

Lorenzo Valdevit

Professor, Materials Science and Engineering and Director, Institute for Design and Manufacturing Innovation at UC Irvine

Irvine, CA, US

Lorenzo Valdevit's research is in the general area of mechanics of materials and structures and additive manufacturing

Biography

Prof. Valdevit received his MS degree (Laurea) in Materials Engineering from the University of Trieste, Italy (in 2000) and his PhD degree in Mechanical and Aerospace Engineering from Princeton University (in 2005). He worked as an intern at the IBM T.J. Watson Research Center and as a post-doctoral scholar at the University of California, Santa Barbara. He joined the faculty in the Mechanical and Aerospace Engineering Department at the University of California, Irvine in 2007. In 2018, he moved his appointment to the newly established Department of Materials Science and Engineering, where is currently a professor. He is serving as the inaugural director of the Institute for Design and Manufacturing Innovation in the School of Engineering. Prof. Valdevit works in the general area of mechanics of materials, developing analytical, numerical and experimental techniques across multiple length scales. His primary research goal is the optimal design, modeling, fabrication and experimental characterization of metamaterials and structures with unprecedented combinations of properties. Some key research accomplishments have been the development and optimization of multifunctional sandwich panels for thermo-structural applications (including hypersonics), the mechanical characterization, numerical modeling and optimal design of ultralight hollow micro-lattices and 2D and 3D shape-reconfigurable materials, the development of novel topology optimization algorithms for the optimal design of architected materials with complex unit cell designs, and the advancement of novel additive manufacturing processes (in particular two-photon polymerization Direct Laser Writing, Direct Metal Laser Sintering and Cold Spray).

Areas of Expertise

3D Printing & Additive Manufacturing, Architected Materials, Advanced Manufacturing, Materials Science, Metamaterials, Aerospace Engineering

Education

Princeton University

PhD Mechanical and Aerospace Engineering

Princeton University

MA Mechanical and Aerospace Engineering

University of Trieste, Italy

MS Materials Engineering

Accomplishments

UCI School of Engineering Outstanding Faculty Service Award
2019

Popular Mechanics Breakthrough Award
2012

Orange County Engineering Council Outstanding Engineering Educator Award
2012

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