
JIANZHI (JAMES) LI

UTRGV PRESIDENT ENDOWED PROFESSOR

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Appointments

President Endowed Professor, University of Texas Rio Grande Valley. (2016 -).
Founding Director, America's Additive Foundry Consortium (2023-)
Founding Director, DoD Innovation Driven Research Education Ecosystem for Advanced Manufacturing for the Defense (I-DREAM4D) (2019-)
Director, DOE/NNSA Consortium for Advanced Additive Manufacturing for Energy Systems (2020-)
Director, UTRGV Center for Advanced Manufacturing Innovation and Cyber Systems (CAMICS)
Adjunct Professor, Illinois Tech, (2023-)
Adjunct Professor, University of Nebraska Lincoln (2022-)

Representative Grants and Research Projects

Highlights of Grants and Research Funding (2017-present)

- As PI: \$17,857,520.00 was awarded by DoD, DOE, NIST, and EDA.
- As Co-PI: \$6,488,992.00 was awarded by DoD, NSF, and DOE.

"**America's Additive Foundry**: Secure U.S. Supply of Tactical Alloys Through Additive and Intelligent Casting and Forging," Department of Defense Office of Local Defense Community Cooperation, \$7,526,385.00. (September 1, 2023 - August 31, 2028).

"Consortium of **Advanced Additive Manufacturing** Research and Education for Energy Related Systems (CA2REERs)," DOE/NNSA, \$4,970,639.00. (September 1, 2021 - August 31, 2025).

"Standards/Guidance for **Rapid Qualification of Metal-Based Additive Manufacturing**," NIST, \$993,610.00. (July 1, 2021 - July 1, 2023).

"**Innovation Driven Education Pathways** for Defense Oriented Advanced Manufacturing Engineering (I-DREAM4D)," Office of Naval Research, \$3,958,812.00. (November 1, 2019 - October 31

CREST Center for Multidisciplinary Research Excellence in **Cyber-Physical Infrastructure Systems** (MECIS)," National Science Foundation (NSF), \$5,000,000.00. (September 1, 2021 - August 31, 2026).

"**AI Based Mixed Reality** for Industry Autonomy, Launch BTX" GBIC, FutureSQC, \$210,000, (January 2023 – April 2024)

"**Manufacturing Reshoring** Initiative for the South Texas Border Region," Sponsored by US EDA, in collaboration with US-Mexico Foundation of Science, \$297,988.00. (July 1, 2021 - December 1, 2022).

Representative Publications

Products most closely related to the proposed project:

- Biswas, I. J., Lopez, E. C., Ahmed, F., Li, J. (2022). Ultrafast Laser Direct Writing of Conductive Patterns in Polyimide Substrate. Proceedings of the ASME's 17th MSEC2022 International Conference.
 - Dhar, J. C., Lopez, L., Zhang, S., Xu, B., Uddin, M., Li, J. (2021). Direct Selective Laser Synthesis of CuCrFeTiNiAl High Entropy Alloy from Elemental Powders through Selective Laser Melting. Annual International Solid Freeform Fabrication Symposium
 - Canacoo, S., Lopez, E. C., Coronel, O., Ahmed, F., Li, J., Srivastava, A. (2022). Ultrafast Laser Ablation of Inconel 718 for Surface Improvement. Manufacturing Letters, 33, 410-414. <https://doi.org/10.1016/j.mfglet.2022.07.054>
 - Farias, M., Hu, H., Zhang, S., Li, J., & Xu, B. (2023). A molecular dynamics study of atomic diffusion effects on thermomechanical properties applying laser additive alloying process for the Cantor high entropy alloy. Journal of Manufacturing Processes, 91, 149-166.
 - Shawon, S. M. A. Z., Carballo, Z. D., Vega, V. S., Lin, C., Rafaqut, M. S., Sun, A. X., Li, J., & Uddin, M. J. (2022). Surface modified hybrid ZnSnO₃ nanocubes for enhanced piezoelectric power generation and wireless sensory application. Nano Energy, 92, 106653.
 - Ye, W., Zhang, S., Mendez, L. L., Farias, M., Li, J., Xu, B., ... & Zhang, Y. (2021). Numerical simulation of the melting and alloying processes of elemental titanium and boron powders using selective laser alloying. Journal of Manufacturing Processes, 64, 1235-1247.
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- Dou, C., Perez, V., Li, J., Tsin, A., Xu, B. (2021). Laser Assisted Bioprinting: A State-of-the-Art Review and Future Trend. ChemBioEng Reviews, 8(5), 1–19.
- Rahman, T., Perez, V., Qu, J., Xu, B., Li, J., Tsin, A., Analysis of the operating conditions of pulse electric field assisted EHD for sodium alginate 1 printing using design of experiment approach, International Journal of Advanced Manufacturing Technology, Accepted, 2021
- Shawon, S.M.A.Z., Sun, A.X., Vega, V.S., Chowdhury, B.D., Tran, P., Carballo, Z.D., Tolentino, J.A., Li, J., Rafaqut, M.S., Danti, S. and Uddin, M.J., 2020. Piezo-Tribo Dual Effect Hybrid Nanogenerators for Health Monitoring. Nano Energy, p.105691.
- Chowdhury, A., Abdullah, A., Romero, U., Danti, S., Li, J., Uddin, M.*, e. a. (2020). Decentralized triboelectric electronic health monitoring flexible microdevice. Med Dev Sensor, e10103.
- Ghorbani, J.** , Li, J., Srivastava, A. K. (2020). Application of optimized laser surface re-melting process on selective laser melted 316L stainless steel inclined parts. Journal of Manufacturing Processes, 56, 726-734.
- Mantel, H.** , Xu, B., Li, J. (in press). Selective Laser Melting of Mechanically Alloyed Metastable Al₅Fe₂ Powders. ASME Journal of Manufacturing Science and Engineering.
- Hu, Y.** , Li, J. (2017). Selective laser alloying of elemental titanium and boron powder: thermal models and experimental validation. Journal of Materials Processing Technology (247), 426–432.
- Wu, Z.** , Li, J., Timmer, D., Lozano, K., Bose, S. (2009). Study of Processing Variables on the Electrical Resistivity of Conductive Adhesives. International Journal of Adhesion and Adhesives, 29(5), 488–494.
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Education

Texas Tech University, Ph.D. in industrial and manufacturing engineering

Tsinghua university, B.S. in automobile engineering, M.S. in manufacturing engineering

Research and Professional Experience

Professor, The University of Texas Rio Grande Valley, Edinburg, TX

August 2016-

Associate Professor, The University of Texas Rio Grande Valley, TX

2015-2016

Associate Professor, The University of Texas – Pan American, TX 2010-2105

Assistant Professor, The University of Texas – Pan American, TX 2004-2010

Research Scientist, Texas Tech University, Lubbock, TX 2003-2004

Honor and Award

Excellence Award Presented by Honorable Heidi Shyu, Under Secretary of Defense for Research and Engineering

Presidential Endowed Professorship, UTRGV (2022 - Present)

Olegario Vazquez Rana Endowed Fellow, UTRGV. (2020-2022).

Member, Sigma Xi, the Scientific Research Horner Society.

Professional activities:

NSF Panel Members: NSF Panel, CMMI MME, 2014, NSF Panel, MRI – PUI, 2015

Editorial Advisory Board, International Journal of Energy for a Clean Environment

Editorial Advisory Board, Journal of Sustainable Manufacturing & Renewable Energy

Steering Committee Member: McAllen Economic Development Corporation Technology and Medical Districts