

2018 Faculty and Student Team Research Award at ChemMatCARS (FaSTRAC)

CALL FOR PROPOSALS

The ChemMatCARS sector (<https://chemmatcars.uchicago.edu/>) at the Advanced Photon Source (APS) at Argonne National Laboratory (ANL) is sponsoring summer research experiences for faculty and students of Minority Serving Institutions (MSIs) such as Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges and Universities (TCUs), Alaska Native-Serving Institutions and Native Hawaiian-Serving Institutions (ANNHSIs) and Asian American and Native American Pacific Islander Serving Institutions (AANAPISIs). The aim of our program is to foster research collaborations between ChemMatCARS and MSI faculty.

Interested faculty should submit a proposal by **January 20, 2018, 5:00 p.m. CST**. Selected faculty and undergraduate or graduate student teams will perform research, and work with ChemMatCARS research staff for a period of up to 6 weeks.

Application deadline: January 20, 2018, 5:00 p.m. CST

Eligibility and benefits

The program is open to full-time faculty at post-secondary institutions designated by the federal government as MSIs. The program will sponsor round-trip transportation to ANL, on-site lodging, a one-month stipend of \$3,000.00, and an allowance for materials and supplies of max. \$2,000.00.

Duration and location

The successful applicant will be hosted by ChemMatCARS for a continuous time period in the months of **June to July**, with the exact time duration and dates negotiated with the applicant following proposal acceptance. An extension to eight weeks is possible, with the additional two weeks financially supported by the MSI.

Research area

2018 research project proposals should focus on high precision crystallography to study microcrystals, charge (i.e., electron) densities, bonding, resonant diffraction, and/or high-pressure single crystal diffraction for structure elucidation in the area of chemistry and materials science. Applicants may be novices in crystallography with synthetic projects that benefit from crystallographic characterization. Alternatively, they may have advanced knowledge of diffraction methods and crystallography requiring complex crystallography experiments to advance their research.

Application documents

- Curriculum vitae
- Letter of support by department chair or dean
- Letter of cost-sharing commitment (for a 2-week extension, if applicable) by department chair or dean
- Proposal for research project (*1-2 pages*)

Applicants should describe the research project they would like to pursue in collaboration with ChemMatCARS beamline staff. Anticipated outcomes should be detailed and references to the literature given.
- Statement about career advancement (*max. 1 page*)

Applicants should explain in which way participation in the program will advance their professional career, specifically, which new experiences and skill sets will benefit their research and teaching at the MSI. Additionally, they should detail how the summer research experience may lead to an ongoing collaboration and research partnership with ChemMatCARS.
- Budget and budget justification for materials and supplies (*max. 1 page*)
- Information on participating student

Information about the student participating in the summer research experience should be given, including a paragraph on how the student will be involved in the proposed research, as well as the student's CV and GPA.

Selection and notification

A committee of ChemMatCARS research staff and other expert researchers will review applications. The applicants will be notified of their proposal status **by April 1, 2018**. Subsequently, arrangements for institutional agreements (<https://www1.aps.anl.gov/Users-Information/Legal-Financial/Argonne-User-Facility-Agreements>) between ANL and the MSI will be made if not already in place. The selected summer research fellow will need to complete APS user training (http://www.aps.anl.gov/Safety_and_Training/Training/) prior to arrival.

FaSTRAC fellows will be selected based on research match with the capabilities of the beamline, qualifications of the candidate and the potential for establishing continuing research collaborations.

Inquiries and application submission

For general program information and application submission please contact

Dr. Binhua Lin, Executive Director of ChemMatCARS, lin@cars.uchicago.edu, (630) 252-0463.

Lead contact for high precision crystallography experiments is

Dr. Yu-Sheng Chen, yschen@cars.uchicago.edu, (630) 252-0471.

ChemMatCARS is principally supported by the Divisions of Chemistry (CHE) and Materials Research (DMR), National Science Foundation, under grant number NSF/CHE-1346572.