Michigan Tech Water Newsletter - November 26, 2018

Please send water-related items to post in the weekly email to Carol Asiala at glrcadmin-l@mtu.edu. We would especially like to include on-campus seminar announcements, off-campus conferences and webinars, and notifications of new funding and other member highlights.

Highlights

On-Campus/Local Seminars
New Funding Opportunities
Course Announcements
World Water Day 2019: Save the Date - March 21-26
Request Contribution numbers for GLRC Publications
Reports and Action Plans
Conferences & Webinars
Open RFPs of ongoing interest
Graduate Certificate in Sustainable Water Resources Systems
Student Research Grants (December 7) and Travel Grants (November 30)
Colloquium Course – UN5100 – next offered: Spring 2019
Seminar Speaker Support Program
Job Opportunities
Student Opportunities

1. Highlights

Pengfei Xue (CEE/GLRC) is the principal investigator on a project that has received a $130,118 research and development contract from the University of Michigan-Cooperative Institute for Great Lakes Research. The title of the project is "The Cooperative Institute for Great Lakes Research: Long-Term Data Assimilative, Temperature and Currents Database for Lake Erie." This is a one-year project.

Valoree Gagnon (GLRC) is the principal investigator on a project that has received a $30,489 instruction grant from the Native American Heritage Fund. Jerry Jondreau (SFRES) is the Co-PI on the project "Ge-izhi-mawanji-idiyang Dazihindamang Gidakiiminaan ('The Way in Which we Meet to Talk About our Earth')." This is a one-year project.

CUAHSI Events and Sessions at AGU Fall Meeting 2018
December 10-14, 2018 at AGU in Washington, DC

International Association for Great Lakes Research (IAGLR) scholarships!
Deadline: December 1, 2018

Michigan Tech Research Forum Nominations Open
Distinguished Lecturers should be professionally accomplished and recognized as a leader in their field; they are selected for their ability to increase the knowledge of our community by connecting their research with societal and community concerns. TechTalks are rapid-paced samplings of the work of researchers across campus. Nominate a colleague or yourself.
Deadline: November 30, 2018
2. On-Campus/Local Seminars

Monday, November 26, 2018
Karina Eyre, Environmental Engineering MS Student, Michigan Tech
*Low Cost Low Tech Class A Biosolids Production: A Tale of Two Pilot Scales*
Environmental Engineering Graduate Seminar
GLRC 202
3:00 pm

Monday, November 26, 2018
Dr. Stephen Techtmann, Biological Sciences
*Marine Microbial Biosignatures of Geospatial Location in Ship Microbiomes*
EPSSI Seminar
M&M U113
4:00 pm

Tuesday, November 27, 2018
Prof. Raymond A. Shaw, Physics
*Forming Ice from Supercooled Liquid Water: Our Weather Depends on a Materials Science Problem*
Materials Science and Engineering Seminar
M&M 610
11:00 am

Thursday, November 29, 2018
Dr. Laurence Dorr, Chair of the Department of Botany
The Smithsonian Institution
*Reimagining the U.S. National Herbarium: More than a Cabinet of Botanical Curiosities*
Forestry, G002
12:30-1:30 pm

Friday, November 30, 2018
Sapna Sarupria, Clemson University
*Freezing Water and Aqueous Solutions: Elucidating the Molecular Ballet Using Computer Simulations*
Chemical Engineering Grain Processing Seminar Series
Chem Sci, 101
1:00 pm

Friday, November 30, 2018
Masters Defense: Timothy Butler, Biological Sciences
Advisor: Stephen Techtmann
*Microbial Community Response to Light and Heavy Crude Oil in Freshwater Systems*
DOW 708
2:00 pm

Monday, December 3, 2018
Dr. Becky Alexander, University of Washington
*Climate driven changes in the oxidation capacity of the atmosphere*
EPSSI seminar
M&M U113
4:00 pm
Tuesday, December 4, 2018
Masters Defense: Erica Coscarelli, Environmental Engineering
Advisor: Daisuke Minakata
Predicting the Organic Compound Degradations in Aqueous-Phase Ultraviolet (UV) and UV-Based Advanced Oxidation Processes
Dillman 214 1:00 pm

Wednesday, December 5, 2018
Michigan Tech Geospatial Research Forum
Do you use GIS, remote sensing or other geospatial technologies in your research or teaching? Or perhaps want to?
Come for lunch, learn about how you can collaborate on geospatial focused proposals and contribute to a series of "TechTalks"-style presentations about current geospatial research across campus.
For lunch and to sign up to present a three-minute Geospatial TechTalk, fill out this form. RSVP by Wednesday, Nov. 28 so we have enough lunch for all guests.
Questions? Contact Don Lafreniere or Ryan Williams.

