

Students share research at national conference

by Natalie Johnson - Tuesday, April 07, 2009

<http://www.uwosh.edu/today/1832/students-share-research-at-national-conference/>

Hours spent analyzing constellations, genomes, black-caped chickadees and more have paid off for 11 University of Wisconsin Oshkosh students who will share their findings April 16-18, during the 23rd National Conference on Undergraduate Research (NCUR).

Approximately 2,000 students and their faculty mentors from across the nation will present oral presentations, posters and other visual arts, and performances at the conference hosted at UW-La Crosse.

Christopher Hathaway, a UW Oshkosh senior majoring in physics, and mentor Nadia Kaltcheva, an associate professor of astronomy, will present "Tracing the Structure of Star-Forming Regions in the Constellation Monoceros."

"My research focuses on studying various characteristics of the young, massive stars within two areas of the constellation," Kaltcheva said.

Kaltcheva also is mentor to junior Linda Osterloh and sophomore Jake Pichelmeyer, who will present "A Photometric Investigation of the Scutum Field of the Milky Way" and "Photometric Survey of OB Stars in the Carina Flare," respectively.

Working with associate computer science professor Wing Huen, senior Jason Busse, who is majoring in computer science and French, will report on "Automating the Investigation of Genomes."

"Our research is in the field of bioinformatics, which is the crossroads of computer science and biology," Busse explained. "We are developing software tools to automate a process that searches for mechanisms of macroevolution. We compare multiple genomes to seek similarities in the way a range of species differ."

Busse said the testing process for the project proved interesting. "In order to provide a reasonable guarantee of correct results, the algorithms had to be programmed twice with separate unique implementations and the results compared," he said.

The following UW Oshkosh students also will take part in NCUR:

- Robert Ahlrichs, a junior in anthropology, with associate professor Jeffery Behm, "Chronological Patterns in the Incidence of Heat Treatment in East Central Wisconsin";
- Vanessa Ante, a senior in biology, with associate professor Dana Vaughn, "Visual Pigment Transcription during Hibernation";
- Nathan Harris, a junior in physics/mathematics, with associate professor Dennis Rioux, "Pattern

Formation in Granular Materials”;

- Janene Lang, a senior in liberal studies and philosophy, with environmental studies professor David Barnhill, “Public Values and Ownership in Natural Resource Management Planning”;
- Aaryn Mustoe, a senior in psychology and biology, with associate professor Sheldon Cooper, “The Energetic Cost of an Immune Response in Black-Capped Chickadees”;
- Rachel Raasch, a junior in history, with assistant history professor Steven Sheehan of UW-Fox Valley, “The Feminist Movement and the Harbor House: Battered Women in the Fox Valley Find a Place and a Voice”;
- Marshall Scorcio, a junior in computer science, with assistant professor Kathy Faggiani, “Designing Systems That Gain Public Trust: An e-Voting Platform Prototype.”

For more information about NCUR, visit www.uwlax.edu/ncur2009.