DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

Bioprinting and Additive Manufacturing

Bioprinting

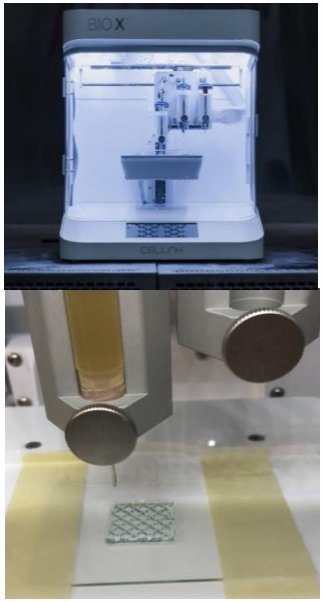
- 3D printing with biomaterials and stem cells
- *In vitro* and *in vivo* assessments of fabricated scaffolds
- Tissue engineering for wound healing and bone regeneration

Metal Additive Manufacturing

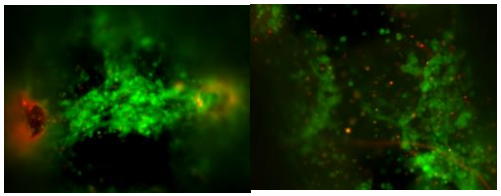
- Laser Powder Bed Fusion
- Laser Foil Printing

Non-metal Additive Manufacturing

- Ceramic On-Demand Extrusion
- Fused Deposition Modeling
- AM of Carbon Fiber Composites



3D bioprinting



In Vitro Evaluation

In Vivo Evaluation

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Funding

- National Institute of Health
- National Science Foundation
- Department of Energy
- Department of Education
- Honeywell Federal Manufacturing & Technology
- Clean Energy Smart Manufacturing Institute
- CAMT Industrial Consortium

Keywords

- Bioprinting, biofabrication, biomaterials, stem cells, 3D printing, additive manufacturing

Recognitions

- International Freeform and Additive Manufacturing Excellence (FAME) Award, 2020
- ASME Milton Shaw Manufacturing Research Medal, 2018
- Univ. of Missouri President Leadership Award, 2017
- ASME Blackall Machine Tool and Gage Award, 2014
- ISFA Hanafusa Outstanding Investigator Award, 2008