Thursday, December 6, 2018
Research Forum: TechTalks
Two minutes + two slides + interesting faculty = a research showcase at (not quite) warp speed.

TechTalks are rapid-paced samplings of work, both published and unpublished. Time before and after each event will be dedicated to mingling, with ample time to seed collaborative discussions.

The Michigan Tech Research Forum is a new University presentation series showcasing the work of Michigan Tech faculty, postdocs, and researchers to strengthen our community.

Mingle: 4:00 PM
Lecture: 4:30 PM
Mingle 5:00 PM
Location to be announced 4:00 pm to 5:30 pm

Thursday, December 6, 2018
Valoree Gagnon (GLRC)
Synopsis of Workshop: "Tuyuryaq: A Model for decolonizing learning on college campuses"
GLRC 202 4:00 - 5:30 pm

3. New Funding Opportunities

New proposals can be submitted through the Great Lakes Research Center. Director Guy Meadows’ signature will be needed on the PI signature page of the transmittal sheet.

Cooperative Ecosystem Studies Unit, Great Lakes Northern Forests (CESU) Program
G19AS00019  (Lower Maumee River Region Restoration Potential Study)
Department of the Interior, Geological Survey
Deadline: December 4, 2018

**Cooperative Ecosystem Studies Unit, Great Lakes Northern Forest CESU**
G19AS00020 (Total Maximum Daily Load (TMDL) and watershed management plan for total phosphorus (TP) in the Rock River Basin, Madison WI area)
Department of the Interior, Geological Survey
Deadline: December 7, 2018

**Funding for restoring Great Lakes areas of concern**
Environment and Climate Change Canada
Deadline: January 11, 2019

**FY19 Coral Reef Conservation Program, Domestic Coral Reef Conservation Grants**
NOAA-NOS-OCM-2019-2005879
Department of Commerce, NOAA
Deadline: January 29, 2019

**Future Investigators in NASA Earth and Space Science and Technology (FINESST)-2019**
NASA
Deadline: February 1, 2019
Note: this program succeeds the NASA Earth and Space Science Fellowship (NESSF)

**Marshall Faculty Fellowship Program**
NASA
Deadline: February 8, 2019

**ENVIRONMENTAL JUSTICE SMALL GRANTS PROGRAM**
EPA-OP-OEJ-19-01
Environmental Protection Agency
Deadline: February 15, 2019

**FY 2019 Community-based Restoration Program Coastal and Marine Habitat Restoration Grants**
NOAA-NMFS-HCPO-2019-2005889
Department of Commerce
Deadline: May 15, 2019

**FY19 Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program**
N00014-19-S-F003
Department of Defense, Office of Naval Research
Deadline: September 27, 2019

4. **Course Announcements**
SS 5049 GIS for Graduate Researchers  
CRN 14484, Spring 2019, 3 Credits,  
Section 0A: F 01:05 pm-01:55 pm and L01: F 02:05 pm-03:35 pm in GLRC B003  
Instructor: Don Lafreniere (djlafren@mtu.edu)  
Introductory GIS course for students who have no and very limited experience with geography or GIS. The course introduces students to the basics of GIS including data collection, manipulation, basic spatial analysis, and how to create webmaps and basic apps for dissemination.

SS5050- Advanced GIS Methods and Projects  
New Course in Fall 2019  
Instructor: Don Lafreniere (djlafren@mtu.edu)  
Advanced course for students who have ideally taken SS5049 or have other experience in the spatial sciences. The course will outfit students' toolbelt with expertise in advanced spatial analysis and statistics and apply those skills to a semester major project (ideally linked to their thesis or dissertations)

CRN #: 12669, Spring 2019, 3 credits  
Schedule: MWF 10:05-10:55 am in GLRC B003  
Instructor: Thomas Oommen (toommen@mtu.edu)  
Course Objective: This course gives an introduction to Earth science and engineering applications of remote sensing. The course covers a description of the sensors, discussion of their applications, and hands-on exercises with multispectral, hyperspectral, airborne, and satellite-borne sensors measuring optical, thermal infrared responses, and active sensors, such as Light Detection and Ranging (LiDAR) and Synthetic Aperture Radar (SAR). The course will also introduce students to the photogrammetric technique using Structure from Motion (SfM). The fusion and analysis of remote sensing datasets with other geologic and geophysical data require the application of machine learning and data mining. The course will also introduce students to an open source collection of machine learning algorithms for data mining tasks using Weka.

