



Dr. Kaustav Banerjee
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Kaustav Banerjee is Professor of Electrical and Computer Engineering and Director of the Nanoelectronics Research Lab at UC Santa Barbara. Initially trained as a physicist, he graduated from UC Berkeley with a PhD in electrical engineering in 1999. His current research focuses on the physics, technology and applications of low-dimensional materials such as graphene and other 2D materials for next-generation green electronics, photonics and bioelectronics.

Prof. Banerjee has made seminal contributions in nearly every aspect of nanoelectronics, and his ideas and innovations have played a decisive role in steering worldwide research. His research into low-power electronics, including 3D ICs and thermal-aware IC design, has found wide scale implementation in the semiconductor industry. His research group has also spearheaded the use of 2D materials for overcoming power dissipation and other fundamental challenges in nanoscale transistors, interconnects and sensors including the demonstration of world's thinnest channel tunneling transistor with subthermionic turn-on characteristics (Nature, 2015, in press). Prof. Banerjee's technical contributions have been recognized with numerous awards and honors including the prestigious Friedrich Wilhelm Bessel Research Award, presented to him in 2011 by Alexander von Humboldt Foundation, Germany, for his outstanding contributions to nanoelectronics, and an Invitation Fellowship from the Japan Society for the Promotion of Science in 2013, for his research on 2D materials and devices. Prof. Banerjee is a Fellow of IEEE and the American Physical Society, and the recipient of the 2015 Kiyo Tomiyasu Award, one of IEEE's highest honors.