

Department of Physics and Astronomy

2017 Year in Review



University of Wisconsin
Stevens Point

Scholarship Recipients:

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

- Alyssa Likeness

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

- Nicholas Becher

Kameshwar Razdan Memorial Scholarship (\$1,000)

- Karsten Hintz

Monica E. Bainter Scholarship (\$750)

- Sarah Parker
- Logan Hess

Allen Blocher Scholarship (\$500)

- Karsten Hintz

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

- Matt Lanke

Academy of Letters and Science Award Recipients:

- Kyle Meidenbauer (graduating senior)
- Nicholas Becher (continuing student)

Graduating Seniors:

- Korey Abbott
- Christopher Cleworth
- Isaac Greig
- Alexander Holmes
- Andres Jaimes-Carvajal
- Carmen Johnson
- Travis Kleinshchmidt
- Calvin Klesmith
- Claudia Marek
- Kyle Meidenbauer
- Joshua Schoechert
- Shayne Smith
- Albert Unruh

Notable Selected Activities and Accomplishments

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

University Awards

- Nancy Stokosa received the University Staff Service Award (April 2017)
- Jim Mortier received the University Outstanding Work Performance Award (April 2017)
- ***Way to go, Nancy and Jim!!!***

Grants and Partnerships

- Adriana Durbala was part of a – new NSF grant “Empowering Research by the Undergraduate ALFALFA Team” with the ALFALFA collaboration (PI: Rebecca Koopmann, Union College) – approved - approx. \$250,000. The NSF grant will allow our students to continue participating in annual workshops at Green Bank Observatory (West Virginia), as well as getting hands-on radio observing experience. The grant will also provide financial support for one or two students to travel to Kitt Peak National Observatory and make observations with the WIYN 0.9m optical telescope. (Fall 2016)
- Karsten Hintz was awarded a \$3,188.00 WSGC Fellowship for the project entitled, “Evaluating Information Content in SDSS Quasar Spectra as a Function of Signal-to-Noise,” for the period of September 4, 2017 – May 25, 2018.
- Karsten Hintz was awarded a \$2,000.00 WSGC Scholarship for the period of August 15, 2017 – May 31, 2018.
- Art Stevenson received an L&S Enhancement Grant, Oct. 2016, to travel with students to view the August 21, 2017 total solar eclipse. Students will do research experiments during the eclipse, including photography of the solar corona, environmental sensing, eclipse shadow geometry, and observation of wildlife behavior.
- Art Stevenson received a UEI grant for student stipends as compensation for their participation in the August 2017 UWSP Total Eclipse Field Trip.
- Logan Hess was awarded WSGC Undergraduate Research Fellowship Award for the academic year 2017-2018; his research project is entitled “A Fourier Photometric Analysis of the Spiral Arms of Late-Type Spiral Galaxies” (faculty research advisor: Adriana Durbala)
- Sarah Parker was awarded both a WSGC Undergraduate Scholarship and a WSGC Undergraduate Research Fellowship Award for the academic year 2017-2018; her research project is entitled “Lenticular Galaxies in Different Environments – Isolated versus Group Environment” (faculty research advisor: Adriana Durbala)

Research, Publications, Presentations and Posters of Faculty and Students

- Kyle Meidenbauer worked with Maryam Farzaneh on two research projects: Getting a new CCD camera to work with our experiment using LabVIEW programming and studying thermal properties of high-power red laser diodes (in collaboration with UW-Madison). Kyle has presented his work at the UW system and COLS undergraduate research symposiums.

