

Michigan Tech Concrete Canoe 2013-2014

This past year was an exceptional season for Michigan Technological University's Concrete Canoe Team. Michigan Tech defended its title at the regional level and proudly earned an eighth place finish at the National Competition in Johnstown, Pennsylvania. Placing in the top ten for yet another year was an exciting accomplishment for the team.

The team focused on the strength, power, and dedication of samurai warriors and therefore chose Ancient Japan as a theme. The samurai followed a code of honor that governed their lives, similar to how engineers follow a code of conduct. The display table, cross section, and stands highlighted the stunning architecture of ancient Japanese buildings.

Katsuo Maru, which translates to "victory," was chosen as the canoe's name. Katsuo Maru's hull design was a hybrid version of the 2012 canoe, Genoa, and the 2008 canoe, Gambler. These two previous designs provided a bulge to optimize displacement and a semi-displacement hull for excellent turning ability. This year's hull design provided the lowest total drag of any past Michigan Tech canoe. Credit for Katsuo Maru's design goes to Michael Larson and Sean Kuchta, who collaborated to make an innovative and advanced V-bottom hull design.

2013 Michigan Tech Concrete Canoe at a Glance	
Name	Katsuo Maru
Weight	170 lbs.
Width	31.9"
Length	20'
Depth	15.4"

2014 National Competition

In June, Michigan Tech traveled to the national competition in Johnstown, Pennsylvania. Before the competition, Michigan Tech was externally ranked as a potential top 10 contender, but the team knew that this was a huge understatement of our team's hard work and product. All of the team's research,

training, and dedication proved to pay off in Johnstown. The team left the judges in awe with a presentation that received an outstanding 4th place finish. In addition, seniors Brad Johnson and Alex Bomstad paddled hard to achieve the 4th place title in the men's sprint race. Our overall competition finish was rounded out with our unique hull design, amazing aesthetics, and a paper with no deductions.

The effort made by our presenters this past year was unprecedented, conducting daily meetings to practice formal presentation skills. The entire team helped quiz each presenter on hundreds of questions to prepare for the Q & A session at competition. With diligent preparation and rigorous studying, the presenters were prepared for every question that was asked.

In addition to the presentation, the team also made great strides in the Technical Paper category. Madie Martin, a senior on the team, compiled an errorless paper that took 10th place at the national competition. Marissa Flowers, another senior on the team, led the sanding, staining, and aesthetics efforts that allowed us to create a beautiful canoe. The team spent several hours of fine detail work on the construction and finish of the tabletop, stands, and cross-section. This dedication and hard work was noticed by the judges at Nationals, and the team was awarded eighth.

National Competition Breakdown	
Presentation	4 th
Final Product	14 th
Technical Paper	10 th
Races Overall	7 th
Women's Endurance	6 th
Men's Endurance	6 th
Women's Sprint	8 th
Men's Sprint	4 th
Coed Sprint	10 th
Final Results	8 th

2014-2015

For this upcoming year, the team plans to build upon the success of Katsuo Maru. Research and development will continue to make even greater strides than last year. The hull design team is innovating another ground breaking canoe design that will be tested with a prototype. Currently, the prototype is under construction. This year the hull design committee is improving turning ability and paddler ergonomics by shortening the canoe, increasing width in the bow and stern, and modifying the "bulge" used in previous years. Credit to this year's innovative hull design goes to Sean Kuchta, a senior mechanical engineering student. New materials are being tested to improve upon the structural performance of the concrete.

2015 Team Leadership

Returning for another leadership year on the concrete canoe team is senior captain Karl Schlicker. Karl is a mechanical engineering student who has been a part of the team since his freshman year. In the past Karl has compiled the engineer's notebook and assisted with hull design, structural analysis, and reinforcing materials, along with being a paddler and presenter at the 2013 and 2014 competitions.

Stepping into leadership positions as junior captains are Phil Doederlein and Kathrine Cipriano. Phil, a civil engineering student, and Kathrine, a mechanical engineering student, have been a part of the team since their freshman year. Last year, Phil designed the engineer's notebook and led the troweling and finishing mix committees. Kathrine's previous roles were as the team secretary, fundraising committee head, and a paddler in the 2013 and 2014 competitions.

2015 Regional Competition

Michigan Technological University will be attending the regional competition in Toledo, Ohio this year in early April. Michigan Tech is

very excited to bring innovative and advanced ideas to the competition.

2015 National Competition

The national competition will be held at Clemson University in Clemson, South Carolina from June 20th-22nd. Michigan Tech is working hard to earn the honor of representing the North Central Conference at the national level and place among the top finishers again.

Finally we would like to thank our sponsors that made this past year possible!

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