The Scientific Profession (BL5025)  
BL 5025, CRN 13759, Spring 2019, Meeting time T 11:05 – 12:45 in Dow 708  
Instructor: Amy Marcarelli (ammarcar@mtu.edu)  
This 2-credit class will be discussion-based, covering the practice of sciences for graduate students, including how to plan a research project, tips for preparing grants, conference presentations, publications, navigating the job market, and consideration of personal and social issues (e.g., diversity and bias, time management and work-life balance, etc.). It also fulfills the advanced RCR requirement for graduate students. More details can be found on the attached flier.

Although this course is offered through Biological Sciences, the topics covered are not specific to the field and I find that it works the best when students from other departments are also enrolled. In the past the class had included students from many programs across campus, including SFRES, Chemistry and Chem Eng, Civil Environ Eng, Biomed Eng, Geol Eng + Sci, Mechanical and Electrical Eng, Humanities and Cognitive and Learning Sci. We typically have
a mix of new and more established students, of traditional and non-traditional students, of US and international students, and of MS and PhD students.

"Piled Higher and Deeper" by Jorge Cham. www.phdcomics.com. Used with permission

5. **World Water Day 2019**: Save the Date - March 21-26

**Theme:** Leaving No One Behind - Human Rights: Near and Far  
**Keynote Lecturer:** Monica Lewis-Patrick, We the People Detroit  
**Thursday, March 21:** Green Film: Marathon for Justice  
**Monday, March 25:** Poster Session, Welcome to Traditional Homelands by KBIC and Woodland Singers, Keynote Lecture, Reception  
**Tuesday, March 26:** Panel Discussion, Art Reception, Closing Ceremony

The Poster Competition includes entries from graduate and undergraduate students in 2 categories. The Original Research posters include research and student thesis work on any aspect of water. The Coursework/Informational posters include presentation of coursework or literature based research. Faculty are encouraged assign posters in their Spring courses, if appropriate for the course.

Faculty may also want to consider assigning attendance at the World Water Day lecture and panel discussion and green film in their Spring courses if applicable.

6. **Request Contribution numbers for GLRC Publications**

Please email Carol Asiala (glrcadmin-l@mtu.edu) when you are preparing publications. We are continuing to follow in the time-honored tradition of many Institutes by recognizing Contribution Numbers in papers that we publish in the peer-reviewed literature. You are welcome to participate. All you need to do is -
1. Contact Carol Asiala/Beth Hoy (glrcadmin-l@mtu.edu) to request a Contribution Number. Please provide as much citation info as possible - author(s), title, journal/book, etc.

2. Add to your acknowledgements section, "This is Contribution No. _ of the Great Lakes Research Center at Michigan Tech."

3. Get back to Carol when your paper is in print and give her the volume and page numbers.

Your participation is welcomed for this effort to enhance the visibility of the GLRC.

7. Reports and Action Plans

Federal Science Partners Updates

Great Lakes Connections
International Joint Commission newsletter

8. Conferences & Webinars

OneNOAA Science Seminars Series
Currently scheduled webinars: September 2018 - December 2018

Monday, November 26, 2018
Listening Session hosted by the National Oceanic and Atmospheric Administration (NOAA)
NOAA is conducting a series of Listening Sessions across the United States to receive public input regarding the implementation of the Department of Commerce's 2018-2022 Strategic Plan (available here). One of the goals in the Strategic Plan is to Strengthen U.S. Economic and National Security by Reducing Extreme Weather Impacts. NOAA has a critical role in implementing this goal through the implementation of the Weather Research Forecasting and Innovation Act of 2017 which includes advancing science and technology innovation, improving weather research to operations, developing a community-based weather model, and advancing seasonal to subseasonal weather forecasts.

