

Kraig J. Andrews

CONTACT INFORMATION	666 West Hancock Street Detroit, MI 48201	+1 248-798-9388 kraig.andrews@wayne.edu kraigjandrews.com
RESEARCH INTERESTS	Two-dimensional materials, nanotechnology, transition metal dichalcogenides, field-effect transistors, semiconductor physics, materials physics	
EDUCATION	Wayne State University , Detroit, MI	<i>expected</i> 2018
	Ph.D., Physics	
	<ul style="list-style-type: none">• Thesis Topic: “Intrinsic Channel Properties, Scattering Mechanisms, and Quantum Transport Properties in Transition Metal Dichalcogenides”• Advisor: Zhixian Zhou, Ph.D	
	Wayne State University , Detroit, MI	2016
	M.S., Physics, Feb 2016	
	Michigan State University , East Lansing, MI	2014
	B.S., Physics and Astrophysics (Double Major)	
RESEARCH EXPERIENCE	Graduate Research Assistant	2015–Present
	Nano Fabrication and Electron Transport Laboratory, Department of Physics and Astronomy, Wayne State University Supervisor: Zhixian Zhou, Ph.D.	
	Visiting Scientist	2017
	π - Electronics Research Group, International Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS) (国立研究開発法人物質・材料研究機構), Tsukuba, Ibaraki Prefecture, Japan Supervisor: Kazuhito Tsukagoshi, Ph.D.	
	Undergraduate Researcher	Jan 2014–May 2014
	International Course on Computational Physics (ICCP) Michigan State University and Technische Universiteit Delft East Lansing, MI USA and Delft, Netherlands Supervisors: Phil Duxbury, Ph.D. and Jos Thijssen, Ph.D.	
	Undergraduate Research Assistant	Feb 2013–Dec 2013
	Neutron Star Evolution and Developmental Limits, Department of Astronomy, Michigan State University Supervisor: Edward Brown, Ph.D	
	Undergraduate Research Assistant	May 2012–Jan 2013
	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.	

INDUSTRY EXPERIENCE	Summer Intern Jenoptik Laser Technologies , Brighton, MI USA Jun 2013–Aug 2013 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.																								
PUBLICATIONS	1. Chamlagain, B., Perera, M., Chuang, H.J., Bowman, A., Rijal, U., Andrews, K. , Klesko, J., Winter, C., Zhou, Z. “Substrate dependence of Hall and Field-effect mobilities in few-layer MoS ₂ field-effect transistors.” <i>Manuscript in preperation</i> , 2016.																								
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TEACHING EXPERIENCE	<table> <tr> <td>Teahcing Assistant, General Physics II, Wayne State University</td> <td>Winter 2017</td> </tr> <tr> <td>Teaching Assistant, General Physics II, Wayne State University</td> <td>Autumn 2016</td> </tr> <tr> <td>Teaching Assistant, General Physics I, Wayne State University</td> <td>Summer 2016</td> </tr> <tr> <td>Teaching Assistant, General Physics I, Wayne State University</td> <td>Autumn 2015</td> </tr> <tr> <td>Teaching Assistant, General Physics Lab I, Wayne State University</td> <td>Summer 2015</td> </tr> <tr> <td>Laboratory Instructor, Conceptual Physics, Wayne State University</td> <td>Winter 2015</td> </tr> <tr> <td>Laboratory Instructor, Descriptive Astronomy, Wayne State University</td> <td>Winter 2015</td> </tr> <tr> <td>Laboratory Instructor, Descriptive Astronomy, Wayne State University</td> <td>Autumn 2014</td> </tr> <tr> <td>Teaching Assistant, Introductory Physics II, Michigan State University</td> <td>Winter 2014</td> </tr> <tr> <td>Laboratory Instructor, Planets and Telescopes, Michigan State University</td> <td>Winter 2013</td> </tr> <tr> <td>Teaching Assistant, Introductory Physics I, Michigan State University</td> <td>Autumn 2013</td> </tr> <tr> <td>Teaching Assistant, Introductory Physics II, Michigan State University</td> <td>Winter 2012</td> </tr> </table>	Teahcing Assistant, General Physics II, Wayne State University	Winter 2017	Teaching Assistant, General Physics II, Wayne State University	Autumn 2016	Teaching Assistant, General Physics I, Wayne State University	Summer 2016	Teaching Assistant, General Physics I, Wayne State University	Autumn 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	Autumn 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	Autumn 2013	Teaching Assistant, Introductory Physics II, Michigan State University	Winter 2012
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RELEVANT SKILLS	Nanofabrication: Atomic Force Microscopy (AFM), Electron Beam Lithography, Photolithography, Computer-Aided Design (CAD) , Scanning Electron Microscopy (SEM), clean room, chemical etching, metal deposition, and others Programming: C, C++, Fortran, GNU make , HTML, CSS, Python, UNIX shell scripting, and Visual Basic Data Analysis: GNU octave , Kaleidagraph, LabView, MATLAB , Mathematica , Microsoft Excel Data Analysis: Apple OS X, Linux OS, Microsoft Windows Family Editing and Typesetting: T_EX , Microsoft Office, OpenOffice, LibreOffice, GIMP , InkScape Version Control: Git , Mercurial, SVN																								

RELEVANT
GRADUATE
COURSEWORK

Methods of Engineering Analysis II
Advanced Quantum Mechanics I & II
Survey of Condensed Matter Physics
Statistical Mechanics
Electrodynamics
Thermal Physics