

Professor Ferruzza Retires *by David Ferruzza*



Professor Ferruzza and his wife, Betty, get ready to cut the cake at his retirement party held in the Event Space this May 2006.

People ask, “How are you enjoying retirement?” The flippant answer is, “It’s tough to get up every morning and need to decide what to do.” Yes, there’s an element of that sort of freedom, but I have mainly been enjoying taking trips and checking off tasks from a 5-year old “to-do” list.

Before I retired, Betty and I went on a study tour to Prague in January. I went to USAF Academy for the retirement of a Physics colleague in February and we took a vacation trip to Florida in March.

Since the Spring semester, Betty and I went to Florence Italy (for an NSF-sponsored course centered on Galileo—great experience!). I took a 9-day road trip with a 10-year old grandson -- the destination was the Intelligent Ground Vehicle Competition in Michigan but the trip encompassed places in PA, OH, MI, Ontario, and NY (including an astronomical viewing session at Alfred U.). My entire family (wife, two sons and spouses, and five grandchildren) took a wonderful nostalgia-filled July trip to Colorado where my sons had spent some of their formative years.
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Department Welcomes Professor Watson

This year the Physics and Engineering Department is very pleased to announce our newest faculty member, Dr. Heather Watson, Assistant Professor of Engineering. Originally from Jamaica, Dr. Watson has a B.Sc. in Engineering from the University of Detroit, a M.S. in Mechanical Engineering from Georgia Institute of Technology, and a Ph.D. in Mechanical Engineering from New Mexico State University. She also has several years of experience working as an engineer in the energy and aerospace industries, including an appointment working in France. Dr. Watson teaches primarily in the thermodynamics and fluid science areas. Her research interests are in thermal management systems and energy systems, and she is enthusiastic about involving students in research. Prior to coming to Elizabethtown College she taught for two years at Clemson University and this is a “big, yet pleasant, difference”. We heartily welcome Dr. Watson to our department!



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IEEE Speech on Solar Energy Held

On March 14, 2006, the Physics and Engineering Department co-hosted a dinner and presentation with the local IEEE (Institute of Electrical and Electronics Engineers) in the Susquehanna Room located in the back of Myer Hall. Seventeen local electrical engineers and 34 Elizabethtown College students and faculty shared conversation over a "white-tablecloth" dinner. An informative talk by Dr. Chris Sherring of Worldwater & Power, Inc. of New Jersey followed the dinner. Dr. Sherring shared the "Real Value of Solar Photovoltaics Today" and added that solar systems are becoming more affordable. After discussing the basics of photovoltaic's, Dr. Sherring shared data and pictures of several recent installations ranging from a residential 10 kW system to systems over 1 MW peak power. Slides from his excellent presentation can be viewed at www.etown.edu/physics&engineering/news.htm



Dr. Chris Sherring of
Worldwater & Power, Inc.

Gravé Receives Tenure Status

Dr. Ilan Gravé has been working in academics and in high tech industries throughout his career; he has done research and managed high-tech projects over three continents, including his native country, Israel, Europe and in North America. Dr. Gravé has given important contributions to research in a number of fields in Applied Physics and Electrical Engineering in the form of scientific publications and patents. Among these fields: superconductivity, quantum-confined semiconductor devices, nonlinear optics and biomedical signal processing. Since joining Elizabethtown College he has been building a lab for the electrical measurements of semiconductor devices, helped by his students and supported by external funding. Prof. Gravé is most proud of having watched many students in the last four years at Etown take his courses and become versed in the fields of electromagnetism, circuit analysis, electronics and control theory. He received tenure this May 2006.



Welcome Class of 2010



First year engineering students Joe Macus (L) and Adam Hartzell (R) at the October 2006 IEEE dinner and talk.

Along with the start of the 2006-07 school year comes the renewing spirit of a fresh, prestigious group of new students. The incoming class of 2010 includes twenty-seven students interested in pursuing physics and engineering degrees, including three international students and five women. An ambitious group, six of these students are already employed within the department, while others are busy with sport teams including baseball, soccer, track, swimming and lacrosse, as well as several involved in musical programs. "This is a great group of students and we look forward to seeing them develop and flourish as they become integrated into our programs," says Department Chair Dr. Kurt DeGoede. We welcome the class of 2010 to our growing departmental family!



DeGoede Receives Tenure Status

Kurt DeGoede joined the faculty at Elizabethtown College after completing a Ph.D. in Mechanical Engineering and Applied Mechanics from the University of Michigan. Previously, he worked for several years as an engineering project manager at Ford Motor Company. He has been chair of the department of Physics and Engineering for the past 2 years. His research interests are in the areas of biomechanics and modeling dynamic systems. Dr. DeGoede has published 7 journal papers and presented 12 conference papers in this area. Current projects include experimental and theoretical analyses of the arrest of falls to the ground and of carpal tunnel injuries associated with low velocity automotive accidents. Over the past 6 years, over 15 Elizabethtown students have been involved in his research to various degrees. Dr. DeGoede received tenure this May 2006.



DeGoede (L) with Dr. Leap and President Long last spring at the new science building ground breaking ceremony.

Ferruzza continued

Also in July, Betty and I were in an enlightening four-day church music conference. Lately I have helped both of my sons with some re-decorating of their properties.

If I were to share my deepest thoughts, they would include missing daily contact with students but being gratified in knowing the “department is in good hands.” No matter where I am or what I’m doing, I still feel very much a part of the Physics and Engineering family.

Since I will be teaching HES215 Honors Meteorology in Spring 2007, some of my recent activity involves preparation. It would be nice if some Physics/Engineering students would enroll in that course.

Announcements—HOMECOMING!

Homecoming '06

This is a good year to come back “home” to Elizabethtown; of course every year is a good year. If you are going to be visiting the campus for homecoming this year we would love to spend some time with you.

The “official” time for our department’s get-together is **3:00 – 4:30 p.m. on Saturday October 21 in Esbenshade Room 166**. Refreshments will be available. Some faculty and students will be in the department area, and you will have a chance to see the some of the projects our current students are working on. We will (informally) tell you what’s happening in the department and will enjoy hearing of your activities.

We will be selling shirts again—polo’s and t-shirts. They cost \$26.00 and 13.00, respectively. Shipping is available. Email Kaitlin Hartzell [Hartzellk@etown.edu] with any questions or orders.



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Physics and Engineering

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*If you wish to receive this newsletter
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Sightings from the Department



A team of Elizabethtown College computer engineering students traveled to Michigan with the WUNDERBOT III for the 2006 Intelligent Ground Vehicle Competition (IGVC). Qualifying for all events in the competition, the team performed well against mostly teams from large universities including many graduate student only teams. At left, the team assembles near the outdoor obstacle course with (from left to right) Advisor Dr. Joe Wunderlich, David Coleman '08, Shane Rosencrance '06 (computer science), Juan Pablo Rodriguez '07, Justin Shade '06, Brian Moran '07, Tom Yeager '06, and James Painter '08. Notably, Harrisburg-based Phoenix Contact has provided substantial equipment donations to the project and hired full-time team members / recent graduates Shade and Yeager. At right, some of the features of the Wunderbot III can be seen. Details can be found on the team's website (<http://www.etown.edu/wunderbot>), including a sampling of current features such as dual motor zero turning radius drive system, "a combinational logic based collision detection system, ultrasonic ranging for short-range proximity detection, IR sensors", "preprocessing by slave microcontrollers", "three-axis digital compass", color vision system, "differential global positioning system (DGPS)", and onboard PC. Competition results and other details can be found on the competition website: <http://www.igvc.org>.

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