Dr. Neil Jacobs, assistant secretary of commerce for environmental observation and prediction and NOAA deputy administrator, will discuss the implementation of The Weather Act, including the development of a community-based weather model. His remarks will be followed by a period for public comments. This is an opportunity to ask questions and provide input on implementation of these and other NOAA and Department of Commerce priorities.

NOAA Listening Session
University of Wisconsin
Union South, Varsity Hall
1308 W. Dayton Street, Madison, WI 53715
Monday, November 26, 2018
Doors open at 2:00pm CST
Listening Session: at 2:30pm - 4:00pm CST

Please indicate your interest in attending by completing the form via this link. If you are unable to complete the form, please identify the listening session you are attending and provide the following information: your name, email address, and affiliation to listen.sessions@noaa.gov.

Friday, November 30, 2018
The Summer Institute Research Experience: Highlights from Past CUAHSI National Water Center Summer Institute Research and 2019 Summer Institute Themes
CUAHSI
Speakers: Fred Ogden, NWC; Ehab Meselhe, The Water Institute of the Gulf
Registration is free! You must register for the series in order to attend. To register, click here

Tuesday, December 11, 2018
Chris Doyle, Director of Biology, Solitude Lake Management
Monitoring and Detecting Hydrilla: Three Case Studies in New York and New Jersey
Great Lakes Hydrilla Collaborative’s technical webinar series
To register, please send an email to hydrillacollaborative@ene.com
2:00 pm EST

February 19-21, 2019
Wetland Science Conference
Madison, WI
Call for Abstracts

June 5-7, 2019
LIVING BLUE: TRANSFORMING WATERFRONTS
Great Lakes and St. Lawrence Cities Initiative
2019 Annual Conference, Email jane.eagleton@glslcities.org
Sheboygan, WI

9. Open RFPs of ongoing interest

Virtual Consortium for Translational/Transdisciplinary Environmental Research (ViCTER) (R01 Clinical Trial Optional)
RFA-ES-18-007
Department of Health and Human Services, National Institutes of Health
Deadline: December 1, 2018

National Estuarine Research Reserve System (NERRS) Collaborative Science Program 2019
NOAA-NOS-OCM-2019-2005778
Department of Commerce, NOAA
Deadline: December 3, 2018

**16th Annual P3 Awards: A National Student Design Competition Focusing on People, Prosperity and the Planet**
EPA-G2019-P3-Q1 – Air Quality
EPA-G2019-P3-Q2 – Safe and Sustainable Water Resources
EPA-G2019-P3-Q3 – Sustainable and Healthy Communities
EPA-G2019-P3-Q4 – Chemical Safety
EPA
Deadline: December 11, 2018

**Desalination and Water Purification Research Program for Fiscal Year 2019**
BOR-DO-19-F001
Department of the Interior, Bureau of Reclamation
Deadline: December 13, 2018

**NOAA Marine Debris Research Program**
NOAA
NOAA-NOS-ORR-2019-2005817
Deadline: December 14, 2018

**Coastal Zone Management (CZM) Program 2020**
Michigan Department of Natural Resources, Office of the Great Lakes (OGL)
- Habitat
- Hazard Management
- Water Quality
- Public Access
- Community Development
Deadline: December 14, 2018

**Collaborative Science, Technology, and Applied Research (CSTAR) Program**
NOAA-NWS-NWSPO-2019-2005754
Department of Commerce, NOAA
Deadline: December 14, 2018

**FY19 Dr Nancy Foster Scholarship Program**
NOAA-NOS-ONMS-2019-2005832
Department of Commerce, NOAA
Deadline: December 17, 2018

**CZM Projects of Special Merit Competition - FY2019**
NOAA-NOS-OCM-2019-2005819
Department of Commerce, NOAA
Deadline: December 19, 2018
Review Eligibility Requirements
FY 2018 Support of the National Estuary Program Coastal Watershed Grants
EPA-OW-OWOW-18-04
Environmental Protection Agency
Deadline: December 20, 2018

National Oceanographic Partnership Program (NOPP)
N00014-18-S-B007
Department of Defense, Office of Naval Research
Deadline: December 21, 2018

TAT Grant Program
TATFY19
Department of Agriculture, Utilities Programs
Deadline: December 31, 2018

Solid Waste Management Grant Program
SWMFY2019
Department of Agriculture, Utilities Programs
Deadline: December 31, 2018

