# THREE FROM EECS WIN LEMELSON-MIT STUDENT PRIZES

EECS seniors Chandani Doshi and Tania Yu were part of Team Tactile, which invented a portable, real-time text to braille converter. PhD candidate Apoorva Murarka developed technology designed to more efficiently produce high-fidelity sound.

By Anne Stuart | EECS

Photo: Brian Smale, Microsoft

Left to right: Chandra Doshi, Jessica (Jialin) Shi, Chen (Bonnie) Wang, Charlene Xia, Tania Yu, and Grace Li of MIT's winning undergraduate Team Tactile

Three students in the Department of Electrical Engineering and Computer Science were among the winners of the 2017 Lemelson-MIT Student Prizes, which are designed to honor the nation's most inventive college students.

The prizes, presented in April by the Lemelson-MIT Program, honored the EECS students for their inventions in the "Use it!" category, which focuses on technology that can improve consumer devices.

Chandani Doshi and Tania Yu, both seniors in EECS, were part of MIT's Team Tactile, the $10,000 Lemelson-MIT "Use it!" Undergraduate Team Winner. The six-member team developed Tactile, a portable device that converts text to braille in real time. The technology allows people who are visually impaired to take a picture of printed text, which is then transcribed to braille on a refreshable display. Other Team Tactile members include Grace Li, Jessica (Jialin) Shi, and Charlene Xia, all seniors in the Department of Mechanical Engineering (MechE), and Chen (Bonnie) Wang, a senior in the Department of Materials Science and Engineering.

Apoorva Murarka, a PhD candidate in electrical engineering, was the $15,000 Lemelson-MIT "Use it!" Graduate Winner.

Murarka developed a 125-nanometer-thick membrane — approximately one-thousandth the width of a human hair — to produce high-fidelity sound more efficiently. This technology can be applied to hearing aids, earphones, or other consumer electronic devices, resulting in superior sound quality and longer battery life. Murarka previously received bachelor's and master's degrees in electrical engineering from MIT.

## Celebrating young inventors

The Lemelson-MIT Student Prize is a national collegiate invention prize program, supported by the Lemelson Foundation, which celebrates young inventors who have designed and built prototypes of inventions to solve social problems. For 2017, the Lemelson-MIT Program honored four undergraduate teams and five individual graduate inventors. "These students display the brilliance and hope of their generation," said Dorothy Lemelson, Lemelson Foundation chair. "We are proud to recognize them for their achievements."

Students entered their technology-based inventions in "Use it!" and three other categories: "Cure it!" (for improving health care), "Drive it!" (for improving transportation), and "Eat it!" (for improving food or agriculture). Other 2017

Graduate winner Apoorva Murarka, PhD candidate in electrical engineering

Lemelson-MIT Student Prize winners from MIT included two PhD candidates in mechanical engineering and one in aeronautics and astronautics. The Lemelson-MIT Program also honored graduate students or undergraduate teams from Stanford University, the University of California Berkeley, the University of Iowa, and the University of Maryland.

Lemelson-MIT Student Prize applicants were evaluated by screening committees with expertise in the invention categories as well as by a national judging panel of industry leaders. Screeners and judges assessed entries on the breadth and depth of inventiveness and creativity, potential for societal benefit and economic commercial success, impact on community and environmental systems, and the candidates' experience as role models for youth.

*To learn more about the Lemelson-MIT Program, including instructions on applying for future prizes, visit lemelson.mit.edu*

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—Dorothy Lemelson, Chair,
The Lemelson Foundation

**StartMIT, covered elsewhere in this section, offers another opportunity for young entrepreneurs and inventors to hone their ideas and hear from the pros. Following are some tweets from the 2017 StartMIT experience.**

@ahamino: Awesome startup vibe @medialab StartMIT innovation night.

@MIT_Alumni: @drewhouston '05 stops by @MITEECS's #StartMIT to talk collaboration, managing scale and @Dropbox.

@jpenswick: Proud to represent @cmtelematics at the #StartMIT Innovation Event tonight.

@kochinstitute: Drop and give me career advice: Bob Langer & Susan Hockfield impart wisdom at StartMIT's entrepreneurship boot camp.

@TriciaCotter:#StartMIT @eship @aulet Great teams presenting from the MIT ecosystem.

@juanleungli: Amazing @MIT support for Boston founders. Inspiring speakers... Fired up for future #startmit

@iza_wit: Feel[s] strange in some ways and so wonderful, having 6 women on a panel at a tech conference and it's not a [women's conference] #StartMIT @MITEECS @MIT

@jeanhammond: @ktrae Katie Rae telling how entrepreneurship thinking can drive change as a part of a panel of innovative women #StartMIT