

ACI – Purdue Chapter Active at Spring Convention in New York City

A student chapter of the American Concrete Institute (ACI) was founded at Purdue University by a group of graduate and undergraduate students in August 2004*. The goal of this student organization is to spread interest and knowledge of concrete to undergraduate students, and to bridge the gap between academic learning and professional practice in the construction industry. These goals are pursued through the chapter's activities including international student competitions, guest lectures, site visits, and community construction projects.



A team from ACI-Purdue recently competed in the ACI sponsored international competition on utilization of fiber reinforced polymer (FRP) composites. The objective of the competition was to design, construct, and test a concrete structure reinforced with FRP bars or meshes. The final goals were to achieve an optimal load-to-weight ratio and to predict the mechanism of failure including the ultimate load, and the load resulting in a 2.5 mm deflection (a picture of the loading machine with Purdue's FRP composite frame is shown on the right). The competition took place during the ACI Spring Convention (April 17-21) in New York City and awards were presented to the teams with the highest load-to-weight ratio as well as the teams with the most accurate load predictions.

ACI student members Jason Taylor and Eric Sandved developed, with the assistance of advisor Prof. Robert Frosch, lab manager Mark Baker, and graduate students Farshad Rajabipour and Tom McQuillan, a FRP composite frame. The Purdue team successfully predicted the failure behavior of the FRP structure with a discrepancy of a mere 3% (best in the history of this competition), earning them the first place award for the "Most Accurate Prediction". This is the first ACI sponsored competition a team from Purdue has entered in the past several years. New teams are now being formed for future ACI competitions including the Concrete Cube Competition that will take place in New Orleans in November. (for more information visit www.concrete.org/students/stu_competitions.htm)



In addition, ACI student members Farshad Rajabipour and Brad Pease (picture on the left) were active during the convention's technical seminars and presented in "Designing for 100 years of service life" and "Early-age volume changes of concrete" sessions.

* The chapter's current board of officers includes Farshad Rajabipour (President), Brad Pease (Treasurer), Yogini Deshpande (Vice President), Jason Taylor (Secretary), and Prof. Jason Weiss (Faculty Advisor).