Great Lakes Fish and Wildlife Restoration Act
F19AS00015
Department of the Interior, Fish and Wildlife Service
Pre-Proposal Deadline: January 7, 2019

FY 2019 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM
NOAA-OAR-OAR-TPO-2019-2005899
Department of Commerce, NOAA
Deadline: January 8, 2019

Special Joint Request for Proposals: Michigan, Illinois-Indiana, and Wisconsin
Sea Grant Regional RFP
Understanding and Communicating Coastal Hydrodynamics and Nearshore Sediment Transport Processes on Lake Michigan to Promote Resilient Coastal Communities
Deadline: January 11, 2019

Fishery and Sea Lamprey Research Programs
Great Lakes Fishery Commission
Pre-Proposal Deadline: January 15, 2019

2019 Ecological Effects of Sea Level Rise Program
NOAA-NOS-NCCOS-2019-2005813
Department of Commerce, NOAA
Deadline: January 16, 2019

Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)
NSF (18-510)
Deadline: January 22, 2019
**2019 Summer Undergraduate Research Fellowships (SURFs)**
Fellowship recipients will spend the summer on an individual research project under the guidance of a Michigan Tech faculty mentor. SURFs are open to all Tech undergraduates who have at least one semester remaining after the summer term. Awards are up to $4,000.
Deadline: January 25, 2019 by 4:00 pm

**Workshop: Writing effective SURF proposals**
Tuesday, Dec. 11 in Fisher 132  6:00 pm

**2020 Partners for Fisheries Monitoring Program**
F19AS00022
Department of the Interior, Fish and Wildlife Service
Deadline: January 31, 2019

**National Competitive Harmful Algal Bloom Programs**
NOAA-NOS-NCCOS-2019-2005810
Department of Commerce, NOAA
Deadline: February 4, 2019

**National Estuarine Research Reserve System (NERRS) Land Acquisition and Construction Program for Fiscal Year 2019**
NOAA-NOS-OCM-2019-2005800
Department of Commerce, NOAA
Deadline: February 8, 2019
Review Eligibility Requirements

**Commercial Fishing Occupational Safety Training Project Grants**
RFA-OH-19-005
Department of Health and Human Services
Centers for Disease Control and Prevention - ERA
Deadline: February 15, 2019

**Regional Ocean Acidification Observing Optimization Study (OOS-OA19)**
NOAA-OAR-OAP-2019-2005791
Department of Commerce, NOAA
Deadline: March 4, 2019

**FY2019 Office of Weather and Air Quality Research Programs**
NOAA-OAR-OWAQ-2019-2005820
Department of Commerce, NOAA
Deadline: March 20, 2019

**Interpreting the Conditions of the Nation's Freshwater, Wetland and Coastal Resources**
US EPA
MI DEQ Nonpoint Source Implementation RFP
This RFP involves a long-term plan:
**Year 1:** Feb - submit watershed plans, and get them 319 approved by July

NOIs are due in August, Proposals are due in October

**Year 2:** Projects are awarded in early summer

2018 ERDC Broad Agency Announcement
US Army
Deadline: January 31, 2019

Coastal
F19AS00027
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2019

Partners for Fish and Wildlife
F19AS00024
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2019

FY 2018 – 2020 - Broad Agency Announcement (BAA) Announcement Type: Initial
NOAA-NFA-NFAPO-2018-2005418
Department of Commerce, NOAA
Deadline: September 30, 2020

Army Research Office BAA for Basic and Applied Scientific Research
US Army
Deadline: March 31, 2022

NSF Announcements:

