

Mathematical Foundations of Data Science

Position Summary

The Department of Computational Mathematics, Science and Engineering (CMSE) at Michigan State University invites applications from outstanding candidates for a tenure system Assistant Professor position in the broad area of mathematical foundations of data science. All areas of mathematical data science will be considered. Special consideration will be given to candidates with a background in the geometry and topology of big data and its application to real-world domains including but not limited to neuroscience, molecular biology, atmospheric science, image processing, etc. This position will be jointly appointed with the Department of Mathematics with tenure home in CMSE. Post-doctoral experience is preferred but not required. Prior instructional experience as a lecturer and/or teaching assistant is desirable but not required.

A significant area of research focus within CMSE is on the synergy between forward modeling and data science in physical and biological sciences. Meeting the position's research expectations will require obtaining external funding and publishing peer-reviewed papers in national and international journals and/or conference proceedings. In addition to developing an internationally-recognized, externally funded research program, the successful candidate will be expected to contribute high-quality teaching and service/outreach, and have a strong commitment to diversity, equity and inclusion. Teaching will include one undergraduate or graduate course per semester as well as graduate and postdoctoral training. Service will include participation in campus and national/international programs. The anticipated start date is August 16, 2022.

Required Degree

Doctorate – Mathematics, Statistics, Computer Science or a related field

Minimum Requirements

A Ph.D. is required prior to the start of employment. Research in the mathematical foundation of data science.

Required Application Materials

Applications should be submitted to the MSU Human Resources site at:

<https://careers.msu.edu/en-us/job/508759/assistant-professortenure-system>

The application dossier should include:

- Cover letter: One page that frames the application in the context of this ad and CMSE at Michigan State University
- CV: Including a list of publications, accepted proposals for funding or other resources, contributed or invited presentations, teaching and mentoring experiences, leadership positions, contributions to the academic community, and public outreach efforts. Other professional information may also be included, as the applicant sees fit.
- Research statement: A 4-5-page summary of research focus including the relevance of the research, research accomplishments, and future research plans. This statement should also

describe past experiences with and future plans to promote diversity, equity, and inclusion in research (e.g., through grant-funded research, publications, etc.).

- Teaching statement: A 1-2 page description of teaching and mentoring philosophy, experiences, goals, and plans to address these goals. This statement should also describe past experiences with and future plans to promote diversity, equity, and inclusion in teaching and mentoring (e.g., through mentoring, pedagogy, etc.).
- Referee information: The names and email contact information for four individuals who can provide reference letters. References will be contacted to solicit letters for candidates selected for a short list. At least one of the letters must specifically address the applicant's ability to teach.

Review of applications will begin January 4, 2022, and continue until a suitable candidate is identified. While letters will not be solicited for the initial evaluation of candidates, applicants should ensure that letters will be submitted promptly upon request. Questions regarding the position may be directed to Dr. Shin-Han Shiu, Chair of the Search Committee (shius@msu.edu).