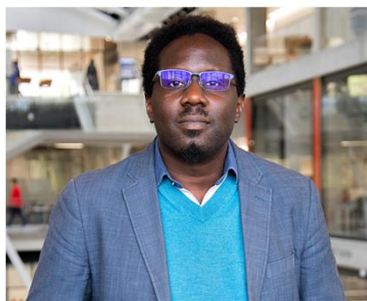




# IBS Center for Multidimensional Carbon Materials



## Prof. Deji Akinwande

Microelectronics Research Center  
University of Texas - Austin

### Adventures with 2D Materials: From Transistors, Atomristors, Tattoos and Beyond

May 1 | Bldg. 101  
Tues 2 PM | Seminar Room on the 1<sup>st</sup> floor

**Abstract:** This talk will present our latest research adventures on 2D nanomaterials towards greater scientific understanding and advanced engineering applications. In particular the talk will highlight our work on flexible electronics, zero-power devices, monolayer memory (atomristors), non-volatile RF switches, wearable tattoo sensors, straintronics, and new topological semiconductor transistor concepts. Finally, recent commercial electronic products employing graphene and related materials will be featured. Much of this research achievements have been published in nature, IEEE and ACS journals, and widely covered by the news media including Time magazine, BBC, Nature news, IEEE spectrum, and several dozen media outlets.

#### References:

- [1] R. Ge, X. Wang, *et al.*, **Nano Letters** 18, 434 (2018)
- [2] A. Molle, J. Golberger, *et al.*, **Nature Materials** 16, 163 (2017)
- [3] S. Ameri, R. Ho, *et al.*, **ACS Nano** 11, 7634 (2017)
- [4] L. Tao, E. Cinquanta, *et al.*, **Nature Nanotechnology** 10, 227 (2015)
- [5] D. Akinwande, *et al.*, **Nature Communications** 5, (2014)

Dr. Deji Akinwande is an Endowed Faculty Fellow and Associate Professor at the University of Texas at Austin. He received the PhD degree from Stanford University in 2009. Prof. Akinwande has been honored with the 2017 Bessel-Humboldt Research Award, the U.S Presidential PECASE award, the inaugural Gordon Moore Inventor Fellow award, the inaugural IEEE Nano Geim and Novoselov Graphene Prize, the IEEE "Early Career Award" in Nanotechnology, the NSF CAREER award, several Young Investigator awards, and was a past recipient of fellowships from the Kilby/TI, Ford Foundation, Alfred P. Sloan Foundation, 3M, and Stanford DARE Initiative. His work on silicene have been featured by Time magazine and was selected among the top 2015 science stories by Discover magazine. His work on flexible graphene and tattoos was featured on BBC. He serves as an Editor for the IEEE Electron Device Letters and Nature NPJ 2D Materials and Applications. He is a Fellow of the American Physical Society (APS).

**You are cordially invited to attend!**

Tuesday Colloquium