Scholarship Recipients for Fall 2012

On September 14, 2012, the Physics Department was proud to award nearly $5000 in scholarships to nineteen deserving students. Of the awarded scholarships, five went to graduate students and fourteen went to undergraduate students. The award recipients also represented all parts of the Physics Department, from Standard Physics, Engineering Physics, and Science Teacher Education with a Certification in Physics.

The Physics Department is blessed to have eight named and endowed scholarships in addition to our general foundation account. Scholarships help ease the financial burden on our students, and often allow them to handle more responsibility and take independent research classes with faculty members.

Our students are very appreciative of the donations made by our alumni and friends. If you are interested in donating to the Physics Foundation Account, please contact the Physics Office for more information.

The picture on the left shows Nicole Szabo, Jennifer Nelson, and Erin Lundgren, three of the four recipients of the Gladwyn Barrett Scholarship. Shown on the right are graduate students Stephen Fatokun, Kinnary Patel, Stewart Ferrell, Akin Olumoroti, and Oluwatobi Olorunsola. Stephen and Stewart received the Physics Graduate Scholarship, Akin and Oluwatobi received the Nobuyuki Tsuchiya International Scholarship, and Kinnary received the first Peggy Rodeffer Scholarship.
From the Desk of Dr. Mark S. Boley

Welcome to our winter 2013 newsletter!! We are pleased to report that this past fall semester we welcomed a record number of new graduate and undergraduate majors into our physics department, while also serving some of the largest enrollments ever seen in our general education and service courses. For the first time, we have expanded our introductory calculus-based physics sequence to the Quad Cities campus, with Physics I being offered there this past fall, and Physics III this spring. We were very pleased to be able to welcome our new faculty member (a previous alumnus) on board to assist with these increased responsibilities.

Undergraduate and graduate student research continues to thrive in our department, resulting in ten student presentations at the prestigious annual Midwestern Argonne/CSU research symposium this past October. Despite the difficulties involved with our current lack of state funding for the university, our faculty have worked doubly hard to find creative ways of accomplishing these projects with our students, and they are to be applauded.

Our high school visitation program hosted a record number of students and teachers for visits this past fall semester, and received some recognition and support through the receipt of an APS-PAIR grant for one school district to work more closely with us. Our Discover Western days, which also now include solar telescope viewing, have become more popular among potential student visitors.

We are thankful to all of our alumni for their many contributions. In particular, we were pleased to have two of our more recent alumni return to give department seminars on their current research work with FDA and DOE, explaining to our students the value of the research training they received while here in our department. And we welcomed back a very special alumnus, Frank Rodeffer, who has endowed two student scholarships, to receive a CAS distinguished alumni award.

If you are an alumnus or former faculty, we encourage you to drop by for a visit and we will be happy to update you on our progress, as well as discuss with you how you might be able to help us in growing our department. You are always welcome!!
Financial Grants Received by the Physics Department

Three students in the Physics Department successfully applied for College of Arts and Sciences Undergraduate Research Grants. Students Tim Woodworth and Andrew Hartweg have each received $375 for their research with Dr. Pengqian Wang, while Mark Smith has received over $300 to work with Dr. P. K. Babu. Not only does this grant give much needed financial assistance to students, but it also teaches them grant writing skills that will prove invaluable in their future careers.

It is also worth noting that Dr. Mark S. Boley worked together with Darwin Smith, a physics teacher at Payson High School, on an American Physical Society Physics and Instructional Grant that will allow Payson High School to visit WIU for hands-on physics experiments three times this school year. Not only do the students get an excellent learning experience from these trips, but the Physics Department is able to recruit local students for WIU. We look forward to more collaborations like this in the future.

1961 Physics Alumnus Wins Distinguished Alumni Award

Physics Alumnus Frank Rodeffer has been awarded the 2012 Distinguished Alumni Award for the College of Arts and Sciences. Mr. Rodeffer has been a great friend to the Physics Department by endowing two scholarships in the past three years. The first Frank Rodeffer Scholarship was awarded to Daniel Halbe and the first Peggy Rodeffer Scholarship was awarded to Kinnary Patel this fall.

