

Opportunity Title: Spin-ARPES Evaluation of Topological Materials and Heterostructures for Spintronic and novel Electro-Optical Device Applications

Opportunity Reference Code: ARL-C-PEQS-400019

Organization DEVCOM Army Research Laboratory

Reference Code ARL-C-PEQS-400019

Description The DEVCOM Army Research Laboratory (ARL) seeks a highly motivated, well informed, cross-disciplinary and skilled postdoctoral fellow with experience in the characterization and understanding of high quality topological, magnetic materials and heterostructures using ARPES techniques spin-ARPES. The selected fellow will investigate band structure phenomena that underlie theoretical descriptions of notional future topological electronic devices (TEDs) for energy-efficient electronics, sensors, and/or electro-optical (EO) and infrared (IR) technologies. The fellow will leverage state-of-the-art spin-ARPES facilities located within ARL/ARD, and will leverage extended capabilities off-site at leading spin-ARPES beamline facilities located at synchrotron sites.

Advisor Name: Patrick Taylor

Advisor Email: patrick.j.taylor36.civ@army.mil

A complete application includes:

- **Curriculum Vitae or Resume**
- **Three References Forms**
 - An email with a link to the reference form will be available in Zintellect to the applicant upon completion of the on-line application. Please send this email to persons you have selected to complete a reference.
 - References should be from persons familiar with your educational and professional qualifications (include your thesis or dissertation advisor, if applicable)
- **Transcripts**
 - Transcript verifying receipt of degree must be submitted with the application. Student/unofficial copy is acceptable

If selected by an advisor the participant will also be required to write a **research proposal** to submit to the ARL-RAP review panel for :

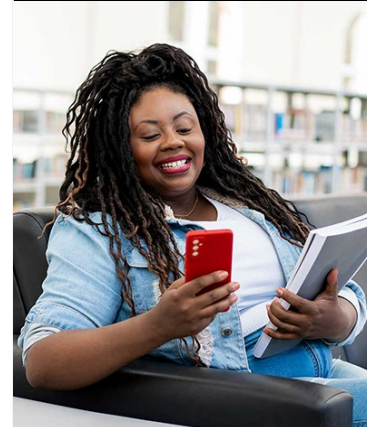
- Research topic should relate to a specific opportunity at ARL (see [Research Areas](#))
- The objective of the research topic should be clear and have a defined outcome
- Explain the direction you plan to pursue
- Include expected period for completing the study
- Include a brief background such as preparation and motivation for the research
- References of published efforts may be used to improve the proposal

A link to upload the proposal will be provided to the applicant once the advisor has made their selection.

Questions about this opportunity? Please email ARLFellowship@ora.u.org.



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- Eligibility**
- Requirements**
- **Degree:** Doctoral Degree.
 - **Academic Level(s):** Any academic level.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) 👁)
 - **Communications and Graphics Design** ([2](#) 👁)
 - **Computer, Information, and Data Sciences** ([17](#) 👁)
 - **Earth and Geosciences** ([21](#) 👁)
 - **Engineering** ([27](#) 👁)
 - **Environmental and Marine Sciences** ([14](#) 👁)
 - **Life Health and Medical Sciences** ([48](#) 👁)
 - **Mathematics and Statistics** ([11](#) 👁)
 - **Physics** ([16](#) 👁)
 - **Science & Engineering-related** ([2](#) 👁)
 - **Social and Behavioral Sciences** ([28](#) 👁)