



\$30,000 Lemelson-MIT Collegiate Student Prize Program 2011 Winners

2011 Lemelson-MIT Caltech Student Prize Winner



Guoan Zheng is an innovative electrical engineer who has developed a simple, cost-effective, high-resolution on-chip microscope, which is suitable for biological research and enables more affordable clinical and field diagnostics. A prolific inventor, he has also developed a low-cost microscopy imaging system, and a surface-wave-enabled darkfield aperture, which is a nanophotonic structure that is used to boost the detection sensitivity of image sensors.

2011 Lemelson-MIT Illinois Student Prize Winner



Scott Daigle's company IntelliWheels Inc., is rapidly developing into a wheelchair innovation house with multiple products. The main product, IntelliWheels, replaces wheelchair wheels and adds automatic gear shifting to reduce the effort required to push the chair and to make it more ergonomically efficient. The company's mission is to create new wheelchair technologies that make everyday life easier.

2011 Lemelson-MIT Student Prize Winner



Alice A. Chen, biomedical engineer and graduate student in the Harvard-MIT Division of Health Sciences and Technology, has applied innovative applications of microtechnology to study human health and disease. Chen's most recent inventive breakthrough – a humanized mouse with a tissue-engineered human liver – is designed to bridge a gap in the drug development pipeline between laboratory animal studies and clinical trials.

2011 Lemelson-MIT Rensselaer Student Prize Winner



Benjamin Clough developed a novel method for eavesdropping on terahertz information hidden in invisible plasma acoustic bursts. The doctoral student at Rensselaer Polytechnic Institute has demonstrated a promising technique that employs sound waves to boost the distance from which researchers can use powerful terahertz technology to remotely detect hidden explosives, chemicals, and other dangerous materials.