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<th>Title</th>
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<td>Advancing Informal STEM Learning (AISL)</td>
<td>November 7, 2018</td>
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<td>17-584</td>
<td>Discovery Research PreK-12 (DRK-12)</td>
<td>November 14, 2018</td>
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<td>17-590</td>
<td>Improving Undergraduate Science Education: Education and Human Resources (IUSE:EHR)</td>
<td>December 11, 2018 (Development and Implementation) Oct 1, 2018 - Sept 30, 2019 (Exploration and Design )</td>
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<td>17-512</td>
<td>Division of Environmental Biology (core programs) (DEB)</td>
<td>Pre-Proposal: Jan. 23, 2018 Full Proposal: Aug 2, 2018</td>
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<td>17-513</td>
<td>Long Term Research in Environmental Biology (LTREB)</td>
<td>Accepted Anytime</td>
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<tr>
<td>Proposal Number</td>
<td>Program Description</td>
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<td>18-510</td>
<td>Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)</td>
<td>January 22, 2019</td>
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<td>17-537</td>
<td>Faculty Early Career Development Program (CAREER)</td>
<td>July 18, 2018: BIO, CISE, EHR July 19, 2018: ENG July 20, 2018: GEO, MPS, SBE</td>
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<td>14-559</td>
<td>Opportunities for Promoting Understanding through Synthesis (OPUS)</td>
<td>August 1, 2018</td>
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<td>15-506</td>
<td>Science, Technology, and Society (STS)</td>
<td>February 2, 2018 August 3, 2018</td>
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<td>15-577</td>
<td>Collections in Support of Biological Research (CSBR)</td>
<td>August 13, 2018</td>
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<tr>
<td>PD 98-1650</td>
<td>Biological Oceanography</td>
<td>February 15, 2018 August 15, 2018</td>
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<td>PD 98-1610</td>
<td>Physical Oceanography</td>
<td>February 15, 2019 August 15, 2019</td>
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<td>PD 98-1670</td>
<td>Chemical Oceanography</td>
<td>February 15, 2019 August 15, 2019</td>
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<td>19-531</td>
<td>Frontier Research in Earth Sciences (FRES)</td>
<td>February 15, 2019 August 15, 2019</td>
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<td>PD 17-7643</td>
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<td>PD-17-1440</td>
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<td>PD 09-6882</td>
<td>Environmental Chemical Sciences (ECS)</td>
<td>October 31, 2018</td>
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<td>15-536</td>
<td>Limited Submission – Internal Deadline: Research Experiences for Teachers (RET) in Engineering and Computer Science</td>
<td>August 8, 2018 September 19, 2018</td>
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<td>15-600</td>
<td>Integrated Earth Systems (IES)</td>
<td>November 14, 2018</td>
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<td>18-503</td>
<td>Dynamics of Coupled Natural and Human Systems (CNH)</td>
<td>next deadline not set</td>
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<td>16-506</td>
<td>Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML)</td>
<td>December 14, 2018</td>
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<td>15-568</td>
<td>Earth Sciences Postdoctoral Fellowships (EAR-PF)</td>
<td>October 24, 2018</td>
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<td>15-504</td>
<td>Major Research Instrumentation Program (MRI) Limited Submission – Internal Deadline:</td>
<td>January 22, 2019 October 24, 2018</td>
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<td>18-583</td>
<td>Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS)</td>
<td>LOI: September 21, 2018 Proposal: Nov 19, 2018</td>
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<td>16-517</td>
<td>National Robotics Initiative (NRI)</td>
<td>February 5, 2019</td>
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<td>PD 98-1680</td>
<td>Ocean Technology and Interdisciplinary Coordination</td>
<td>February 15, 2019</td>
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<td>17-593</td>
<td>Long-Term Ecological Research (LTER) - renewal proposals only</td>
<td>March 2, 2018</td>
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<td>17-527</td>
<td>NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)</td>
<td>March 28, 2018</td>
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<td>18-545</td>
<td>Innovations at the Nexus of Food, Energy and Water Systems</td>
<td>September 26, 2018</td>
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<td>15-558</td>
<td>Hydrologic Sciences (HS)</td>
<td>Accepted Anytime</td>
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<td>PD-06-5740</td>
<td>Climate and Large-Scale Dynamics</td>
<td>Accepted Anytime</td>
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<td>15-560</td>
<td>Geomorphology and Land-use Dynamics (GLD)</td>
<td>Accepted Anytime</td>
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<tr>
<td>15-516</td>
<td>Earth Sciences: Instrumentation and Facilities (EAR/IF)</td>
<td>Accepted Anytime</td>
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<tr>
<td>16-595</td>
<td>Arctic Research Opportunities</td>
<td>Accepted Anytime</td>
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<td>18-530</td>
<td>Antarctic Research</td>
<td>Accepted Anytime</td>
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<td>PD 98-1620</td>
<td>Marine Geology &amp; Geophysics</td>
<td>Accepted Anytime</td>
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**NASA ROSES 2018**

