

## Advanced Manufacturing Seminar Series

Friday, April 23, 2021

10:00 AM – 11:30 AM (Pacific Time)

Registration link: [https://usc.zoom.us/webinar/register/WN\\_Y5Tl4puUT36axYDkjQaMxw](https://usc.zoom.us/webinar/register/WN_Y5Tl4puUT36axYDkjQaMxw)

### ***From Promise to Production: Unleashing the Potential of Additive Manufacturing***

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*Abstract:* Additive Manufacturing (AM) burst onto the scene in the 1990's to great excitement about the new approach to product development and revolutionary products it would enable. While the opportunities for rapid prototyping have been largely realized, the ability to additively manufacture production parts has grown much more slowly. This talk will highlight key issues in process knowledge, production speed/quality, quality control, and functionality that hold the keys to broader implementation of AM in production and give examples of recent efforts to address some of these limitations touching on applications in polymers, metals, and printed electronics and compare the current status to biological fabrication methods.



*Biography:* Dr. Nathan Crane joined the faculty of the BYU as professor of mechanical engineering in 2018 after 12 years at the University of South Florida. Dr. Crane completed a Ph.D. degree in Mechanical Engineering with a minor in Materials Science at the Massachusetts Institute of Technology in 2005 and earned his B.S. and M.S. degrees in Mechanical Engineering at Brigham Young University in Provo, UT in 1998 and 1999 respectively. He has worked in industry (Caldera Engineering and Pratt and Whitney Aircraft) government (Sandia National Laboratories, Los Alamos National Laboratories), and academia. He is also associate editor of Elsevier's Additive Manufacturing journal. Dr. Crane's interests lay in the areas of design, materials and advanced manufacturing with a particular interest in additive manufacturing (AM) and digital microfluidics. His work focuses on applying material science, mechanical design, and processing science to enable novel manufacturing processes.