

VCSEL Arrays for 3D Sensing and Imaging

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Vertical cavity surface emitting lasers (VCSELs) have long been predicted as low-cost enabling laser sources for many applications including optical communications, sensing and imaging. In this talk, I will discuss inventions and advances made in the last two decades and recently, all of which have led to recent wide deployment of commercial applications including LIDAR, 3D sensing and optical coherent tomography applications.

Biography



Connie Chang-Hasnain is Associate Dean for Strategic Alliances of College of Engineering and Whinnery Distinguished Chair Professor in Electrical Engineering and Computer Sciences, at the University of California, Berkeley. She has been the Founding Co-Director of Tsinghua-Berkeley Shenzhen Institute since 2015. She is also the Chief Academic Officer of Berkeley Education Alliance for Research in Singapore (BEARS) and Program Leader of BEARS' SinBeRISE (Singapore Berkeley Research Initiative on Sustainable Energy) program since April 2015. Prof. Chang-Hasnain received her Ph.D. from the same university in 1987. Prior to joining the Berkeley faculty, Dr. Chang-Hasnain was a member of the technical staff at Bellcore (1987–1992) and Assistant Professor of Electrical Engineering at Stanford University (1992–1995).

Professor Chang-Hasnain has been honored with many awards including the UNESCO Medal For the Development of Nanoscience and Nanotechnologies (2015), IEEE *David Sarnoff Award* (2011), the OSA *Nick Holonyak Jr. Award* (2007), etc. Additionally, she has been awarded with a *National Security Science and Engineering Faculty Fellowship* by the US Department of Defense (2008), a *Humboldt Research Award* (2009), and a *Guggenheim Fellowship* (2009). She was a member of the USAF Scientific Advisory Board, the IEEE LEOS Board of Governors, OSA Board of Directors, and the Board on Assessment of NIST Programs, National Research Council. She was the Editor-in-Chief of *Journal of Lightwave Technology* 2007-2012.