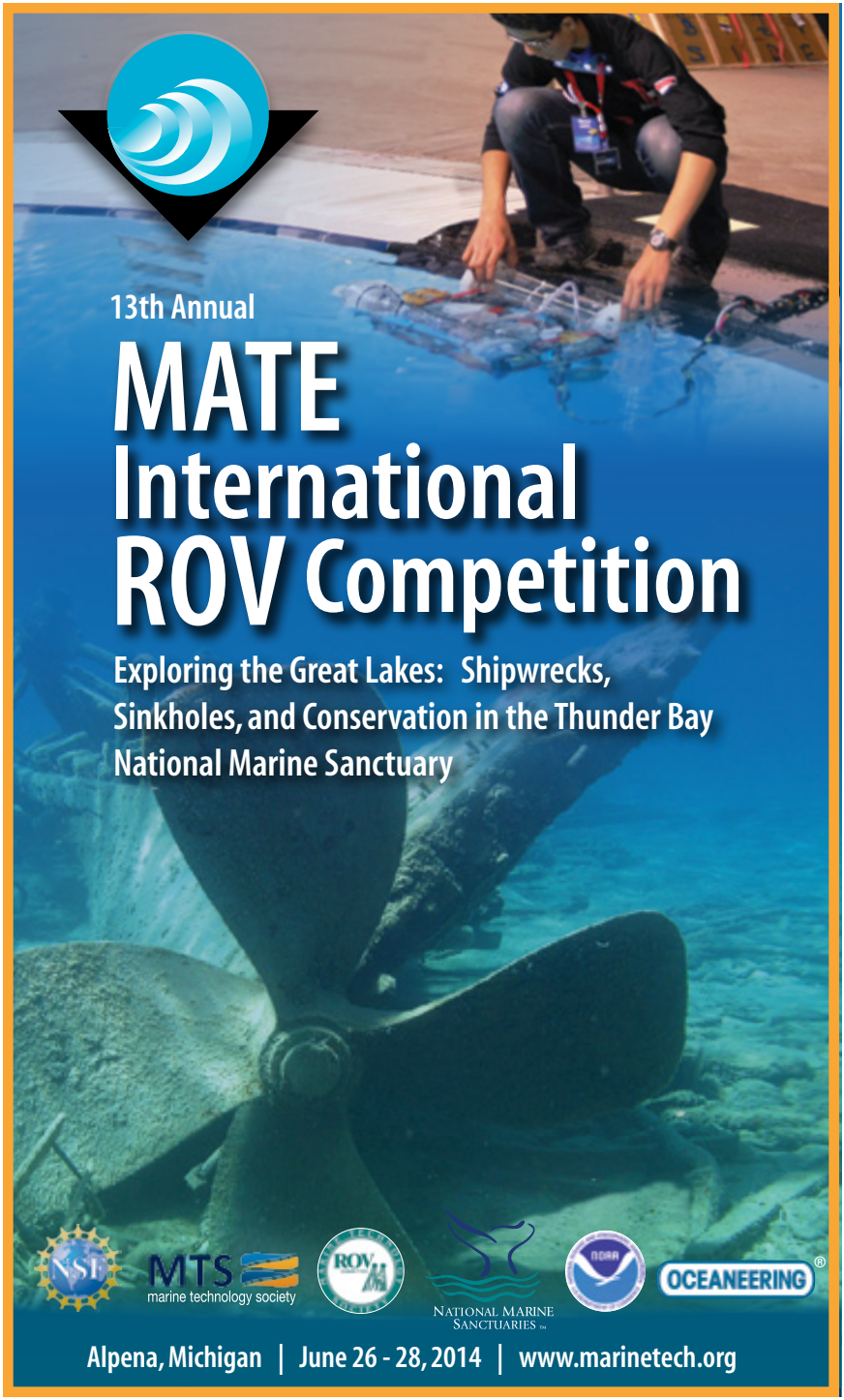

13th Annual
MATE
International
ROV Competition
Exploring the Great Lakes: Shipwrecks, Sinkholes, and Conservation in the Thunder Bay National Marine Sanctuary
NSF
MTS
marine technology society
ROV
National Marine Sanctuaries
OCEANEERING
Alpena, Michigan | June 26 - 28, 2014 | www.marinetech.org

The MATE Competition at a Glance

The MATE Center uses underwater robots – also known as remotely operated vehicles or ROVs – to teach science, technology, engineering, and math (STEM) and prepare students for technical careers. Working in partnership with the Marine Technology Society's ROV Committee, MATE created the competition as a way to:

