Professor Howard Lee receives Partnership for Innovation award from NSF

The award will help Lee and his lab develop optical fiber technology for advanced imaging.

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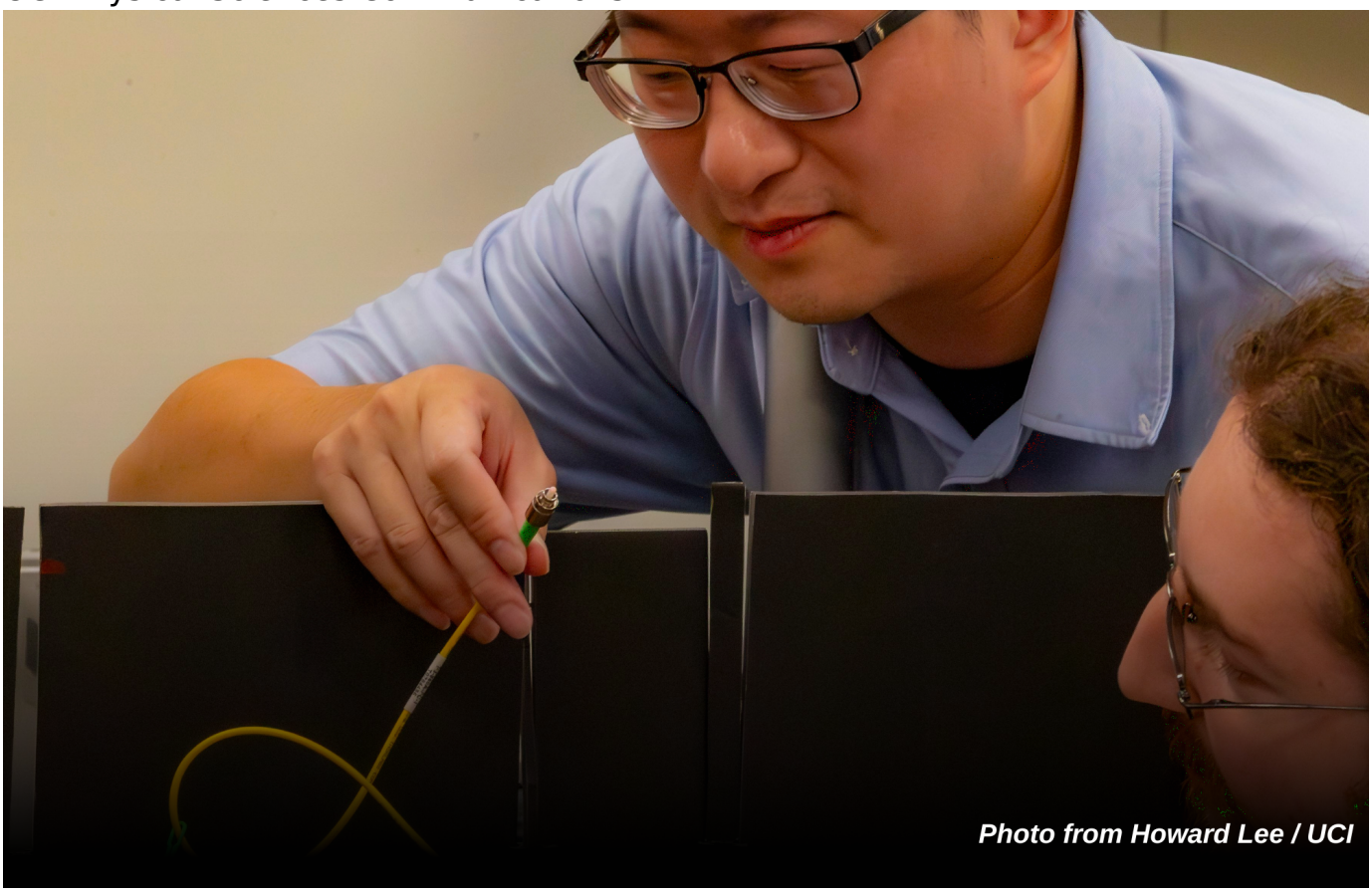

Professor Howard Lee inspects optical wiring in is lab at UC Irvine.

Picture Credit:
Howard Lee

Professor Howard Lee of the UC Irvine Department of Physics & Astronomy recently received a Partnerships for Innovation award from the National Science Foundation. The award will give Lee and his lab $550,000 over two years to develop fiber-optical technology for advanced imaging applications.

“Optical endoscopes are critical for surgical and other medical applications where the optical probe allows for real-time, non-invasive detection of the interior of an organ inside the human body with high resolution and biochemical information,” said Lee, who's a member of UCI’s Beckman Laser Institute and Medical Clinic as well as the Eddleman Quantum Institute. “However, existing optical fiber endoscopes are bulky and have limited imaging capability.”

With the new funding, Lee’s lab will work to develop a new kind of optical fiber based on nanotechnology that will enable compact imaging devices that are a few hundred micrometers in diameter – similar in size to a human hair – which will allow for expanded applications in medical settings.

The NSF award goes to proposals that show a high promise of developing technologies that will make their way to market. “Our team will also undergo an NSF National I-Corps Teams training – a seven-week entrepreneurial training program that facilitates the transformation of an invention into market impact,” said Lee.

Lee added: “I’d like to thank Dean James Bullock and Professor Reginald Penner of the School of Physical Sciences for promoting entrepreneurship and commercialization for scientists, and for organizing different industry-related events. Through industry events like Shark Tank, I got to know different Industry Advisory Committee members and investors, such as Michael Colaco and Shiv Grewal from Auctus Global Capital who are now serving as industry mentors for our project.”

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