

NDSU

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IT'S HAPPENING AT STATE

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5 research faculty receive funding for NASA-related research

Five NDSU faculty received ND NASA EPSCoR research focus area awards totaling \$150,000. The recipients are Fardad Azarmi, assistant professor of mechanical engineering and applied mechanics; Benjamin Braaten, assistant professor of electrical and computer engineering; Muhammet Kose, professor of chemistry; Jack Norland, assistant professor of natural resources, school of natural resource science; and Xinnan Wang, assistant professor of mechanical engineering.

ND NASA EPSCoR's goal is to provide seed funding to help faculty develop competitive NASA-related research programs and multiple

NASA-relevant research clusters in North Dakota. The program fosters collaboration between NDSU and University of North Dakota faculty with research groups and scientists at one or more NASA Centers.

The program aims to increase the competitiveness of North Dakota for merit-based grants and contracts in support of science and technology research from federal funding agencies.

Visit www.ndepscor.spacegrant.org for more information on the program.

Gillam and graduate students present research on bats



Gillam

Bats, the only mammals that fly, often carry negative connotations based on myths instead of facts. Erin Gillam, assistant professor of biology, and a team of graduate students are conducting research on the role bats play in ecosystems around the globe and on their ability to communicate.

Gillam and her team have conducted field research on bats in Theodore Roosevelt National Park in the Badlands of North Dakota, in Texas and in Costa Rica. In her research, Gillam records bat calls through portable sensors and captures bats using mist nets. NDSU graduate students Paul Barnhart from Bismarck, N.D., Lucas Bicknell from Fargo, Karina Montero from Costa Rica and Derek Stonefish from Cannonball, N.D., are working with Gillam on research projects. One aspect of the research, funded by the North Dakota Game and Fish Department, includes a statewide survey of the bat population in North Dakota to determine where they're foraging and roosting. Of concern is "white-nose syndrome," a fungal disease that kills hibernating bats and is spreading in various areas in the U.S. The research team also is investigating the effect of wind energy on bats in North Dakota and the communication mechanisms of bats in Costa Rica.

Gillam and Barnhart presented initial results of their research at the North American Symposium on Bat Research in Denver Oct. 29 in a presentation titled "Distribution, abundance, and habitat use of bats in North Dakota." Gillam also presented "Effects of call structure on the jamming avoidance response in Brazilian free-tailed bats." Bicknell and Gillam participated in a student honors poster presentation on "Impacts of wind energy facilities on North Dakota bats: biological and social implications," regarding research that included Chris Biga, assistant professor of sociology.

Gillam's research also has focused on investigating natural flexibility in bat echolocation and examining how bats adjust their calls in response to characteristics of their signaling environment. Information about her research was published recently in the *Journal of Mammology* and on *Wired.com* in the article, "How Bats Get Around the Crowded Skies – Hey, I'm flyin here!"

Bats use a natural type of sonar called echolocation to emit high frequency sounds that bounce off objects, which helps them determine size, shape and direction of their prey – mainly insects – and other objects. "It's better than anything humans have come up with such as sonar," says Gillam. Bats emit a loud sound, then measure

Continued...

NDSU www.ndsu.edu/itshappening

News and events

As information becomes available, news and event updates will be located on the "It's Happening at State" website at www.ndsu.edu/itshappening.

Diversity events calendar posted online

The Equity and Diversity Center now has monthly event calendars available on their website, www.ndsu.edu/diversity.

YMCA of NDSU Brown Bag focuses on student veterans

"Serving Those Who Served: Student Veterans at NDSU" will be presented Nov. 10 at noon in the Memorial Union Arikara room as part of the YMCA of NDSU Brown Bag series.

Storyteller/musician to perform

Keith Bear, Native American storyteller, flutemaker and musician will perform Tuesday, Nov. 23, from 7 p.m. to 9 p.m. in Beckwith Hall. His performance is sponsored by Multicultural Programs and the Equity and Diversity Center.

the time it takes for the sound to bounce back, helping them determine how far away things are. Their echolocation can detect something as fine as a human hair in total darkness. Bats eat insects, including mosquitoes. Bats help agriculture in the United States by feeding on insects such as cutworms and corn-borer moths, and they pollinate more than 300 species of fruit.

