

# **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

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## **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).

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## **Areas of Expertise**

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

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## **Education**

**Princeton University**

PhD Mechanical and Aerospace Engineering

**Princeton University**

MA Mechanical and Aerospace Engineering

**University of Trieste, Italy**

MS Materials Engineering

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## **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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