

Hema C. P. Movva

hemacp@utexas.edu

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Education	Ph.D., Electrical Engineering, The University of Texas at Austin	Expected 2018
	M.S.E., Electrical Engineering, The University of Texas at Austin	2012
	B.Tech., Electrical Engineering, Indian Institute of Technology Bombay	2009
Publications	HCP Movva et al., Tunable $\Gamma - K$ Valley Populations in Hole-Doped Trilayer WSe ₂ , <i>Phys. Rev. Lett.</i> 120 , 107703 (2018)	
	HCP Movva et al., Density-Dependent Quantum Hall States and Zeeman Splitting in Monolayer and Bilayer WSe ₂ , <i>Phys. Rev. Lett.</i> 118 , 247701 (2017)	
	HCP Movva et al., High-Mobility Holes in Dual-Gated WSe ₂ Field-Effect Transistors, <i>ACS Nano</i> 9 , 10402 (2015)	
Experience	Research Assistant , The University of Texas at Austin	Ongoing
	<ul style="list-style-type: none">• Ph.D. advisors: Emanuel Tutuc, Sanjay Banerjee• Electrical contact engineering for transition metal dichalcogenide (TMD) FETs• Fabrication of dual-gated FETs using monolayer/few-layer TMDs such as WSe₂• Quantum Hall effect measurements in high-quality TMD FETs• Tunneling phenomena in TMD heterostructure FETs	
	Research Assistant , The University of Texas at Austin	Aug '10 - May '12
	<ul style="list-style-type: none">• 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
	<ul style="list-style-type: none">• Modeled wattage losses in c-Si photovoltaic modules• Developed distributed circuit models for c-Si solar cells and modules• Managed sun simulators for solar cell and module characterization	
	Circuit Design Intern , Texas Instruments, Bangalore, India	May '08 - Aug '08
	<ul style="list-style-type: none">• 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
	Best Poster Award, 9 th International Nanotechnology Conference (INC9)	2013
	Silver Medal, 37 th International Physics Olympiad	2005
	National Talent Search scholarship, India	2003
Service	Reviewer , IEEE Trans. Electron Dev., ACS Appl. Mater. Interfaces, Nanoscale	
	Mentor , Research Experience for High School Young Scholars	Sum. '17
	President , Japan Karate Association of Austin	May '13 - May '15
Skills	<u>Fabrication:</u> Electron-beam lithography, standard cleanroom processing	
	<u>Electrical:</u> Semiconductor parameter analyzers, probe stations, He cryostats	
	<u>Metrology:</u> Atomic force microscopy, scanning electron microscopy	
	<u>Software:</u> MATLAB, LabVIEW, C	