Previous research by Gillam shows that bats can quickly shift the frequency of their acoustic pulses, many times in only about one-fifth of a second. This allows them to avoid signal interference from other bats or noises. It's a type of built-in mechanism to avoid jamming of their communication signals.

Gillam's research has been published in Proceedings of Royal Society B, New Scientist, Journal of Animal Behavior, Journal of Mammology, the New York Times and the PBS Kids program, "Dragonfly TV."

Bison BEST robotics Game Day held

The finals of the Bison BEST (Boosting Engineering, Science and Technology) Robotics Competition were held Oct. 30, at the Fargo Civic Memorial Auditorium. The event was sponsored for the fourth year in a row by NDSU's College of Engineering and Architecture.

The sports-like competition offers hands-on engineering-based experience to middle and high school students. The goal of BEST Robotics is to inspire students to pursue careers in engineering, science, technology and mathematics. Given identical equipment and parts, the 25 regional teams had six weeks to design, build and test a radio-controlled robot.

Local winners advance to the Frontier Trails BEST Regional Competition in Ft. Smith, Ariz., during December. Visit www.bestinc.org and www.ndsu.edu/ndsu/cea/bison_best_new, for information.

New endowment honors Eidem

A new endowment has been created with the NDSU Development Foundation in honor of former NDSU band director Orville "Orv" Eidem. Eidem died Oct. 14 in Moorhead, Minn. He was 79 years old.

The Orv Eidem Gold Star Band Endowment Fund will directly support the NDSU Wind Symphony (formerly the Gold Star Concert Band) and NDSU Jazz ensembles.

Eidem directed NDSU bands from 1970 until 1993. During his tenure, he lobbied for the current location of the music education building, created the jazz program and directed the Gold Star Concert Band and Gold Star Marching Band.

Contributions to the endowment fund can be sent to:

NDSU Development Foundation
ATTN: Andrea Jenson
PO Box 5144
Fargo, ND 58105-5144

Graduate student research assistantship applications sought

A call for Graduate Student Research Assistantship (GSRA) applications is available through North Dakota Experimental Program to Stimulate Competitive Research (ND EPSCoR). The GSRA program is designed to increase opportunities for graduates of the North Dakota University System baccalaureate universities and tribal colleges to earn master's or doctoral degrees in science, engineering and mathematics at North Dakota's two research universities, NDSU and University of North Dakota. American Indian and Alaskan Native applicants must have graduated from one of the North Dakota tribal colleges or have been a participant in ND EPSCoR's Nurturing American Tribal Undergraduate Research and Education (NATURE) program.

Faculty and staff are invited to recruit students. Review of applications begins Feb. 10, 2011, with a final deadline of noon, March 10, 2011. Program information and application requirements can be found at www.ndepscor.nodak.edu.

North Dakota EPSCoR is a federally and state funded program designed to improve the ability of university researchers to compete more effectively for federal, regional and private research grants in the sciences, engineering and mathematics. Contact David R. Givers at 1-7516 or david.givers@ndsu.edu for more information.

Regional Studies releases book

The North Dakota Institute for Regional Studies is hosting a book release party, reading and signing, with Brenda Marshall, author of their newly released publication, "Dakota, Or What's a Heaven For" on Thursday, Nov. 4, at 7 p.m. at the Plains Art Museum.

Marshall tells a story about desire and ambition set in late 19th century Dakota Territory. The lives and schemes of frontier politicians, Northern Pacific Railroad executives, bonanza farmers and homesteaders converge in the story of Frances Houghton Bingham, who marries the son of a Red River Valley bonanza farmer in order to remain near her new husband's sister. Emotionally complex, willful and resourceful, Houghton is seduced by the myths of opportunity driving the settlement of Dakota Territory, and dares to dream of a new world in which to realize her unconventional desires. Providing a counterpoint to the dramatic risks taken by Houghton is the voice of Kirsten Knudson, the daughter of Norwegian homesteaders. As Knudson grows from a voluble girl to a formidable woman, her observations (equal parts absurdity and insight) reveal the heart of the novel.

An excerpt of the book has been published recently in the Michigan Quarterly Review.

