

*NSF NANOSCALE SCIENCE AND ENGINEERING GRANTEES CONFERENCE:
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**“AI powered Knowledge Representation and Reasoning”
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Bio: Wei Wang is the Leonard Kleinrock Chair Professor in Computer Science and Computational Medicine at University of California, Los Angeles and the director of the Scalable Analytics Institute (ScAi). She has extensive expertise in artificial intelligence, big data analytics, data mining, machine learning, natural language processing, bioinformatics and computational biology, and computational medicine. Her contributions to the field are significant, including seven filed patents, one monograph, and over 300 research papers in international journals and major peer-reviewed conference proceedings, with multiple best paper awards. She has served as an associate editor of several prestigious academic journals. She is the Chair of the ACM Special Interest Group on Knowledge Discovery in Data (SIGKDD). Dr. Wang is a fellow of both ACM and IEEE, demonstrating her outstanding contributions to the field.

Abstract: The emergence of generative AI models has introduced a new paradigm in data modeling. These models replace specialized models designed for individual tasks with unified models that are effective across a broad range of problems. In scientific domains, this shift not only transforms approaches to handling natural language tasks (e.g., scientific papers) but also suggests new methods for dealing with other data types (e.g., molecules, proteins, pathology images). In many fields, GenAI has already shown great potential to accelerate scientific discovery. In this talk, I will present some latest advances and opportunities in AI especially in the context of science and engineering research.