



The NSF-CREST Center for Cellular and Biomolecular Machines (CCBM) was established with a \$5 million Centers of Research Excellence in Science and Technology (CREST) grant in 2016 from the National Science Foundation (NSF). The CCBM brings together more than 30 faculty members from multiple units across campus, including bioengineering, physics, chemistry and chemical biology, biomaterials science and engineering, cell and molecular biology, and applied mathematics. The center received an additional \$5 million in 2021 for another 5 years of funding. Researchers are studying how biological matter like proteins or cells come together to perform specific tasks, in hopes of eventually being able to engineer and develop innovations ranging from designer cells and tissue to novel diagnostic and therapeutic devices. The CCBM also hosts an integrated, interdisciplinary training program for graduate students that emphasizes physical and biological components, research and training experiences for undergraduate and high school students to enhance the recruitment of underrepresented groups into STEM research, and outreach experiences for the local community and beyond.

Opportunity for UC Merced Graduate Students in STEM: CCBM Outreach Fellowship

Overview:

The center's outreach programming focuses on integrating exciting and challenging topics of relevance and interest to diverse students in an inclusive atmosphere. We will continue to focus on general STEM topics as well as Center research areas and on broadening participation of UR groups in STEM, particularly Hispanic, low-income, women, and first-generation students. We will continue with both in-person, hands-on and virtual sessions, with a goal of 80% of participants being women, those from UR groups, low-income, first generation, or those with disabilities. Annual programs will include: 1) CCBM Open House, 2) school and campus visits, 3) CCBM Virtual Sessions, 4) Science and Technology Enrichment Program/high school research program, 5) weeklong K-12 programs, 6) Science for Humanity Series (public talks), 7) teacher professional development workshops, and 8) development of STEM education / outreach and science communication resources. We will continue to refine programs based on participant surveys and feedback from our External Evaluator.

The CCBM Outreach Fellow will gain outreach and leadership experience by leading, developing, and managing activities. The integration and active participation of Center affiliates will provide valuable experience for students and junior faculty, expand the outreach capacity of the Center, and provide motivating role models for program participants.

The CCBM Outreach Fellowship will promote training for a career in research/mentorship/education/outreach and will contribute to the advancement of center education/training and outreach/dissemination efforts. The role will also facilitate interactions with center faculty, scientists, graduate students, undergraduate students, and other affiliates. The role will enhance the professional development and training of the graduate student, with a focus on development of outreach leadership, development, and management; communication skills; and organizational skills. The CCBM Outreach Mentor will work under the direction of CCBM Executive Director Carrie Kouadio.

Fellowship Qualifications: UC Merced M.S. or Ph.D. student in a STEM field who has a 50% assistantship or fellowship, is in good standing, with advisor approval; Applicants must be either U.S. citizens, U.S. nationals, or permanent residents, as per National Science Foundation (NSF) CREST funding guidelines: <https://www.nsf.gov/pubs/2018/nsf18509/nsf18509.pdf>

Funding: Provide a small stipend as a fellowship (\$2000) upon completion of term, for role in center (not intended to replace an assistantship)

Timeline: 4-7 hours per week (average) depending on program needs, with flexible hours (apart from meetings, some sessions, and outreach events which are required). It is expected that the Fellow will serve multiple semesters for continuity of center programs, depending on availability, student status, and positive performance.

Focus Areas: • Participate in and lead outreach programming • Contribute to management of programs • Organize information related to outreach • Develop and plan specific sessions for center STEM K-12 and community outreach opportunities and plans • Recruit and train volunteers for outreach programs • Collect feedback from participants and volunteers • Mentor, guide, and advise volunteers • Share best practices and experiences regarding outreach

Outcomes:

1-2 page report (reflection on program experience) per semester and a presentation in a center meeting

Applications open until filled. CCBM Outreach Fellowship begins immediately in fall 2022.

Send your CV, 1-2 references, and statement of interest (and direct any questions) to CCBM Executive Director Carrie Kouadio (ckouadio@ucmerced.edu).



ccbm.ucmerced.edu

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