Kraig J. Andrews

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Education

- **Wayne State University** **Detroit, MI**
  Department of Physics & Astronomy, Ph.D. Physics *2014 – Present*
  - *Advisor:* Dr. Zhixian Zhou
  - *Thesis Title:* "Quantum Transport Properties and Scattering Mechanisms in Transition Metal Dichalcogenides"
- **Wayne State University** **Detroit, MI**
  Department of Physics & Astronomy, M.S. Physics *2017*
- **Michigan State University** **East Lansing, MI**
  Department of Physics & Astronomy, B.S. Physics *2014*
- **Michigan State University** **East Lansing, MI**
  Department of Physics & Astronomy, B.S. Astrophysics *2014*

Experience

- **Nano Fabrication & Electron Transport Laboratory** **Wayne State University, Detroit, MI**
  Graduate Research Assistant *2015 – Present*
  - Fabricate two-dimensional field effect transistors using transition metal dichalcogenides, such as molybdenum disulphide, tungsten diselenide, and molybdenum diselenide to investigate intrinsic transport properties.
  - Develop novel techniques for making low-resistance Ohmic contacts to a wide variety of two-dimensional semiconductors.
- **National Institute of Materials Science** **Tsukuba, Ibaraki, Japan**
  Visiting Graduate Researcher, Summer Intern *2017*
  - Investigate methods for surface modification of two-dimensional semiconductors for the use of creating a highly doped contact strategy.
- **Interational Course on Computational Physics** **Delft, Netherlands & East Lansing, MI**
  Undergraduate Researcher *2014*
  - A Joint collaboration with Technische Universiteit Delft and Michigan State University involving the development of computational models of various physical systems to model interactions of materials and optimize employed techniques.

Core Technical Skills

Nanofabrication: Atomic force microscopy (AFM), Electron beam lithography, Photolithography, Scanning electron microscopy (SEM), General clean room abilities, Physical vapor deposition (PVD), Electron beam deposition, Plasma etching, Reactive ion etching (RIE)

Languages & Software: C++, Fortran, Java, JavaScript, LaTeX, Python, shell script, Microsoft Office, Matlab, Mathematica

Operating Systems: OS X, Linux OS, Microsoft Windows