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<td>Earth Science Research Overview</td>
<td>N/A</td>
<td>N/A</td>
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<td>Land Cover Land Use Change</td>
<td>08/01/2018 (Step-1)</td>
<td>03/01/2019 (Step-2)</td>
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<td>A.7</td>
<td>ECOSTRESS Science Team</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.25</td>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2019</td>
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<td>A.35</td>
<td>SERVIR Applied Sciences Team</td>
<td>10/25/2018 (Step-1)</td>
<td>04/25/2019 (Step-2)</td>
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<td>A.41</td>
<td>Advanced Information Systems Technology</td>
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<td>E.2</td>
<td>Topical Workshops, Symposia, and Conferences</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2019</td>
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</table>

10. Graduate Certificate in Sustainable Water Resources Systems

Currently enrolled students can download the [Certificate Degree Schedule](#) to plan their coursework. When they have completed the required courses, or are enrolled in the last ones, the certificate degree schedule should be submitted to Nancy Byers Sprague (nspr@mtu.edu) in the Graduate School.

**Request from GLRC:**

If you plan to complete the certificate, please email Carol Asiala (glrcadmin-l@mtu.edu)

- If you are not already on the glrc-student-community-l email list, you will be added and will receive announcements of water-related activities and the opportunity to apply for travel and research grants.
- We would like to keep a list of students working towards the certificate, and then we also have an idea of which students need to enroll in the UN5100, the Water and Society colloquium course.
- For questions about the certificate, please contact Cory McDonald or Carol Asiala (glrcadmin-l@mtu.edu)

**Links to certificate degree schedule:**
11. **Student Research Grants** ([December 7](#)) and **Travel Grants** ([November 30](#))

**Research Awards:** Graduate and undergraduate research awards are now due the first Friday in December and March of each year, and the 2nd Friday in August.

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>December 7, 2018</td>
<td>March 1, 2019</td>
<td>August 10, 2018</td>
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</table>

Each award can be up to $750. Awards can also be used to support undergraduate research in formal class settings (e.g. Enterprise, Senior Design, Pavlis, senior thesis, capstone classes etc.).

Applications and Requirements for Research Grants are online at: [http://www.mtu.edu/greatlakes/about/documents/glrc-studentresearchgrant.pdf](http://www.mtu.edu/greatlakes/about/documents/glrc-studentresearchgrant.pdf)

The research should support the Center's mission ([http://www.mtu.edu/greatlakes/about/documents/strategic-plan.pdf](http://www.mtu.edu/greatlakes/about/documents/strategic-plan.pdf)).

**Travel Awards:** Graduate student travel grants ($500) are also available through the Center for Water and Society to present a water related paper at a conference. Applications are reviewed on the last Friday of each month, and must be submitted at least 2 weeks in advance of planned travel.

Applications for **Travel** grants are online at: [http://www.mtu.edu/greatlakes/about/documents/glrc-travel-grant-app.pdf](http://www.mtu.edu/greatlakes/about/documents/glrc-travel-grant-app.pdf)

Student advisors must be a faculty member of the GLRC or the students must be supported on a GLRC-affiliated research grant.

Students will also be required to indicate how they would like to provide a return on the GLRC investment. Options include:

a. presenting a poster at World Water Day in March;

b. assisting with preparations for World Water Day;

c. assisting with GLRC-sponsored outreach activities;

12. **Colloquium Course – UN5100 – next offered: Spring 2019**

**Water & Society Colloquium Course**

**Course Number:** UN5100, CRN 13023, 1 credit

**Time/Location:** Tuesdays 3:35-4:25 in Dow 875

**Course Organizer:** Noel Urban ([nurban@mtu.edu](mailto:nurban@mtu.edu))
Each week, participants will read a journal paper or scientific report in preparation of discussion sessions on Tuesdays. Select films from the Green Film series (held Thursday evenings) will be used in lieu of the paper/Tuesday discussions. Students not registered for the course and faculty are encouraged to participate.

Discussion sessions will be led by a group of students and faculty. This group will prepare a few questions or comments the week preceding the discussion and send these to the class as a way to begin focusing the discussion. The group will begin the discussion session with a 10-minute summary of the major issues covered by the preceding week’s reading and repeat the discussion questions.

This course (or SS 5325) is required for the CWS Graduate Certificate in Sustainable Water Resources Systems.