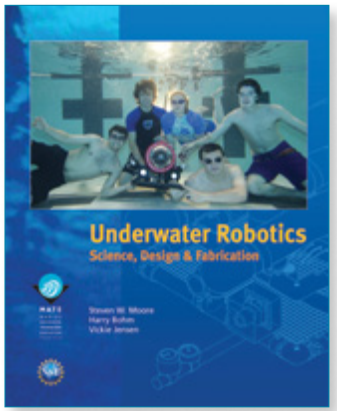
- engage students in STEM and expose them to science and technology careers
- encourage students to develop and apply technical, teamwork, and problem solving skills
- provide funds, materials, and technical expertise to support student learning
- supply industry with skilled individuals who can fill workforce needs

The MATE competition challenges K-12, community college, and university students from all over the world to tackle missions modeled after scenarios from the ocean workplace. The competition's class structure of beginner, beginner-intermediate, intermediate, and advanced complements the educational pipeline by providing students with the opportunity to build upon their skills – and the application of those skills – as they engineer increasingly more complex ROVs for increasingly more complex mission tasks.

The MATE competition requires students to think of themselves as "entrepreneurs" and transform their teams into companies that manufacture, market, and sell "products." In addition to engineering their ROVs, the students are required to prepare technical reports, poster displays, and presentations that are delivered to working professionals who serve as competition judges.

Other MATE underwater robotics educational products include:

- *Underwater Robotics: Science, Design and Fabrication* [ISBN 978-0-9841737]
- Knowledge and Skill Guidelines for prospective ROV professionals
- Curriculum and videos
- Workshops for teachers and students
- Internships for college students
- All levels of DIY Kits and free open source plans
- Microcontrollers for thrusters and sensors
- And much more!



12 Years of Underwater Robotics: The History of the MATE ROV Competition

2002
Rime of the Ancient Buccaneer
NASA Kennedy Space Center and Brevard Community College
Cape Canaveral, Florida
May 20-22, 2002

2003
Lost on the Titanic: Rusticles or Bust
Massachusetts Institute of Technology
Cambridge, Massachusetts
June 19-21, 2003

2004
NOAA's National Marine Sanctuary Program: The Adventure of Mystery Reef
University of California Santa Barbara
Santa Barbara, California
June 25-27, 2004

2005
From the Depths of the Oceans to the Far Reaches of Outer Space
Neutral Buoyancy Laboratory @ NASA Johnson Space Center
Houston, Texas
June 17-19, 2005

2006
Ocean Observing Systems: Tools for Tomorrow's Science & Technology Workforce
Neutral Buoyancy Laboratory @ NASA Johnson Space Center
Houston, Texas
June 23-25, 2006

2007
Celebrating the International Polar Year: Science & Technology Under the Ice
Memorial University and the Institute for Ocean Technology
St. John's, Newfoundland, Canada
June 22-24, 2007

2008
Diving to the Deep: Uncovering the Mysteries of Mid-Ocean Ridges
Scripps Institution of Oceanography–University of California, San Diego
San Diego, California
June 26-28, 2008

2009
ROVs: The Next Generation of Submarine Rescue Vehicles
Massachusetts Maritime Academy
Buzzards Bay, Massachusetts
June 24-26, 2009

2010
ROVs in Treacherous Terrain: Science Erupts on Loihi, Hawaii's Undersea Volcano
University of Hawaii-Hilo
Hawaii's Big Island
June 24-26, 2010

2011
ROVs and the Offshore Oil & Gas Industry: Highlighting the Challenges that ROVs Faced During the Gulf of Mexico Oil Spill
Neutral Buoyancy Laboratory @ NASA Johnson Space Center
Houston, Texas
June 16-18, 2011

2012
Diving into History: The Role of ROVs in Exploring WWII Shipwrecks
YMCA Aquatic & Family Center
Orlando, Florida
June 21-23, 2012

2013
Ocean Observing Systems: Launching a New Era of Ocean Science & Discovery
Weyerhaeuser King County Aquatic Center
Federal Way, Washington
June 20-22, 2013

A Special Thanks to All of Our Sponsors!

Return on Investments

Sponsoring the MATE ROV competition helps to ensure a future, skilled STEM workforce and ensures that all students have access to this unique learning opportunity.

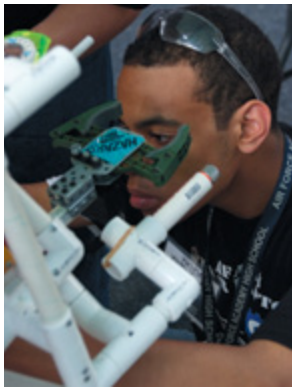
Sponsors provide:

- **Financial and technical support.** Funds cover travel stipends and meals provided during the events, while contributions of materials, equipment, mentoring time, and technical expertise support ROV building, promote skill development, and expose students to careers.
- **Recognition**. Award trophies, plaques, certificates of participation, event t-shirts and patches, gift certificates, and donations of equipment such as cameras, thrusters, and other hardware are ways to highlight both the winning teams and the sponsoring organizations.
- **Networking opportunities.** Funds cover the international competition's kick-off reception and closing awards banquet, events that provide opportunities to build peer and professional networks. Students interact, share ideas, and learn from each other and the working professionals who serve as competition judges.

