



USACM News

November 2025

New Quantum Computing TTA

USACM has established a new technology thrust area (TTA) on Quantum Computing (QC) - a field that is seeing transformative and rapid advances with a potential to *revolutionize engineering computing*. QC TTA will provide a focal point for research and collaboration at the intersection of computational mechanics and quantum information science. Topics relevant to the TTA include development of quantum algorithms for linear systems, optimization, uncertainty quantification, and multiscale modeling; hybrid quantum-classical computational frameworks; quantum simulation of materials and mechanical systems; error mitigation and resilience strategies for noisy quantum devices; and applications of quantum computing in mechanics-informed machine learning. The TTA will promote both foundational algorithmic advances and the integration of QC into real-world mechanics applications, ensuring the USACM community remains engaged at the forefront of this emerging field. Those who are interested in getting involved with QC TTA *are encouraged to* reach out to founding co-chairs Caglar Oskay and Suvranu De.

Email admin@usacm.org if you would like to join this TTA.

WCCM-ECCOMAS 2026

Save the date for [WCCM-ECCOMAS 2026](#) from 19 to 24 July 2026 in Munich, Germany.

Abstract submission is now open. Abstracts will be accepted until January 12, 2026.

USNC/TAM'26

The [20th U.S. National Congress of Theoretical and Applied Mechanics](#) will be held in Pasadena, California on June 21-25, 2026.

USNC/TAM'26 aims to foster and promote the exchange of ideas and information among the various disciplines of the theoretical and applied mechanics community around the world, and chart future priorities in mechanics related research, applications and education.

[Short Course Proposals](#) are now open with a deadline of November 30.

[Abstract Submissions](#) are now open with a deadline of January 15.

USACM Foundation

As the year draws to a close, don't forget to [donate to the USACM Foundation](#), a registered 501(c)(3) nonprofit.

Every dollar supports its mission to provide support for education, opportunities for research collaboration and promotion of computational mechanics within the United States.

TTA Corner

Energy & Earth Systems

- Our next webinar will take place on **December 9, 2025 at 8:00AM PST**. The speaker will be Nicole Aretz from The University of Texas at Austin speaking on "Multifidelity uncertainty quantification for ice sheet simulations".

Join via Zoom:

<https://us06web.zoom.us/j/89805920868?pwd=UaxOZeVHZAs9BeKkjgRWbNadZYCIzo.1>

Large Scale Structural Systems and Optimal Design

- Our next colloquium will take place on **December 3, 2025 at 1:00PM CST**. The speaker will be Yakov Zelickman from Johns Hopkins University speaking on "Leveraging Polygonal Primitives in Feature-Mapping Topology Optimization for Manufacturing Constraints".

Join via Zoom:

<https://us06web.zoom.us/j/87331120699?pwd=MExkQ085ZHh1aDc3ZnBwQzFIUHI4UT09>

Nanotechnology and Lower Scale Phenomena

- Our next webinar will take place on **November 25, 2025 at 3PM EST**. The speaker will be Prof. Heather Kulik from Massachusetts Institute of Technology speaking on "Machine-learning-accelerated materials design: from prediction to experimental reality"

Join via Zoom:

<https://us06web.zoom.us/j/84541274013?pwd=ZDhuM09BaUIVVI BuREhEV0sweGFIZz09>

Uncertainty Quantification and Probabilistic Modeling

- The webinar for November 13 **has been rescheduled to November 20 at 3PM EST**. The speaker will be Drew P. Kouri from Sandia National Laboratories speaking on "An Inexact Trust-Region Algorithm for Nonsmooth Risk-Averse PDE-Constrained Optimization". **This webinar will NOT be recorded.**

Join via Zoom:

<https://us06web.zoom.us/j/92756548524?pwd=cTFoRXIvNVN4dV FoaHEzK0pQQjhldz09>

- Our next webinar will take place on **December 11, 2025 at 3PM EST**. The speaker will be Ionut-Gabriel Farcas from Virginia Tech speaking on "Structure-exploiting data-driven methods for large-scale uncertainty quantification".

Join via Zoom:

<https://us06web.zoom.us/j/92756548524?pwd=cTFoRXIvNVN4dV FoaHEzK0pQQjhldz09>

Student Chapter Corner

- Join the community online at the [USACM Student Chapter Discord Server](#).
- Our next webinar will take place on **November 20, 2025 at 11am CST**. The speaker will be Chao Wang from University of Illinois Urbana-Champaign speaking on "Inverse design, advanced manufacturing, and applications of magneto-active soft materials".

Join via Zoom:

<https://us06web.zoom.us/j/82464478256?pwd=ZMkJVFdjMJzadg nVWFpQsdUSs4qTaY.1>