- Korey Abbott helped Ken Menningen begin a new strategy to search for water-splitting semiconductors in fall 2016. New equipment allowed Korey to assess the photocurrent generated by up to 64 different mixtures of metal oxides within a few minutes' time. Physics minor Garrett Bartelt continued the work in spring 2017. The work is supported by a UPDC Research and Creative Activities grant awarded in November 2016.
- Working with Palash Banerjee, Alex Holmes presented a research poster titled "Measuring the quantum tunneling of electrons across a small gap" at the UW System Undergraduate Research Symposium held at UW-Stevens Point, April 21, and also at the UWSP College of Letters and Science Research Symposium.
- Palash Banerjee served as the advisor to Physics Rocket team that successfully competed in the Wisconsin Space Grant Consortium Collegiate Rocket Launch competition.
- Brent LaRue, Claudia Marek, Joshua Schoechert and Antonio QuilesJimenez participated in research on saturated absorption spectroscopy in a rubidium vapor with Chris Verzani.
- With students Logan Hess and Sarah Parker, Adriana Durbala participated in the NSF-Sponsored Undergraduate ALFALFA Consortium Workshop at Green Bank Observatory, WV; observing experience with the radio telescopes at Green Bank; Logan presented a poster titled "Nature versus Nurture" for Spiral Galaxies in Different Environments. (June 2016)
- Adriana Durbala and students Sarah Parker, Logan Hess, and Timothy Carroll completed six observing nights at Kitt Peak with the WIYN 0.9m telescope (October 2016)
- April 21, 2017 – Logan Hess presented a poster "Exploring Nature versus Nurture in a Fourier Photometric Analysis of Spiral arms in Early-Type Spiral Galaxies" at the 16th Annual UW System Symposium for Undergraduate Research and Creative Activity held at UWSP
- May 5, 2017 – Logan Hess presented a poster titled "Exploring Nature versus Nurture in a Fourier Photometric Analysis of Spiral arms in Early-Type Spiral Galaxies" at the COLS Undergraduate Research Symposium
- May 5, 2017 – student Sarah Parker presented a poster titled "Elliptical Galaxies in Different Environments - Isolated versus Group Environment" at the COLS Undergraduate Research Symposium
- June 2017- Adriana Durbala and student Alyssa Likeness will participate in the NSF-Sponsored Undergraduate ALFALFA Consortium Workshop at Green Bank Observatory
- In Fall 2016 Adriana Durbala submitted a sabbatical proposal titled "Nature versus Nurture: Exploring the Properties of Galaxies as Function of Environment." The proposal was approved for fall 2017.
- Sebastian Zamfir and students Sam Chapman and Austin Schelchta attended the Great Lakes Planetarium Association conference in Flint, MI (Oct. 2016)

Applied Emphasis Major

- Andres Jaimes-Carvajal successfully completed the Applied Emphasis major internship at Donaldson's company.
- Calvin Klesmith successfully completed the Applied Emphasis major internship at Donaldson's company.
- Isaac Greig successfully completed the Applied Emphasis major internship at Green Bay packaging.

Outreach Activities

- Ken Menningen served this year on the AP Physics 2 Development Committee, a group of ten teachers and professionals tasked with writing and editing questions for AP physics exams. He also served for his 12th year on the team of 344 teachers that scored the AP Physics exams in Kansas City, MO. This year they scored 273,600 free-response exams in 7 days.
- Planetarium lecturers presented five shows for the Destination Imagination event
- Planetarium lecturers presented seven shows for College Days for Kids
- Sebastian Zamfir presented the workshop “Let’s Make a Comet” for STEM Career Day for Boys and Girls (Nov. 2016, Feb 2017)
- Eddy Doering and Brad Hinaus a poster at the L And S symposium titled, “Computationally Based Lattice Gas Cellular Automata.”
- Brad Hinaus, Chris Verzani, and Shayne Smith ran the Trajectory Event for the National Science Olympiad at UW Stout last summer.
- Brad Hinaus and Chris Verzani ran four sessions for College Day for Kids titled “ Mars Rover, Mars Rover, Please send Sprit Over.”
- Adriana Durbala presented to UWSP’s LIFE (Learning Is ForEver) program oral presentation – “The Expanding Universe”. ; LIFE is a UWSP program that brings learning opportunities to hundreds of retired adults.