

## JUSTIN A. HAMIL

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### EDUCATION

- 2019-2023 Senior, Nuclear Engineering & Russian Language Majors/Math Minor  
University of New Mexico, Albuquerque, NM  
GPA: 3.86
- 2023-present Pre-Ph.D. Candidate, Nuclear Engineering & Radiological Sciences  
University of Michigan, Ann Arbor, MI  
GPA: N/A

### RESEARCH AND WORK EXPERIENCE

- 2022-2023 Nuclear Engineering Laboratory, University of New Mexico, Albuquerque, NM  
Laboratory Assistant
- Characterization of irradiated nuclear fusion reactor materials with XRD, TEM, TDS, TGA, SEM, data processing
- 2022 Center for High Technology Materials, University of New Mexico, Albuquerque, NM  
Laboratory Assistant
- Arsenide and antimonide crystal growth with MBE, III-V surface and material characterization, XRD, PL, Nomarski microscopy
- 2022 Nuclear Engineering Laboratory, University of New Mexico, Albuquerque, NM  
Laboratory Assistant
- Disassembled AGN-201M reactor, reassembled AGN-201M reactor, participated in annual AGN-201M reactor maintenance, took measurements of AGN-201M reactor components, UNM School of Engineering Summer Academy assistant, AGN-201M reactor operator
- 2021-2022 Nuclear Engineering Laboratory, University of New Mexico, Albuquerque, NM  
Laboratory Assistant
- Collected heat exchanger data with LabVIEW, calibrated pressure transducers, performed plumbing and electrical maintenance on a heat exchanger for a Fluoride Salt-Cooled High Temperature Reactor
- 2021 Air Force Research Laboratory, Kirtland Air Force Base, Albuquerque, NM  
Intern
- Automated data collection process for Fourier Transform Infrared Spectroscopy for United States Space Force satellite components, designed and modified hardware for improvement of data quality

### COURSEWORK

- Nuclear Engineering - Introduction to Nuclear Engineering, Principles of Radiation and Radiation Detection, Nuclear Materials Engineering, Nuclear Thermodynamics, Laboratory Electronics for Nuclear Engineers, Heat Transport Phenomena, Radiation Detection and Measurement, Nuclear Engineering Analysis and Calculations, Unit Operations, Neutronics Techniques, Nuclear Engineering Science, Nuclear Reactor Theory, Nuclear Thermal Hydraulics, Monte Carlo Techniques for Nuclear Engineering, Nuclear Criticality Safety, Nuclear Engineering Computational Methods, Nuclear Reactor Laboratory, Nuclear Fuel Cycles and Materials, Introduction to Space Nuclear Power, Nuclear Engineering Design, Engineering Ethics
  - Russian- Russian I, Russian II, Russian III, Russian IV, Russian V, Russian VI, Russian VII
- **LANGUAGE PROFICIENCY**
    - Russian – Intermediate
    - French – Intermediate
    - Spanish – Intermediate

- German – Elementary
- Italian – Elementary
- Dutch – Elementary
- Swedish – Elementary
- **GENERAL SKILLS**
  - R – Elementary
  - Python – Intermediate
  - ImageJ – Elementary
  - Excel – Advanced
  - LabVIEW – Intermediate
  - MCNP – Beginner
  - Fusion360 – Elementary
  - SRIM – Intermediate
  - MATLAB – Intermediate
  - SCALE – Elementary
  - Word – Advanced

#### **HONORS AND AWARDS**

- UNLP Fellow 2023-2026
- University of New Mexico Engineering Dean’s Lists – Spring, 2020; Fall, 2020; Spring 2021, Fall 2021, Spring 2022, Fall 2022
- University of New Mexico Honors Program
- University of New Mexico Engineering Department & Peer Mentoring Scholarships
- University of New Mexico Amigo Scholar
- Kappa Sigma Scholarship Leadership Award – 2020, 2021, 2022

#### **CAMPUS AND COMMUNITY INVOLVEMENT**

- MTV Summer Experience at the University of Michigan – 2022
  - Met with faculty, guest speakers, and students at the University of Michigan to learn about radiation detection and measurement research activities
- University of New Mexico Nuclear Engineering Peer Mentor – 2020-2022
  - Mentor and guide to seven undergraduate nuclear engineering students
- Secretary - University of New Mexico Student Chapter of the American Nuclear Society, third place 2021 & 2022 Samuel Glasstone Award, 2020-2022
  - Took meeting minutes
- Secretary, Treasurer, Ritual Chairman of the Delta Zeta Chapter, Grand Master of Ceremonies in Model Chapter at Leadership Conference - Kappa Sigma Fraternity
  - Former Grand Scribe and Grand Treasurer of the Kappa Sigma Fraternity Delta-Zeta chapter at the University of New Mexico, taking meeting minutes, organizing community service events with over 1500 hours from members donated, organizing philanthropy events with over \$1000 raised for charity, social media outreach, and communication with alumni, organizing and managing chapter finances
- American Nuclear Society Girl Scouts Event – Fall, 2019
  - Educated girl scouts on nuclear science to aid in acquisition of nuclear science badge
- Albuquerque Balloon Fiesta – Fall, 2019 & 2022
  - Assisted the Albuquerque Police Department with radiation detection equipment to monitor balloon fiesta fairground for radiation
- Member of planning team for UNM Nuclear Engineering Summer Camp – Spring 2020
  - Provided input based on personal experiences at nuclear engineering camps for high schoolers
- Panel Member of Ukrainian War Discussion with UNM School of Law – Spring 2022
  - Discussed potential nuclear ramifications of the Russian occupation of the Chernobyl nuclear power plant to several hundred law students

#### **PUBLICATIONS**

- R. Schoell, A. Reyes, G. Suman, J. Hamil, S. Rosenberg, L. Treadwell, K. Hattar, E. Lang. “Hot Isostatic Pressing Control of Tungsten-Based Composites.” *Inorganics*.

References available upon request