

# MSU engineering team designs innovative medical device

**A Michigan State University engineering design team has developed a medical diagnosis system that would allow people to be inexpensively screened for a variety of medical problems.**

With Tongtong Li, assistant professor of electrical and computer engineering, as the faculty facilitator, Joe Hines, Janelle Shane, Kevin Scheel, Thomas Casey and Kurtis Hessler teamed up with students from China and Italy in the project. The device will address the issue of affordable health care in China, where health care costs are major contributors to poverty. Although China's health care system is in a state of reform, lack of health insurance, especially in rural areas, prevent many Chinese people from seeking medical care.

The goal of the project is to develop a multifunctional medical device to help detect symptoms at no cost to patients, as well as to provide other useful healthcare-related functions. Once completed, the device will perform a number of diagnostic functions, all of which are pressing health-care needs in rural China: blood pressure, blood oxygen saturation, temperature, glucose level and electrocardiogram.

An additional online database system for patient records, and a wireless infusion bottle monitoring system, will be useful to doctors and other hospital workers, making the device beneficial not just to patients. Available for free use in rural hospital lobbies, the device is designed to be simple and safe enough to be operated by trained volunteers or even the patients themselves. For their originality and quality of product, the design team has been selected among 30 finalists for the Mondialogo Engineering Award 2007.

The five-member team was at the Mercedes-Benz Museum in Stuttgart-Untertürkheim, Germany, nominated to proceed to the finals of the worldwide engineering contest by DaimlerChrysler and UNESCO.

The final competition will take place in December in Mumbai, India, where the best will be honored with the Engineering Award.

A total of 3,200 students of engineering sciences from 89 countries had registered for the second edition of the Engineering Award. Key factors for the submitted projects to achieve a nomination for the final were their creativity and quality, their pursuit of the United Nations' Millennium Goals, and their feasibility. The intensity of intercultural dialogue and the exchange of knowledge between the trainee engineers also played a crucial role in the assessment.

Source: Michigan State University

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