Interactive Visualization for Home Energy Interactions at Purdue’s Research Center for Open Digital Innovation

**Lead faculty:** Prof. Sabine Brunswicker, Director, Research Center for Open Digital Innovation

**Project description:** A team of researchers is exploring how to best design information to help private home residents learn and understand their energy usage. The team is planning a series of user centered studies (in the lab, with eyetrackers) and experiments (in-lab and online via Amazon Turk) on information visualization graphs on *desktop, tablet and mobile* devices. More information can be found at: [https://www.purdue.edu/opendigital/getinvolved/students/](https://www.purdue.edu/opendigital/getinvolved/students/)

**To get involved in this project:** Submit a résumé, link to github account (if available but not a must), and other evidence of prior coding and data science experience to opendigital@purdue.edu.

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Research Opportunity with Prof. W.A. Cramer, Distinguished Professor of Biological Sciences

**Lead faculty:** Prof. W.A. Cramer, Distinguished Professor of Biological Sciences

**Project description:** Research position for undergraduate, preferably a sophomore or first semester junior, interested in biochemistry or biophysics in general, and in particular, problems in biology that concern (1) molecular mechanisms of biological energy transduction or (2) mechanisms of toxin import across cell membranes.

**To get involved in this project:** email Prof. Cramer at waclab@purdue.edu to inquire.

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Opportunity to Work on Visitor Harassment Research in the School of Hospitality & Tourism (SHTM), Purdue

**Lead faculty:** Prof. Annmarie Nicely, Associate Professor & Lead Visitor Harassment Researcher, School of Hospitality & Tourism Management

**Project description:** The harassment of visitors by small independent traders at tourist destinations is a phenomenon that affects every continent across the goal and is likely to have a negative economic effect on destinations. So, the goal of the Visitor Harassment Research Unit (Lab) at Purdue is to engage in research focused on understanding the phenomenon and pinpointing sustainable solutions for destination.

**How to get involved in this project:** Honors College students interested in joining our research team may do so by contacting Dr. Annmarie Nicely at ajnicely@purdue.edu. Also, visit our
Purdue Cryo-EM Facility

Lead faculty: Prof. Wen Jiang, Departments of Biological Sciences and Chemistry

Project description: My group focus on cryo-electron microscopy method development and its applications in structural biology of viruses and macromolecular complexes. I prefer to have freshmen/sophomore students who have genuine interests in research and want to start research early. Our research is highly interdisciplinary and students with interest in biochemistry, virology, drug discovery, instrument control, computing, programming and other areas of science/engineering will be fine. For more information, visit: http://cryoem.bio.purdue.edu/

How to get involved in this project: Students can contact me directly via email, wjiang@gmail.com.

Materials Processing Technology Development

Lead faculty: Prof. Qingyou Han, Director, Purdue Center for Materials Processing Research, School of Engineering Technology

Project description: My research is funded by Chrysler and my team (consisting of about 20 researchers) is developing new technologies. It would be beneficial for undergraduate students to get involved with our research if there are interested in learning metals and alloys, and their processing technologies. For more information, visit https://polytechnic.purdue.edu/purdue-center-for-materials-processing-research.

How to get involved in this project: Contact Prof. Han at hanq@purdue.edu.

Research on the Human-Animal Bond, O’Haire Lab

Lead faculty: Dr. Maggie O’Haire, Assistant Profess of Human-Animal Interaction, and Dr. Jess Bibbo, Postdoctoral Research Associate, College of Veterinary Medicine

Project description: For this semester, we would like to advertise a volunteer position in which the student could earn research credits if desired. The O’Haire Lab focuses on conducting rigorous, scientific research on the unique and pervasive effects of the human-animal bond and human well-being. Students will work with Dr. Maggie O’Haire and Dr. Jess Bibbo as well as
graduate students and other undergraduates. The students’ main task will be coding and analyzing qualitative data collected from family members of service dog recipients. They will also assist with other ongoing research studies in the lab involving facility and service dogs. This is a volunteer position, but students can earn research credit hours and apply for outside funding. More information, [www.humananimalinteraction.org](http://www.humananimalinteraction.org).

**Requirements:** An undergraduate student with excellent attention to detail, organization, and an ability to work in a team environment. Previous experience with qualitative data is positive, but not necessary. A two-semester commitment is required to work in the O’Haire Lab.

**How to get involved in this project:** Please email the Project Coordinator, Katelynn Burgess (burges10@purdue.edu) with your resume/cv. The anticipated start date for this position is September 12th.

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**Automation and Intelligent Construction (AutoIC) Lab**

**Lead faculty:** Prof. Jiansong Zhang, Assistant Professor, School of Construction Management

**Project description:** My main research interests are developing and leveraging advanced technologies to support construction engineering and management, construction automation and sustainable infrastructure, including building information modeling (BIM), artificial intelligence (AI) [i.e., natural language processing (NLP), machine learning, and automated reasoning], virtual reality (VR), and construction robotics.

**Requirements:** Preferred qualifications of students include proficiency or passion in building information modeling software and/or Java programming. I am interested to work with students to develop their topic as long as it falls within my research interests.

**How to get involved in this project:** Contact Prof. Zhang, jiansong-zhang@purdue.edu.

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**Social Media for Antarctic Research, Communications Intern**

**Lead faculty:** Prof. Jon Harbor, Department of Earth, Atmospheric, and Planetary Sciences

**Project description:** We are looking for a communications intern to work as part of a team in promoting the work of an international scientific research project MAGIC-DML (Mapping, Measuring and Modeling Antarctic Geomorphology and Ice Change, in Dronning Maud Land). The communications intern will work jointly with a science undergrad intern to collaborate on and edit blog posts (typically one per week), update website content [http://www.magicdml.com](http://www.magicdml.com), manage three social media platforms (including [https://www.facebook.com/MagicDML/](https://www.facebook.com/MagicDML/)), and propose new social media strategies for the project. This is a modestly paid position, approximately 5 hours per week, and the schedule is pretty flexible. Could also be used as the basis for an undergraduate research project.
Requirements: A working knowledge of best social media practices, experience writing blog posts (preferred), the ability to communicate science concepts to the general public in a way that is understandable and clear, and enthusiasm for innovative strategies to communicate to the general public and students/teachers.

How to get involved in this project: Send a one-page resume and up to three short writing samples to Communications Specialist Logan Judy (ljudy@purdue.edu).