Physics with Rocky

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WIU Physics Ranks Second in M. S. Degrees Granted

The American Institute of Physics conducted an annual survey of all public and privates universities in regard to the number of degrees granted at the undergraduate, graduate and doctoral level during 2014. Of the 58 reporting universities with the M. S. degree as the highest degree offered in Physics, the Department of Physics at Western Illinois University ranked second in the number of M. S. degrees granted. During the 2014 calendar year, sixteen students received the M.S degree in physics from WIU, second only to Northern Arizona University, which awarded twenty M. S. degrees.

This latest ranking shows the positive growth of the Department of Physics over the past several years. Our graduate program rankings with AIP have continued to rise every year since 2010, even while overall university enrollments have declined.

Department chair, Dr. Mark S. Boley, attributes this positive growth to the tireless efforts of our faculty, who work continually to offer quality instruction and diverse mentored research projects for our students, while also recruiting high achieving students.

With strong enrollment numbers again this spring, the Department of Physics is striving for the number one ranking in the next American Institute of Physics survey.

From the Desk of Dr. Mark S. Boley

Welcome to our Winter 2016 Newsletter, where you can read about the latest updates and all of the great accomplishments of our wonderful faculty, staff and students in the WIU Physics Department. I will not waste your time by repeating all of the great things in this column that you can read about elsewhere in this newsletter (which I strongly encourage you to do!), but I would like to take this opportunity to draw your attention to a couple of items that I am most certain you may have seen or heard elsewhere in the news.

Firstly, note that the WIU Physics M.S. program was ranked #2 in the nation among institutions with the M.S. degree as the highest degree in Physics by the most recent American Institute of Physics Statistical Report. This is a real honor for our department, which testifies to the dedication and committed efforts of our faculty and staff, as well as the perseverance of our student body. This accomplishment was made possible because our faculty and staff go the extra mile in recruiting students to our program, publicizing the great opportunities within our department, and retaining our students by providing the most wonderful academic resources as well as faculty-mentored research projects for them. Furthermore, many of our previous students have been the best testimony of the strength of our program as they move on in their careers to further graduate work or into employment in academia or industry around the world and help send others our way.

However, secondly, I would be remiss if I did not also point out that WIU is in a time of great uncertainty, at least insofar as budgets and state funding are concerned. We still await this current year's budget decisions from the state of Illinois and certainly cannot predict what the next year will bring. But one thing remains certain, and that is, our faculty and staff remain committed to provide the best educational opportunities for our students of physics with our current departmental identity, and there are several things we can do from our side to ensure that is facilitated long into the future. First and foremost, we all need to be great recruiters for our wonderful physics program all the time and everywhere we go. Remember, every additional student that comes our way helps to strengthen our program numbers and build the case for its continuation. Secondly, we need to broaden and strengthen the support of our alumni base, as the contribution and testimony of each and every alumnus, both current and even those from many years ago, does indeed count in a time when state budgets for higher education seem to keep shrinking and state entities seek to re-evaluate the need for many of our academic programs.

In light of these things, the next year or two could indeed prove to be our years of greatest opportunity to move forward, if we all work together to build our program's strength and we hear from each of you. Let us rise to the challenge!

Sincerely, Dr. Mark S. Boley, Professor and Chair of Physics at Western Illinois University

Everyone is Hero with Science

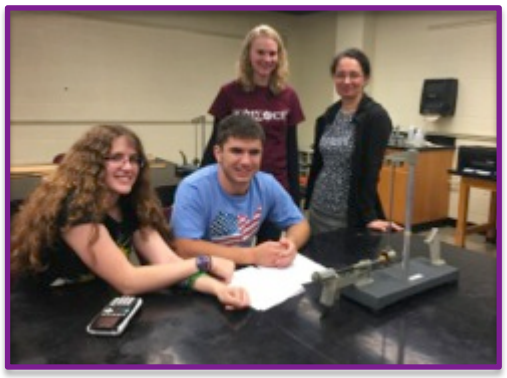
The Physics Department once again teamed up with the departments of Biological Sciences and Chemistry to present the Science Demonstration Show. The inspiration for this year's show was the movie *Big Hero 6*. Students reconstructed many of the impressive effects from the movie to the delight of the audience and showed how anyone can be a hero by using science.

