engineering at Alfred University as well as Saxon Glass Technologies, Inc.

## Faculty news in brief...

### Faculty and students are major contributors at ACerS Glass and Optical Materials Division Corning 2010 Meeting

Faculty and students were important contributors to the recent GOMD 2010 meeting; 11 faculty and 6 graduate students contributed several invited lectures and 11 contributed talks and 5 research poster presentations.

Invited lectures included "Gases in Glasses: The Doremus Perspective," by **Dr. Jim Shelby**, emeritus professor of glass science, in the Robert H. Doremus Memorial Symposium; and "Edge-on Impact Investigations of Stress and Damage Propagation in Monolithic and Novel Laminate Glass and Glass Ceramics," by co-authors E. Strassburger, Ernst-Mach-Institut (EMI, Germany), P. Patel (Army Research Laboratory);

**Dr. Arun Varshneya**, professor of glass

science, and J. W. McCauley\* (Army Research Laboratory) in the symposium "Glass Technology High-Strength Glasses." Varshneya and LaCourse also chaired the session.

**Dr. Alastair Cormack**, professor of ceramic engineering, presented the invited lecture "Interaction of Water with Multi-Component



Silicate Glass Surfaces" (co-author A. Tiloccia) to start off the symposium on "Glass Corrosion Modeling."

### Professional Commitments Take SOE Faculty World-Wide

**Dr. Olivia Graeve**, widely recognized for her research on the synthesis and sintering of nanopowders, presented recent invited talks - in March at the USC's Department of Aerospace and Mechanical Engineering (Los Angeles, CA); in April at RIT's Department of Chemistry; and in May at the U Texas at San Antonio, Department of Physics and Astronomy.

**Dr. Alastair Cormack** gave an invited lecture February 24, 2010, at

the International Bunsen Discussion Meeting (U Münster, Germany) on "Mobile Ions in Disordered Materials." and will present an invited lecture at the 2010 National Institute for Materials Science (NIMS) Conference in Tuskuba, Japan, in mid-July. On that trip, Cormack will also be giving a talk at a symposium organized by the Fuel Cell group at NIMS.

**Dr. Scott Misture** has been named to the executive committee of the Lujan Center Users Group (Lujan Neutron Scattering Center at Los Alamos National Lab's Neutron Science Center facility (LANSCE).



## Shelby honored by present and former students at GOMD



The annual GOMD meeting is like a glass science program reunion for the Inamori School of Engineering and so was an ideal occasion to celebrate the career of **Jim Shelby**, who retired from the Alfred University faculty this year. Students past and present gathered for a celebration dinner in the party room at the Cap'n Morgan Restaurant in Corning on May 18th.

Shelby joined the NYSCC glass science faculty in 1982; he made his farewell to our current students and many industry friends at the occasion of his recent Scholes Award Lecture, April 15, 2010, at Alfred University.

**Faculty Publications for 2010 are now online**  
[engineering.alfred.edu/newsletter/current!](http://engineering.alfred.edu/newsletter/current!)

## 3rd International Conference on Heterogeneous Material Mechanics

May 22-26, 2011

Bao Dao Resort, ChongMing Island

Shanghai, CHINA



**Dr. Jinghong Fan**, AU professor of mechanical engineering and visiting professor at Chongqing University, China, is conference Co-Chair of the upcoming 3rd International Conference on Heterogeneous Material Mechanics (ICHMM-2011), May 22-26, 2011, Shanghai, China. Co-Chairs include Dr. David L. McDowell (Georgia Institute of Technology); Dr. Y. L. Bai (Institute of Mechanics, Chinese Academy of Sciences); and Dr. J. Zhang (Shanghai University).

ICHMM 2011 (<http://ichmm2011.shu.edu.cn>) will be a forum for recent leading-edge research results as well as in-depth discussions of future directions in the challenging subject of heterogeneous material mechanics. Sessions will focus on recent original research developments, while invited panel discussions and debates aim to stimulate future research directions.

Sessions topics are wide ranging in this important and active area. Panel discussions are planned on fundamental challenges in crystal plasticity of microstructures; key interfaces of materials and mechanics in heterogeneous materials; time-scale issues in atomistic modeling; critical path issues in materials for energy; and mechanics of biomaterials.

Abstract submission and conference pre registration will be available through the conference website.

The conference venue is the Bao Dao Resort, ChongMing Island, Shanghai City, China, which neighbors the Dong Ping National Forest Park. The park, a destination noted for hiking, rock-climbing and other outdoor pursuits complements the world-class facilities of the conference resort hotel.



