



U.S. DEPARTMENT OF ENERGY

# American-Made Geothermal Manufacturing Prize SUBMISSION FOR MAKE!

**Additively Manufactured Mechanical Metamaterials for Improving EGS Survivability in the Downhole Environment**  
Enhancing material performance in extreme conditions

*Keyword tags: EGS; casing; mechanical metamaterials; structured materials; computational geometry; advanced materials*

## TEAM

Jesse Silverberg, PhD ([js@multiscalesystems.com](mailto:js@multiscalesystems.com) or [LinkedIn](#))

Arthur Evans, PhD ([art@multiscalesystems.com](mailto:art@multiscalesystems.com) or [LinkedIn](#))

Karen Tisdell, MA ([karen@multiscalesystems.com](mailto:karen@multiscalesystems.com) or [LinkedIn](#))

Shawn Aalto ([sa@multiscalesystems.com](mailto:sa@multiscalesystems.com) or [LinkedIn](#))

**Multiscale Systems** | Worcester, MA 01610 | +1-855-955-7900

[www.multiscalesystems.com](http://www.multiscalesystems.com)

[Watch the project  
video intro here!](#)

## PARTNERS AND AMERICAN-MADE NETWORK SUPPORT

- (1) [Oak Ridge Manufacturing Demonstration Facility](#) – Fabrication
- (2) [WorcLab](#) – Assisting us navigate and accelerate innovation
- (3) [The Larta Institute](#) – Helping develop 3<sup>rd</sup> party commercial validation