Sponsors also profit by:

- Increasing visibility through the MATE web site and conference presentations.
- Displaying logos on the competition materials, including banners at the events and advertisements in industry journals.
- Posting job announcements on the MATE Center's online job board at no cost.
- Using the competition's Ocean Career Expo to recruit students for technical programs or job openings.
- Gaining access to a larger pool of talented students through MATE's partner colleges.

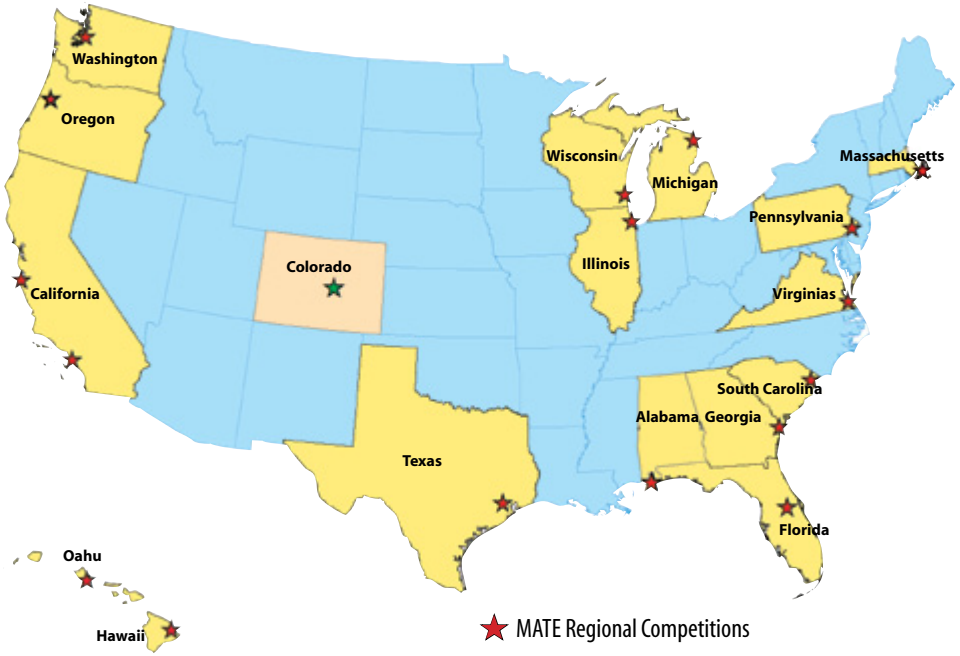
Contributions are tax deductible. Contact the MATE Center for more information.



MATE Regional ROV Competition Network

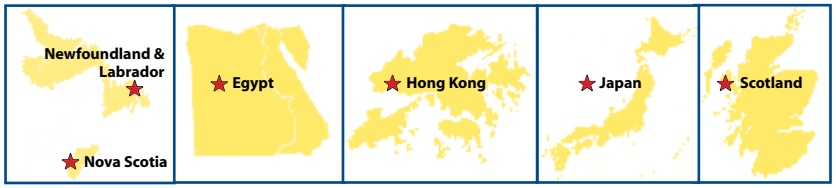
The MATE Competition Network began in 2001 and currently consists of 23 regional events that take place across the U.S. and around the world.

Use this information to find the regional event near you!



MATE International Regional Competitions:

Canada (Newfoundland & Labrador and Nova Scotia), Egypt, Hong Kong, Japan, Scotland



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Here's what people are saying about the MATE competition:

Students

- *This was one of the best learning experiences I've had. Not only did I learn how to manage an ROV, I became more aware of openings in science and engineering.*
- *I have learned so much about robotics and the value of teamwork and friendship. It is an unforgettable experience that I will treasure always.*

Parents

- *[Our son] is learning to be resourceful and creative. He also has learned the importance of teamwork and how the ability to work with others is an essential part of a business success.*
- *I have seen [our son's] excitement in all parts of engineering just soar, plus his creativity and understanding of how engineering affects our lives.*

Teachers

- *I am extremely pleased with the organization of this program, the various elements that are required (poster, presentation, report), and the incorporation of real scientific problems to complement an engineering design competition.*
- *This has definitely been an enriching educational experience for my students. They are excited and looking forward to the ROV competition next year and are already discussing designs.*

Working Professionals

- *A great experience and opportunity to work with students and future employees.*
- *Of all the robotics contests, this one gives the most bang for the buck!*

MARINE ADVANCED TECHNOLOGY EDUCATION CENTER

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Twitter account:
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Facebook Page:
www.facebook.com/materovcompetition

Flickr Channel:
www.flickr.com/photos/matecenter

Photos courtesy of Erin Moore, EM Productions

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