Hema C. P. Movva

hemacp@utexas.edu

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Austin, TX, USA

Education

Ph.D., Electrical Engineering, The University of Texas at Austin	Ongoing
M.S.E., Electrical Engineering, The University of Texas at Austin	May '12
B.Tech., Electrical Engineering, Indian Institute of Technology Bombay	May '09

Select Publications

HCP Movva et al., Density-Dependent Quantum Hall States and Zeeman Splitting in Monolayer and Bilayer WSe_2, Phys. Rev. Lett. 118, 247701 (2017)

HCP Movva et al., High-Mobility Holes in Dual-Gated WSe_2 Field-Effect Transistors, ACS Nano 9, 10402 (2015)

HCP Movva et al., Self-Aligned Graphene Field-Effect Transistors with Polyethyleneimine Doped Source/Drain Access Regions, Appl. Phys. Lett. 101, 183113 (2012)

Experience

Research Assistant, The University of Texas at Austin — Ongoing
- Ph.D. advisors: Emanuel Tutuc, Sanjay Banerjee
- Electrical transport in transition metal dichalcogenide (TMD) heterostructures
- Fabrication of FETs using atomically thin TMDs such as WSe_2, MoS_2, etc.
- Magnetotransport in high-mobility FETs, heterostructures for tunnel-FETs

Research Assistant, The University of Texas at Austin — Aug '10 - May '12
- M.S.E. advisor: Sanjay Banerjee
- Surface charge transfer doping of graphene for use in self-aligned FETs
- Fabricated graphene FETs with chemically doped source/drain access regions

Engineer R&D, Solar Semiconductor Inc., Hyderabad, India — Jun '09 - Aug '10
- Modeled wattage losses in c-Si photovoltaic modules
- Developed distributed circuit models for c-Si solar cells and modules

Circuit Design Intern, Texas Instruments, Bangalore, India — May '08 - Aug '08
- Designed a high-speed dynamic latch based voltage comparator
- Designed a 250 MSPS 6-bit SAR analog-to-digital convertor

Honors

Best Paper Award, 74^{th} IEEE Device Research Conference	2016
Best Poster Award, 73^{rd} IEEE Device Research Conference	2015
Silver Medal at the 37^{th} International Physics Olympiad	2005
National Talent Search scholarship, India	2003

Service

Reviewer, IEEE Trans. Electron Dev., ACS Appl. Mater. Interfaces
President, Japan Karate Association of Austin — May '13 - May '15

Skills

Fabrication:	Electron-beam lithography, standard cleanroom processing
Electrical:	Semiconductor parameter analyzers, probe stations, He cryostats
Metrology:	Atomic force microscopy, scanning electron microscopy
Software:	MATLAB, LabVIEW, C