



52nd ASME Design Automation Conference (DAC)

Dear Colleagues,

On behalf of the DAC Executive Committee, welcome to the **52nd ASME Design Automation Conference (DAC)**!

Following a rigorous review process, this year's DAC technical program consists of 107 accepted papers across 24 active research areas, corresponding to an acceptance rate of approximately 82%. This year, we also solicited and accepted 59 presentation-only submissions. The technical program will be presented from Monday, August 24, to Wednesday, August 26.

Complementing our technical sessions, we will host the DAC Keynote given by **Dr. David Gorsich** on the topic of **"Thirty Years Developing Modeling and Simulation Tools"** and the DAC Signature Event on the topic of **"AI-Empowered Digital Twins for Engineering Design and Manufacturing,"** consisting of a panel of four members of active contributors to DAC:

- Austin Downey (University of South Carolina)
- Chenhui Shao (University of Michigan)
- Elizabeth Qian (Georgia Tech)
- Ramin Bostanabad (University of California, Irvine)

This year, we are also collaborating with the *ASME Journal of Mechanical Design* (JMD) on its new initiative, **"Future of Design,"** inviting members of the engineering design community to discuss the state of the art and the primary challenges in engineering design research. The first session was held in conjunction with the Design Society's annual meeting and led to an editorial published in JMD earlier this year. At this year's DAC conference, we will organize the second in-person session, after which a new editorial will be curated and published in JMD.

Please join us for the DAC Technical Committee Meeting on Tuesday evening, August 25. During that meeting, we will also present the Design Automation Dissertation Award winner, the Design Automation Young Investigator Award winner, the Design Automation Award winner, and the DAC Best Paper Award winners. We look forward to our community coming together to meet old friends and make new ones.

Ten papers were identified as "Papers of Distinction" from the accepted papers. These papers are listed below, ordered by paper number (and including the assigned session):

- DETC2026-194154 (DAC-20: AI-driven Design Innovation): "Variable-Geometry Graph Neural Networks: An Adaptive Surrogate Model for Structural Analyses With Varied Geometries," Jiquan Yan, Weifei Hu, Chengrui Zhang, Yikang Hei, Demin Liu, Liwen Wang, and Yu Zeng.



- DETC2026-194022 (DAC-01: Control Co-Design): “Bridging Spatial Packaging and Robot Execution: Why Co-Designing Configuration, Sequence, Motion, and Robot Design Can Be Beneficial,” Abbas Bataleblu, Chad Peterson, and James T. Allison.
- DETC2026-193969 (DAC-04: Data-Driven Design): “Ortho2CAD: 3d CAD Generation from Orthographic Drawings Using Vision Language Models,” Aditya Joglekar, Amit Regmi, Kenji Shimada, and Levent Burak Kara.
- DETC2026-195037 (DAC-05: Design and Optimization of Energy Systems): “Physics-Informed Self-Cross Attention Operator Network for Heat Map Prediction in Large-Scale Battery Thermal Management Systems,” Yuan Jiang and Pingfeng Wang.
- DETC2026-193788 (DAC-07/DFMLC-03: Design for Additive Manufacturing): “Comparison of Computational and Human-Sourced Print Fidelity Assessments for 3D Printed Foods,” A.K.M. Ahasun Habib, Farnaz Maleky, Ranadip Pal, Martin Binks, and Paul F. Egan.
- DETC2026-186939 (DAC-24 Design for E-Mobility): “A Multi-Agent System for IPMSM Design Optimization via an Fea-Ai Hybrid Approach,” Jinseong Han, Sunwoong Yang, and Namwoo Kang
- DETC2026-194357 (DAC-03: Novel AI or ML Frameworks for Design or Systems Science): “COSMIC: Concurrent Optimization of Structure, Material, and Integrated Control for Robotic Systems,” Qinsong Guo and Liwei Wang
- DETC2026-193841 (DAC-10 Design of Engineering Materials and Structures): “Tool-path-Driven Shape Optimization for Multi-Axis Machining via Configuration Space,” Kota Nozaki, Shuzhi Xu, Kentaro Yaji, and Kikuo Fujita.
- DETC2026-192508 (DAC-13: Multidisciplinary Design Optimization): “Implicit Nonlinear Geometry Parameterization for Multidisciplinary Design Optimization,” Andrew H. Fletcher and John T. Hwang.
- DETC2026-193891 (DAC-19: UQ of ML Models for Data-Driven Design): “Adaptive Conformal Prediction With Asymmetric Intervals for Online Learning,” Yizhe He, Yuwei Zong, Xiwei Tang, Patrick Brandt, Jie Zhang, and Yanwen Xu.

Authors from our community will present these and many other excellent papers throughout the conference. We encourage you to support your colleagues by attending their presentations and participating in the discussions.

Finally, organizing the conference requires the generous effort of many individuals. We are particularly grateful to all session organizers and paper review coordinators:



Ferdous Alam, Saeed Azad, A. Emrah Bayrak, Amir Behjat, Amy Bilton, Ramin Bostanabad, Hannah Budinoff, Grace Burleson, Cheng Chen, Hongrui Chen, Jie Chen, Lei Chen, Wei (Wayne) Chen, Souma Chowdhury, Abigail Clarke-Sather, Daniel Cooper, Shiguang Deng, Xiaoping Du, Bryony DuPont, Ehsan Esfahani, Cong Feng, Maha Haji, Daniel Herber, Zhen Hu, Horea Ilies, Roshni Anna Jacob, Namwoo Kang, Paghava Kommalapti, Yong Hoon Lee, Leifur J Leifsson, Ting Liao, Ketki Lichade, Po Ting Lin, Zheng Liu, Chris Mabey, Hemanth Manjunatha, Ali Mehmani, Seung Ki Moon, Manaswin Oddiraju, Kijung Park, Steve Paul, Cyril Picard, Monsuru Ramoni, Anabel Renteria, Daniel Selva, Zhenghui Sha, Gulai Shen, Ada-Rhodes Short, Binyang Song, Xiaoshi Su, Anh Tran, Anton van Beek, Liwei Wang, Zequn Wang, Natasha Wright, Zhimin Xi, Xinyi Xiao, Yinshuang Xiao, Hongyi Xu, Yanwen Xu, Kentaro Yaji, Wenhua Yang, Chen Zeng, and Lei Zuo.

On behalf of the entire DAC community, we welcome you to another enjoyable and thought-provoking Design Automation Conference.

We look forward to seeing you in Houston, Texas!

Souma Chowdhury

Conference Chair

Zhenghui Sha

Program Chair