

## Kraig J. Andrews

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RESEARCH INTERESTS	Two-dimensional materials, nanotechnology, transition metal dichalcogenides, field-effect transistors, semiconductor physics, materials physics	
EDUCATION	<b>Wayne State University</b> , Detroit, MI Ph.D., Physics, <i>Expected</i> : Fall 2018, GPA: 3.50/4.00 <ul style="list-style-type: none"><li>Thesis Topic: “Intrinsic Channel Properties, Scattering Mechanisms, and Quantum Transport Properties in Transition Metal Dichalcogenides”</li><li>Advisor: Zhixian Zhou, Ph.D</li></ul> <b>Wayne State University</b> , Detroit, MI M.S., Physics, Feb 2016 <b>Michigan State University</b> , East Lansing, MI B.S., Physics and Astrophysics (Double Major), May 2014	
RESEARCH EXPERIENCE	<b>Graduate Research Assistant</b> Nano Fabrication and Electron Transport Laboratory, Department of Physics and Astronomy, Wayne State University Supervisor: Zhixian Zhou, Ph.D.	May 2015–Present
	<b>Undergraduate Researcher</b> International Course on Computational Physics (ICCP) <b>Michigan State University</b> and <b>Technische Universiteit Delft</b> East Lansing, MI USA and Delft, Netherlands Supervisors: Phil Duxbury, Ph.D. and Jos Thijssen, Ph.D.	Jan 2014–May 2014
	<b>Undergraduate Research Assistant</b> Neutron Star Evolution and Developmental Limits, Department of Astronomy, Michigan State University Supervisor: Edward Brown, Ph.D	Feb 2013–Dec 2013
	<b>Undergraduate Research Assistant</b> High Resolution Array Group (HIRA): SAMURAI-TPC Project National Superconducting Cyclotron Laboratory, Michigan State University Supervisors: William Lynch, Ph.D. and Betty Tsang, Ph.D.	May 2012–Jan 2013
INDUSTRY EXPERIENCE	<b>Summer Intern</b> Jenoptik Laser Technologies, Brighton, MI USA Contributed in development of user interface for laser welding machine that allows user manipulation of robotic end-arm tooling. Using microcontroller program via interfaced electronic devices and several developed algorithms machine was able to analyze physical data and feedback.	Jun 2013–Aug2013

PUBLICATIONS	1. Chamlagain, B., Perera, M., Chuang, H.J., Bowman, A., Rijal, U., <b>Andrews, K.</b> , Klesko, J., Winter, C., Zhou, Z. “Substrate dependence of Hall and Field-effect mobilities in few-layer MoS <sub>2</sub> field-effect transistors.” <i>Manuscript in preperation</i> , 2016.	
TEACHING EXPERIENCE	Teaching Assistant, General Physics I, Wayne State University      Fall 2015 Teaching Assistant, General Physics Lab I, Wayne State University      Summer 2015 Laboratory Instructor, Conceptual Physics, Wayne State University      Winter 2015 Laboratory Instructor, Descriptive Astronomy, Wayne State University      Winter 2015 Laboratory Instructor, Descriptive Astronomy, Wayne State University      Fall 2014 Teaching Assistant, Introductory Physics II, Michigan State University      Winter 2014 Laboratory Instructor, Planets and Telescopes, Michigan State University      Winter 2013 Teaching Assistant, Introductory Physics I, Michigan State University      Fall 2013 Teaching Assistant, Introductory Physics II, Michigan State University      Winter 2012	
RELEVANT SKILLS	Nanofabrication: <ul style="list-style-type: none"> <li>• Atomic Force Microscopy (AFM), Electron Beam Lithography, Photolithography, Computer-Aided Design (CAD), Scanning Electron Microscopy (SEM), clean room, chemical etching, metal deposition, and others</li> </ul> Programming: <ul style="list-style-type: none"> <li>• C, C++, Fortran, GNU make, HTML, CSS, Python, UNIX shell scripting, and Visual Basic</li> </ul> Data Analysis: <ul style="list-style-type: none"> <li>• GNU octave, Kaleidagraph, LabView, MATLAB, Mathematica, Microsoft Excel</li> </ul> Data Analysis: <ul style="list-style-type: none"> <li>• Apple OS X, Linux OS, Microsoft Windows Family</li> </ul> Editing and Typesetting: <ul style="list-style-type: none"> <li>• T<sub>E</sub>X, Microsoft Office, OpenOffice, LibreOffice, GIMP, InkScape</li> </ul> Version Control: <ul style="list-style-type: none"> <li>• Git, Mercurial, SVN</li> </ul>	
RELEVANT GRADUATE COURSEWORK	<ul style="list-style-type: none"> <li>• Advanced Quantum Mechanics I &amp; II</li> <li>• Survey of Condensed Matter Physics</li> <li>• Statistical Mechanics</li> <li>• Electrodynamics</li> <li>• Thermal Physics</li> </ul>	