13. Seminar Speaker Support Program

Great Lakes Research Center members can apply for $500 in assistance in bringing seminar speakers to Michigan Tech. Lecture topics should be of interest to the GLRC, and the visit should correspond with GLRC goals. The Seminar Speaker Request form should be emailed to Carol Asiala at glrcadmin@mtu.edu.

14. Job Opportunities

**Habitat Restoration Program Specialist**
Great Lakes Commission
Application deadline: December 21, 2018

**Water Infrastructure Project Manager**
Great Lakes Commission
Application deadline: December 21, 2018

**Commercial Navigation Project Manager**
Great Lakes Commission
Application deadline: December 21, 2018

**Habitat Restoration Engineer/Scientist**
ERT, Inc.
This individual will work out of the NOAA Great Lakes Environmental Research Lab in Ann Arbor, MI. The engineer/scientist will have his or her own portfolio of restoration projects to support and will also provide expertise in the physical sciences and engineering to review feasibility studies, modeling studies, project design plans and related tasks for projects throughout the Great Lakes. An individual is sought with a degree in engineering or related field, knowledge of engineering practices and methods pertaining to habitat restoration, and a background in shoreline and river restoration, geomorphology, and/or hydrology/hydraulics. Please see the link below and share this announcement with other interested individuals.

https://cht.tbe.taleo.net/chtcareers/requisition.jsp?org=ERT&cws=1&rid=2058

Posted: November 9, 2018

**Aquaculture marketing extension specialist**
Illinois-Indiana Sea Grant
Posted: November 1, 2018

**Post-doctoral Research Associate - Aquatic Ecology and Conservation**
Department of Fisheries and Wildlife, Michigan State University
Posted: October 29, 2018

**Climate Change Job Vacancies**
International Institute for Sustainable Development (IISD) Community

**IAGLR Job Board**
Job Opportunities in the Great Lakes

**The Stewardship Network – Job Postings**

**State of Minnesota**
Hydrologist & Natural Resources positions
[https://statejobs.doer.state.mn.us/JobPosting](https://statejobs.doer.state.mn.us/JobPosting)
Search on Job Grouping=Environmental Sciences
Or Department = Pollution Control Agency  (includes summer jobs for students)

**The Ohio Environmental Council – Careers & Internships**

**Positions posted on CUAHSI web site**
(Careers/fellowships/post-docs/research assistantships/faculty positions)

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15. **Student Opportunities**

**International Association for Great Lakes Research (IAGLR) scholarships!**
IAGLR
 Deadline: December 1, 2018

**Future Investigators in NASA Earth and Space Science and Technology (FINESST)-2019**
NASA
Deadline: February 1, 2019
Note: this program succeeds the NASA Earth and Space Science Fellowship (NESSF)

**16th Annual P3 Awards: A National Student Design Competition Focusing on People, Prosperity and the Planet**
EPA-G2019-P3-Q1 – Air Quality
EPA-G2019-P3-Q2 – Safe and Sustainable Water Resources
EPA-G2019-P3-Q3 – Sustainable and Healthy Communities
EPA-G2019-P3-Q4 – Chemical Safety
EPA
Deadline: December 11, 2018
FY19 Dr Nancy Foster Scholarship Program
NOAA-NOS-ONMS-2019-2005832
Department of Commerce, NOAA
Deadline: December 17, 2018

2019 National Water Center Innovators Program Summer Institute
CUAHSI
Application Deadline: January 15, 2019

Research Experiences for Undergraduates
Central Michigan University Institute for Great Lakes Research
Deadline: February 1, 2019

Undergraduate and Graduate Research Fellowships (must be a US citizen)
Michigan Space Grant Consortium
Internal Michigan Tech Deadline: Noon on Wednesday, November 7, 2018
Important: review and follow Michigan Tech Guidelines

IAGLR Scholarships
International Association for Great Lakes Research
  ● David M. Dolan Scholarship ($3,000)
  ● Norman S. Baldwin Fishery Science Scholarship ($3,000)
  ● IAGLR Scholarship ($2,000)
Deadline: December 1, 2018

Graduate Research & Training Scholarship Program (GRTSP)
NOAA
Applications accepted twice per year

Research Associateship Programs
The National Academies
4 application deadlines throughout the year
Participating agencies include: NOAA and EPA
Energy Accounting System Modeling of Urban Water Systems
Deadline: November 1, 2018