Marshall was born and raised on a farm near Wheatland, N.D. She graduated from Central Cass High School in Casselton and earned her bachelor's degree from NDSU, master's from Colorado State University and doctorate from the University of Massachusetts.

"Dakota, Or What's a Heaven For," is available through the North Dakota Institute for Regional Studies by contacting Nancy Nelson at 1-8338 or by website at www.ndsu.edu/ahss/ndirs. Details on the book are available at www.brendamarshallauthor.com.

Library event features students

NDSU Libraries co-sponsored the conference, "Catching the Vision: The Library in 2020," at the Moorhead Courtyard by Marriott on Oct. 19. Other sponsors included Tri-College; Minnesota State University Moorhead, Concordia, Lake Agassiz and Fargo and West Fargo Public Libraries; the North Dakota State Library; and MINITEX, the regional OCLC provider located at the University of Minnesota. Stephen Abram, a Canadian library technologist and futurist, spoke on expectations for both academic and public libraries during the next 10 years. The afternoon session featured a user panel with Erik Mathiason and Donna Rindy representing NDSU students. Michele Reid, NDSU dean of libraries, emceed the event. More than 150 librarians from across North Dakota and Minnesota attended.

Thanksgiving host families sought

The Division of Equity, Diversity and Global Outreach invites faculty and staff to participate as Thanksgiving host families for international students.

Interested faculty and staff can complete an online request form available at www.ndsu.edu/diversity/thanksgiving. For more information, contact the Office of the Vice President for Equity, Diversity and Global Outreach at 1-7708.

Rheumatoid arthritis forum set

An educational forum on the diagnosis, treatment and management of rheumatoid arthritis is scheduled for Saturday, Nov. 13, from 10 a.m. to noon in Sudro Hall room 27. Speakers will include state legislator Kathy Hawken, local rheumatologist Umbreen Hasan, Arthritis Foundation exercise program instructor Dawn Gray and physical therapist Tom Baumgartner.

The forum is free and open to the public. To register, call (701) 237-3310. The Arthritis Foundation, the Y of NDSU, Rep. Hawken and Women in Government are co-sponsors.

Science Café scheduled

Angie Hodge, assistant professor of mathematics, and Christina Weber, assistant professor of sociology, will give the next Science Café presentation, "Where Did All the Girls Go? Gender Equity in University Mathematics," on Nov. 9 from 7 p.m. to 8:30 p.m. in Stokers Basement at the Hotel Donaldson, 101 N. Broadway.

Although girls are both present and succeeding in high school mathematics courses, their presence does not continue into university mathematics classrooms. In this presentation, Hodge and Weber will discuss women's success in mathematics and the implications of their presence and absence in the classroom. They will discuss their research findings on the contributing factors of women's success and will invite discussion on the importance of parents, peers and community involvement in women's success in mathematics.

For more information, contact Keri Drinka at 1-6131 or keri.drinka@ndsu.edu or visit earth.physics.ndsu.nodak.edu.

Costume collection presents paisley items

The Emily P. Reynolds Historic Costume Collection (ERHCC) presents a display of paisley-inspired garments and accessories on the fourth floor of the Family Life Center.

The display tells the history of the paisley motif, from its creation in India to its adaptation in the West. Visitors will learn about the paisley motif's use in cashmere shawls, its symbolism, development and its modern resurgence. Utilizing objects from the ERHCC, garments and accessories range from the late 19th century to the 1970s.

The display is available for viewing until Nov. 29. Faculty, staff and students are welcome to stop by the collection's office in FLC room 407 to learn more about paisley and the ERHCC. For more information about the ERHCC, visit www.ndsu.edu/erhcc or www.facebook.com/erhcc.

SHORTS & REMINDERS

Positions available

Positions open and screening dates through the Office of Human Resources, SGC, 1919 N. University Drive. Position openings also are available through the NDSU website at www.ndsu.edu/jobs.

