



USACM News
February 2025

USNCCM18

The [18th U.S. National Congress on Computational Mechanics](#) will be held July 20-24, 2025 in Chicago, Illinois. We are looking forward to welcoming you then.

- [Registration](#) is now open.
- Pre-congress [short courses](#) are now available to view.
- [Travel award applications](#) are now open.
- [Poster submissions](#) are now open.

USNCCM20 - Notification of Interest

USACM announces a [Notification of Interest \(NOI\)](#) to host USNCCM20 in 2029.

At this time, we are soliciting information from those who have some interest in hosting the 20th U.S. National Congress on Computational Mechanics in 2029. The deadline to submit your interest is **March 1**.

Contact us at admin@usacm.org if you have any questions.

(USNC/TAM) - Call for Proposals to Host

The U.S. National Committee on Theoretical and Applied Mechanics (USNC/TAM) is soliciting proposals from institutions wishing to host the 2030 U.S. National Congress on Theoretical and Applied Mechanics.

The deadline for submissions is **March 20, 2025**. More information can be found [here](#).

CISM Course, Udine (Italy), June 23-27 2025 - Call for participation

Title: [Recent Advancements in Multiscale and Multiphysics Modelling of Complex Materials](#)

Novel methods of multiscale and multiphysics modelling of various types of composites will be discussed. Modelling strategies like parametrically -upscaled constitutive models or quantum computing data-driven algorithms, which start from atomistic and microstructural length scales for different advanced composites, will be proposed for the description of quasistatic, dynamic and fatigue loading responses. Application non-local models with internal length and dispersive properties are also included. Various experimental methods for the verification of multiscale models will be discussed.

Lecturers: Prof. Somnath Ghosh (USA), Prof. Heng Hu (China), Prof. Nicholas Fantuzzi (Italy), Prof. Tomasz Sadowski (Poland), Prof. Siegfried Schmauder (Germany) and Prof. Patrizia Trovalusci (Italy)

Important days:

- Early Bird On-Site Participation: € 650.00 + VAT* ; Deadline: April 23, 2025
- Late On-Site Participation: € 800.00 + VAT* ; Deadline: June 10, 2025
- Live Streaming Online Participation: € 250.00 + VAT* ; Deadline: June 10, 2025

For further information about the CISM course 2025, please see: <https://cism.it/en/activities/courses/>

Short Course by HIDENN-AI, LLC

This two and a half-day short course introduces mechanistic computational intelligence, a new branch of predictive AI using hierarchical neural networks, that injects artificial intelligence (AI) and scientific knowledge into traditional simulation approaches to solve science and engineering (S&E) problems in materials, design, manufacturing, multi-physics, and more. Participants will learn how traditional concepts, including finite element analysis, merge with machine learning to solve problems on extremely large-scale problems (e.g., 10^{21} grid points with a single GPU) with fast, high resolution, and high accuracy solutions. Hands-on sessions with HIDENN-AI software, integrated with Abaqus and Ansys, will demonstrate solutions beyond traditional computational limits.

For more information please see this [flyer](#).

TTA Corner

Energy & Earth Systems

- [AIDT4ES](#), Austin, Texas, September 22-24, 2025
[Abstract Submissions](#) will open on **March 1**.
- Our next webinar will take place on **February 25, 2025 at 8AM PST**. The speaker will be Valerio Lucarini from University of Leicester speaking on "Detecting and Attributing Change in Climate and Complex Systems: Foundations, Green's Functions, and Nonlinear Fingerprints".
Join via Zoom:
<https://us06web.zoom.us/j/89805920868?pwd=UaxOZeVHZAs9BeKkjqRWbNadZYCIZo.1>

Novel Methods in Computational Engineering and Sciences

- Our Spring 2025 Seminar will take place on **March 28, 2025 at 8AM MDT**. The speakers will be Dr. Laura De Lorenzia speaking on "Lattice Boltzmann for solid mechanics: elastostatics and elastodynamics", and Dr. Pablo Seleson speaking on "Breaking Through: Harnessing Exascale Computing and Peridynamics for Complex Fracture Modeling".
Join via Zoom: <https://utah.zoom.us/j/92986632012>

Uncertainty Quantification and Probabilistic Modeling

- Our next webinar will take place on **March 20, 2025 at 3PM EDT**. The speaker will be Youssef Marzouk from MIT.

- **Join via Zoom:**

<https://us06web.zoom.us/j/92756548524?pwd=cTFoRXIvNVN4dVFoaHEzK0pQQjhldz09>

Student Chapter Corner

- Join the community online at the [USACM Student Chapter Discord Server](#)