



## Systems And Methods For Controlling Additive Manufacturing Systems

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### The Invention

A system and method for controlling an additive manufacturing system to form a multi-material component. Operating parameter values may be determined for the additive manufacturing system based on a first material and a second material used to form the multi-material component to ensure a requisite level of bonding between particles of a gradient between the first and second materials. Data or models for the first and second materials, along with observed data from a plurality of sample multi-material components formed from the first and second materials may be utilized to determine the operating parameter values. In some cases, the operating parameter values may be tuned to form a multi-material component having predetermined values for parameter objectives along the gradient of the multi-material component. The additive manufacturing system may be a selective laser melting system.

### Stage of Development

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

### Additional Information

#### For More Information About the Inventors

- [Dan Thoma](#)

#### Tech Fields

- [Engineering : Additive manufacturing](#)

For current licensing status, please contact Michael Carey at [mcarey@warf.org](mailto:mcarey@warf.org) or 608-960-9867