Team of electrical engineers place second in nation at 2013 Texas Instruments Analog Design Contest

August 6, 2013

A team of students from Michigan State University took second place honors at the 2012-13 Texas Instruments (TI) Analog Design Contest in Dallas.

Electrical engineers Mike Mock, Xie He, Yuan Mei, Nate Kesto, Chaoli Ang and Justin Bohr won $7,500 for their success with an Electrocardiogram (ECG) Demonstration Board. Mock '13 and Bohr '13 now work for TI in Dallas in Analog Applications.

Mock said the team worked together on the portable ECG for months. Their challenge was to design, simulate, fabricate and test a portable demonstration board that is capable of measuring and displaying a reliable and low noise Electrocardiogram (ECG) signal.

“The basic idea was to create a portable demonstration board that users can interact with at trade shows and tech shows to allow them to display their actual personal ECG signal,” Mock explained. “We designed an analog front end board that interfaced with a Stellaris microcontroller running an oscilloscope application.”

The project was first displayed at the MSU College of Engineering Design Day in Spring 2013. “I never thought it would be possible to walk up to a device and actually display your heart rate right on the spot so you can see if you are healthy,” he added.

The team is currently being showcased by Texas Instruments in a video and on the company’s blog, “Around TI.” See the video: http://e2e.ti.com/blogs_/b/aroundti/archive/2013/08/06/portable-ecg-takes-2nd-place-in-annual-ti-analog-design-contest.aspx

Texas Instruments sponsors the TI Analog Design Contest each year as a way to inspire engineering students and foster tomorrow’s innovators. During the 2012-13 school year, 450 students from 47 accredited engineering colleges and universities participated.

The annual Engibous Summit, named after former TI chairman and CEO Thomas Engibous, included the top 10 finalist teams, which represented seven universities. These top engineering university students presented their projects to a panel of notable TI and guest judges during the three-day event in Dallas. This year’s winners were announced in July.

First place prize of $10,000 went to Rochester Institute of Technology freshman Adam Munich for an improved Tesla coil. The third place prize of $5,000 was awarded to a team from the University of Puerto Rico at Mayaguez for an easy-tune automatic guitar tuning system. The People’s Choice award and $1,000 went to a team from the University of Texas at Austin for a food safety device.

The 2014 TI Analog Design Contest, renamed TI Innovation Challenge, will open on Sept. 2, 2013, to eligible contestants in the U.S., Canada and, for the first time, Mexico. Visit www.ti.com/tiic-na for more details.

About Texas Instruments
Texas Instruments Incorporated (TI) is a global semiconductor design and manufacturing company that develops
analog ICs and embedded processors. By employing the world's brightest minds, TI creates innovations that shape the future of technology. TI is helping more than 100,000 customers transform the future, today. Learn more at [www.ti.com](http://www.ti.com).

**Related Website:** [Texas Instruments Incorporated](https://www.ti.com)

**Team video**

**Source URL:** [https://www.egr.msu.edu/news/2013/08/06/team-electrical-engineers-place-second-nation-2013-texas-instruments-analog-design](https://www.egr.msu.edu/news/2013/08/06/team-electrical-engineers-place-second-nation-2013-texas-instruments-analog-design)