

Department of Physics and Astronomy

2011 Year in Review



Scholarship Recipients:

Arthur J. Pejsa Aerospace Award (\$1,000)

- Edward Lynch

Monica E. Bainter Memorial Award (\$1,500)

- Zac Meadows

Monica E. Bainter Scholarship (\$500)

- Adam Buck
- Joseph Hottenstein
- Andrew Weekes

Allen Blocher Scholarship (\$700)

- Micah Broehm

William C. and Esther Hansen Memorial Scholarship (\$1000)

- Orry Griffin

Freshman Scholarship (\$750)

- Kyle Leaf
- Timothy Twohig

Graduating Seniors:

- Jake Berg
- Kyle Kafka
- Jared Lowry
- Steve Mattek
- Michael Ryskiewicz
- Michelle Stephens
- Liza Wernicke
- Yia Xiong

Notable Selected Activities and Accomplishments

Single-underline indicates a faculty/staff member, and double-underline indicates a student.

1. Teaching

- Brad Hinaus developed and delivered a First Year Seminar, “The Science of Your House.”

2. Key External Grants

- Sasha Popov and Chris Verzani were awarded \$277,000 from the NSF for a grant titled “Theoretical Investigations and Numerical Simulations of Backward-Wave Photonic Micro-Devices.” The grant provides substantial salary dollars for student summer research. They also submitted another NSF grant (\$363,000) titled “Metamaterial based infrared sensor for remote environmental monitoring,” for which a decision is pending.
- Adrian Durbala received a subaward of \$3,327 for a grant proposal to Georgia Southern University titled “H α Emission in Groups and Clusters of Galaxies in the Context of the ALFALFA Undergraduate Project.” The funding source is the NSF, and the funds will be used to support the summer research of physics major Ben Hendrickson.

3. Publications, Presentations and Posters of Faculty and Students

- Paulette Epstein, Alex Bahr, and Adriana Durbala presented the poster *BUDDA Decomposition of Isolated Face-on Spiral Galaxies* at the American Astronomical Society Meeting in Boston and at the College of Letters and Science Research Symposium.
- Alex Bahr, Paulette Epstein, and Adriana Durbala presented the poster *Photometric Properties of Face-on Isolated Spiral Galaxies* at the American Astronomical Society Meeting in Boston and at the College of Letters and Science Research Symposium.
- Brad Hinaus led the workshop *PhET: Online Simulations to Enhance Learning* at the annual meeting of the Wisconsin Association of Physics Teachers.
- Micah Broehm, Joseph Kwiatkowski, and Ken Menningen presented the poster *Exploration of Semiconductor-based Photoelectrochemical Water Splitting* at the College of Letters and Science Research Symposium.
- David Tamres presented the invited paper *Physical Representations of Space* at the annual meeting of the Semiotic Society of America in Louisville, KY.
- Chris Verzani submitted the manuscript *X-ray emissions from collisions of O⁶⁺ ions with CO to Astrophysical Journal* (under review).
- Logan Besaw and Mick Veum presented the poster *Construction of an Instrument to Measure the Tension of Freestanding Liquid-crystal Films* at the College of Letters and Science Research Symposium.
- Zachary Meadows and Sebastian Zamfir presented the poster *Modeling the H β Emission Line in Luminosity-Averaged Quasar Spectra* at the American Astronomical Society Meeting in Boston and at the College of Letters and Science Research Symposium.

- Sebastian Zamfir had an invited contribution *Quasar Radio-Loudness and the Search for Radio-Loud/Radio-Quiet Dichotomy* for the book *Fifty Years of Quasars: Questions about Observations and Ideas* – Springer; Eds: D’Onofrio, M., Sulentic, J. W., Marziani, P.
 - David Tamres and Adriana Durbala invited the Shapley Lecturer, Dr. Nick Schneider from Univ. of Colorado to give the public lecture *Nine Planets? Eight? How About a Thousand?* and the colloquium lecture *Planetary Habitability from Mars to Extrasolar Planets*. (April 2011)
4. Applied Emphasis Major
- Jeffery Kokke was admitted to the applied physics program, with an emphasis in applied mechanics. Jeffery will be participating in a London internship in the summer of 2011.
5. Outreach Activities
- The Planetarium presented programs to over 11,000 visitors, including university classes, school groups, community groups, and public programs.
 - Adriana Durbala presented the workshop *Telescopes – the Time Machines of Astronomers* at the STEM Career Day Event (November 5, 2010) and at the UWSP Women and Science Day (February 25).
 - Seth Ashman, Brad Hinaus, David Tamres, and Chris Verzani designed and judged events for the Wisconsin Science Olympiad held in Menomonie, WI with the help of students: Tony Albertin, Jacob Berg, Paulette Epstein, and Michelle Stephens.
 - Mick Veum was the keynote speaker at the STEM Career Day Event (November 5, 2010).