## Fractography of Glasses and Ceramics VI — Invited Speakers announced

June 5-8, 2011

Omni Jacksonville Hotel, Jacksonville, Florida

The conference program for Fractography of Glasses and Ceramics VI is taking shape - several invited speakers have already confirmed. Speakers so far are:

**Dr. Robert Cook (NIST)**

"Fracture and Fractography of Nanoscale Structures"

**Prof. Dr. Jan Dusza, DrSc (Slovak Academy of Sciences)**  
 (title not announced)

**Dr. Chuck Kurkjian (retired)**

"Intrinsic Strength, Damage and Failure"

**Mr. George Quinn (NIST, retired)**

"A History of the Fractography of Glasses and Ceramics"

Conference news and updates on programming will be posted as they are available at [fractographyvi.com](http://fractographyvi.com).

# Congratulations to the Class of 2010!

## Doctor of Philosophy - Materials Science and Engineering

Jake W. Amoroso

*"Synthesis, Characterization and Electrical Properties of the Sodium Conductor  $Na_xGa_{4+x}Ti_{1-x}O_8$  ( $x \sim 0.7$ )"*

## Master of Science in Biomedical Materials Engineering Science

Tyler M. Yohe (Dec. '09)

## Master of Science in Ceramic Engineering

George W. Keith, IV  
Chi Qu (Dec. '09)Mohan B. Ramisetty (Dec. '09)  
Sachin R. Shetty (Aug. '09)Emily Asenath Smith  
Gerald L. Wynick

## Master of Science in Glass Science

Kathryn L. Goetschius (Dec. '09)

Patrick K. Kreski (Aug. '09)

## Master of Science in Materials Science And Engineering

Jared R. Friant (Dec. '09)

Bo Jiang (Dec. '09)

Kara E. Vaneck

## Master of Science in Electrical Engineering

Meridith L. Leigh (Aug. '09)

Jacob M. Towsley (Dec. '09)

Jennifer A. Winikus

## Bachelor of Science in Biomedical Materials Engineering Science

Sean M. Breed  
Meghan C. Jones *cum laude*  
Engineering HonorsTimothy J. Keenan  
Drew E. MartinLana M. Placek *cum laude*  
Engineering Honors

## Bachelor of Science in Ceramic Engineering

Colby M. Brunet (Dec. '09) *cum laude*  
Engineering Honors  
Sarah E. Chiara *cum laude*  
Engineering Honors  
Marcus D. Elliott *magna cum laude*  
Engineering HonorsAndrew D. Galens  
Katelyn C. Glass (Dec. '09)  
*magna cum laude*, Engineering Honors  
Bryn C. Keator (Dec. '09)  
William C. Lepry *cum laude*Scott A. Saxton *magna cum laude*  
Engineering Honors  
Andrew C. Thomsen (Dec. '09)  
Abbey M. Timbrook (Dec. '09)  
Steven M. Ulrich

## Bachelor of Science in Glass Engineering Science

Kody L. Bornstein  
Daniel W. LevesqueRachel M. Shaver  
Luke A. Smith

Robert D. Thompson

## Bachelor of Science in Materials Science and Engineering and Bachelor of Arts

Krista R. Kalac (BA Mathematics) *magna cum laude*, Engineering Honors

## Bachelor of Science in Materials Science and Engineering and Bachelor of Fine Arts

Daniel J. Vuono *cum laude*

## Bachelor of Science in Materials Science and Engineering

Samuel J. Burlingame *magna cum laude*  
Engineering Honors  
Kameron I. ChamblissErickson V. Goins  
Justin M. Hamblin (Dec. '09)  
Eric H. Liddington (Aug. '09)Mark D. Scafetta *cum laude*  
Engineering Honors  
Jesse J. Schuster

## Bachelor of Science in Electrical Engineering

Cody J. Blazer (Dec. '09)  
Elliot J. Danby  
Rick A. Engels  
Matthew R. Evans (Dec. '09)Alan F. Johnson (Dec. '09)  
Matthew J. Karczewski (Aug. '09)  
Nicholas A. Mahan  
Sean P. Miller *cum laude*  
Engineering HonorsKirk C. Peskor  
Earl E. Pierce, III (Dec. '09)  
Engineering Honors  
Samantha Lynn Warren

## Bachelor of Science in Mechanical Engineering

Korey J. Abbott  
Jeremy S. Bryant (Dec. '09)  
Michael E. Buisman *magna cum laude*  
Engineering Honors  
Bradley D. Canale *cum laude*  
Engineering Honors  
Travis S. Curren (Dec. '09)  
*magna cum laude*, Engineering HonorsAdam C. Fiegl  
Mark N. Harstad  
Harrison H. Hendricks  
Elizabeth A. Larsen (Dec. '09)  
Anthony J. Mallacoccio  
Kevin C. Manganini (Dec. '09)  
Andrew M. L. MeissnerNoah F. Naples  
Ryan D. Pritchard  
Ross J. Stewart  
Samuel R. Tallarino, Engineering Honors  
James J. Thierman  
Weston J. Ulrich