Above, make your own Baymax, and below, smoke does not always mean fire.

The capacity crowd was treated to demonstrations using lasers, electricity, and rockets, including a live action Baymax.

The Science Demonstration Show is the largest outreach activity of the year and a big thanks goes out to the Physics and Engineering Club for all of their hard work on the show.

Continued Success for High School Visits



Nearly 75 students from four local high schools visited the Department of Physics this fall to conduct ballistic pendulum and projectile motion experiments. Solar viewings were also conducted on sunny days, and a presentation on astronomy was given on days when the sun was uncooperative.

The Department of Physics enjoys hosting local high schools and showing students more complex experiments. This a great way to engage students in learning and let them experience a college level lab. For information on scheduling a visit this spring, please contact the Physics Office at 309.298.1596.

Lunar Eclipse

Despite clouds over the Macomb area, faculty from the Department of Physics celebrated the lunar eclipse on September 27. Several telescopes were setup on the lawn outside Currens in case the clouds broke, and a short lecture about astronomy and recent lunar eclipse events took place in Currens 205.

This event was open to the public and campus community and was well attended despite the poor viewing conditions. Astronomy events such as this one are important recruiting tools, since an eclipse is a large-scale way to see physics in action.

To keep up to date on more astronomy events, please be sure to follow WIU Physics on Facebook.

Image courtesy of John Dolby, Tucson, AZ, September 27, 2015 via http://www.skyandtelescope.com/online-gallery/lunar-eclipse-september-27-2015/

RISE@WIU Open House

On September 9, the Departments of Biological Sciences, Chemistry, Geology, and Physics joined together to hold the RISE@WIU Open House. This event not only highlighted the science research conducted at WIU, but also advertised future RISE@WIU activities.

Students from Physics presented posters on recent research, and helped students during solar viewings. Dr. Wang demonstrated his new holograph set up, much to the delight of students.

RISE@WIU continues to encourage students to excel through research by offering scholarships and awards. For more information on the RISE program, please see the website www.wiu.edu/cas/academics/rise/rise_cas.php

Fall 2015 Scholarship Awards

Thanks to endowments and continuing alumni donations, the Department of Physics awarded more than $8,500 in student scholarships during Fall 2015. This is the most scholarship money the department has awarded in over five years.

Scholarships were given to students at all levels, from freshmen to graduate students. Some awards are smaller, covering books and expenses, while others are large gifts for our highest achieving students. Twenty-five students benefited from scholarship awards this fall.

Scholarships continue to be a way for students to bridge an expanding financial gap in their education. For more information on donating to the Physics Scholarship Fund, please contact the Physics Office at 309.298.1596.

Above, A. Murphy and N. Szabo, recipients of the Peggy Rodeffer Scholarship, and below, the many recipients of the Physics Graduate Scholarship.

Fall Graduation

Three undergraduate students and four graduate students were granted Physics degrees this fall. Daniel Halbe, Michael Ferry, and Jamal Keaton each received the B. S. degree in Physics, while Alex Blanton, Ahmed Alanazi, Tahani Alkureda, and Hala Siddiq achieved the M. S. degree in Physics.

Daniel Halbe is continuing in the WIU Physics graduate program this spring, and used his winter break to present scholarly research at the American Astronomical Society Meeting in Florida. Jamal Keaton will be pursuing a teaching career in the Chicago area, while Michael Ferry is currently looking for a position in industry. Alex Blanton and Tahani Alkureda are pursuing Ph. D. programs and Hala Siddiq is seeking a teaching position.

Congratulations to all of our graduates!

Physics Photo Album

Above left, the standing room only crowd at the Science Demonstration Show. Above right, Dr. Wang gets down to explain an experiment to a visiting high school physics class. Finally, the whole gang at the Boley Family Farm during this fall's picnic in September.

News in Brief

- Like us on Facebook! Search WIU Department of Physics.
- The Department of Physics is hosting the Roger and Jean Morrow Distinguished Lecture in Physics this April. The speaker will be Dr. Peter Hofner of the New Mexico Institute of Mining and Technology. More information will be posted on our website as it becomes available.
- Congratulations to our undergraduate research students for being awarded over $3,000 in College of Arts and Sciences Undergraduate Research Grants this fall.
- Undergraduate and graduate students presented 15 research posters at 5 external conferences this fall.

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