**Jessica Zhang - Carnegie Mellon University, USA**

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| **Talk title** | **Machine Learning Enhanced Simulation and PDE-Constrained Optimization for Material Transport Control in Neurons** |
| **Biography** | Jessica Zhang is the George Tallman Ladd and Florence Barrett Ladd Professor of Mechanical Engineering at Carnegie Mellon University with a courtesy appointment in Biomedical Engineering. She received her B.Eng. in Automotive Engineering, and M.Eng. in Engineering Mechanics from Tsinghua University, China; and M.Eng. in Aerospace Engineering and Engineering Mechanics and Ph.D. in Computational Engineering and Sciences from Institute for Computational Engineering and Sciences (now Oden Institute), The University of Texas at Austin. Her research interests include computational geometry, isogeometric analysis, finite element method, data-driven simulation, image processing, and their applications in computational biomedicine, materials science and engineering. Zhang has co-authored over 200 publications in peer-reviewed journals and conference proceedings and received several Best Paper Awards. She published a book entitled "Geometric Modeling and Mesh Generation from Scanned Images" with CRC Press, Taylor & Francis Group. Zhang is the recipient of Simons Visiting Professorship from Mathematisches Forschungsinstitut Oberwolfach of Germany, US Presidential Early Career Award for Scientists and Engineers, NSF CAREER Award, Office of Naval Research Young Investigator Award, and USACM Gallagher Young Investigator Award. At CMU, she received David P. Casasent Outstanding Research Award, George Tallman Ladd and Florence Barrett Ladd Professorship, Clarence H. Adamson Career Faculty Fellow in Mechanical Engineering, Donald L. & Rhonda Struminger Faculty Fellow, and George Tallman Ladd Research Award. She is a Fellow of AIMBE, ASME, SMA, USACM and ELATES at Drexel. She is the Editor-in-Chief of Engineering with Computers. |