After graduating from WIU, Mr. Rodeffer travelled extensively with the Air Force, but he never forgot his years at WIU. As a student, Mr. Rodeffer nearly left school for financial reasons, and he would like to prevent that same hardship from slowing down other students. His generous gifts to the Physics Department will greatly help our students focus on school, instead of worrying about money.

For the full press release on Mr. Rodeffer’s award, please go to http://www.wiu.edu/news/newsrelease.php?release_id=10322
Sherlock’s Secrets of Scientific Sleuthing

On November 29, over one hundred people attended the Annual Physics and Chemistry Demonstration Show entitled Sherlock’s Secrets of Scientific Sleuthing. The audience witnessed many demonstrations inspired by the recent Sherlock Holmes movies.

Sherlock Holmes uses science to solve his mysteries just like movie producers use science to create special effects. Audience participation is another hallmark of this show, making this program a real crowd-pleaser.

The demonstration show is the most popular outreach program each year. Not only is it entertaining, but it is a great way to educate people about all the exciting things that are possible with physics. After all, there’s nothing like a cool demonstration on inertia to motivate a budding scientist.

First Physics Courses Offered at the Quad Cities

The Physics Department offered its first physics class at the Quad Cities campus this past semester. University Physics I, the first course of the calculus-based physics sequence, was offered to twelve students and taught by Dr. Ryan Gordon.

In the past, many of the Engineering Majors at the Quad Cities transferred physics courses from community colleges. However, as more and more students are coming in as freshmen, this was a good opportunity to ensure that these students are getting a strong foundation in physics.

Engineering is one of the fastest growing careers in our economy, and having well-educated and quality engineers will be paramount in the coming years. The Physics Department at WIU-Macomb is happy to assist our colleagues in the Quad Cities by offering physics courses that meet the same high standards we expect of our own students. This collaboration continues to grow as University Physics III will be offered this spring by Dr. James Rabchuk.
High School Visitation Program

Over 250 students visited the Physics Department at Western Illinois University in 2012. When you include the number of students in classes that were visited by physics professors, that number rises even more.

When classes visit the Physics Department not only do they learn more about Western, but they are also able to participate in some advanced experiments with equipment that most high schools are unable to purchase due to limited funding. As a university, it is our goal to stay current on the latest technology, and by doing so, allow high school students to benefit as well. The most popular experiments for high school visits are Projectile Motion, Ballistic Pendulum, and Vibrating Strings, all of which are conducted in our own traditional classes on campus.

Solar viewing is another popular activity for our visiting students as the department purchased two new Coronado Solar Telescopes last spring. These telescopes allow students to map sun spots and see the sun in a way that they never have before. Dr. Esteban Araya has created several lab exercises to measure the sun’s rotation and other elements of astronomy that these students have found quite enjoyable.

While not every student that visits will become a WIU student, it is still very rewarding to see their excitement for physics and perhaps a few will consider WIU for their college choice. More important than recruitment is cultivating a passion for science, which will undoubtedly help students in their future education.

Many students enjoy the change of pace that comes with visiting the Physics Department and they appreciate seeing a college laboratory. This can be a wonderful motivating factor in their education.

If you would like more information about our high school visitation program, please feel free to contact the department chair, Dr. Mark S. Boley, at mfmsb@wiu.edu for more information. Some of our experiments can be taken out to high school classrooms, so feel free to ask about this option. You can clearly see from the photos that the students are not the only ones that enjoy these visits. Our professors are happy to work with these students, and the high school teachers are satisfied as well.
This past Fall Semester has been fun. Above left shows everyone at the Boley Family Farm for the Fall Picnic, then to the right the faculty pose with alumnus Frank Rodeffer at the Christmas Party. Below, the grad students pose at the Christmas Party and several students are featured with President Jack Thomas before a football game in October.

News in Brief
• Congratulations to our Fall 2012 graduates! Mahdy Almataawha, Atif Alhabbad, and Oluwaseye Dada received their Master’s Degree in Physics while Hyung Kwan Kim and Brandon Selph graduated with their Bachelor’s Degree.
• Congratulations also to Physics Department Secretary, Tiffany Erickson, for being named the Western Illinois University Al & Elaine Goldfarb Civil Service Employee of the Month for December.
• Please see our website at www.wiu.edu/physics for the very latest departmental announcements.