Research Specialist

Plant Science
\$35,000+/year
Open until filled

Senior Technical Services Librarian/#00023136

Library
\$65,000+/year
Open until filled

Project Coordinator

Nursing
\$32,000+/year
Open until filled

Custodian (multiple positions; various hours)

Facilities Management
\$19,760+/year
Open until filled

Agricultural Technician/#00023496

Williston Research Extension Center
Williston, N.D.
\$28,000+/year
Open until filled

Journeyman Electrician

Facilities Management
\$46,000 minimum/year
Nov. 12

University Relations
North Dakota State University
NDSU Dept 6020, PO Box 6050
Fargo, ND 58108-6050

CALENDAR

NOVEMBER

3 **Indian taco sale** – 11 a.m. to 1 p.m., Memorial Union Room of Nations. Sponsored by Native American Student Association and AISES.

3 **“Envisioning a New NDSU Libraries”** – YMCA of NDSU Brown Bag Series, noon, Memorial Union Arikara. Co-sponsored by Department of Women and Gender Studies.

3 **Tri-College Career and Internship Fair** – 1 p.m. to 5 p.m., Crystal Ballroom, Fargo Ramada Hotel

3 **NDSU saxophone quartets recital** – 7:30 p.m., Beckwith Recital Hall. Free and open to the public.

4 **Flu clinic** – NDSU Student Health Service, 9:30 a.m. to 3 p.m., Memorial Union Prairie Rose room. Cost of the shot is \$25 for NDSU students, faculty and staff. For more information, call 1-7331.

4 **Gear Up for Grants seminar** – “Building a Nationally Competitive Research Program at NDSU,” 3 p.m. to 4:30 p.m., Memorial Union Hidatsa Room. Sponsored by the Office of Research, Creative Activities and Technology Transfer.

4 **Chemistry and biochemistry seminar** – Alan Goldman, “Activation of C-H Bonds and Catalysis by Pincer-Iridium Complexes,” 4 p.m., Dunbar room 152

4 **“Getting to Know Our Tribal Partners”** – Karen Paetz Sitting Crow, tourism development and curriculum specialist, Three Affiliated Tribes Tourism Department, “Reservation Development Conditions,” 6 p.m., Memorial Union Meadow Lark room

5 **Animal Sciences graduate seminar** – Austen Germolus, meat science research specialist, “NDSU BBQ Boot Camp: Advocating Agriculture Knowledge,” 3 p.m. to 4 p.m., Hultz Hall room 104

5 **Department of Geosciences seminar** – Marcia Bjornerud, Lawrence University, “Fluids, fault zone permeability and frictional melting during earthquakes,” 8:30 a.m., Stevens Hall room 136

5 **“Does Farm Size Really Matter?”** – presented by Frayne Olson and Joleen Hadrich, assistant professors of agribusiness and applied economics, 2:30 p.m., Richard H. Barry Hall room 600

6 **Baroque Festival Chamber Concert** – 7:30 p.m., Messiah Lutheran Church. Adults: \$15, seniors: \$12 and students: \$5.

7 **Baroque Festival Student Concert** – 2 p.m., Messiah Lutheran Church. Adults: \$5 and students/seniors: \$2.

8 **Plant sciences graduate seminar** – “Mom, Add a Plate: We Have 9 Billion People for Dinner,” Filippo Bassi, 3:30 p.m., Loftsgard Hall 114

8 **Plant sciences graduate seminar** – “Genome-wide Selection for Plant Breeding: From Theory to Practice,” Junyun Yang, 4:15 p.m., Loftsgard Hall 114

9 **ECS Green Bag Lunch** – Jake Kerby, University of South Dakota, “Understanding the impacts of multiple stressors on amphibians,” 12:30 p.m., Memorial Union Hidatsa room

9 **Anti-Racism Tuesday: Native American Law and Order Act** – Monique Vondall-Rieke, 12:30 p.m., Memorial Union Hidatsa room. Sponsored by NDSU Anti-Racism Team.

MORE CAMPUS EVENTS www.ndsu.edu/eventcalendar

NEXT ISSUE Publication date: Wednesday, November 10 | Submissions due: noon November 4

SEND SUBMISSIONS TO THE EDITOR Linsey Davis | ndsu.itshappening@ndsu.edu
Library 16, NDSU Dept 6020, PO Box 6050, Fargo, ND 58108-6050 | Voice: 231-5853 | Fax: 231-5120

SEND MAILING ADDRESS ADDITIONS, DELETIONS OR CHANGES | char.goodyear@ndsu.edu

NDSU

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