William Halsey
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Education

MS	2015-2016	Computer Engineering, University of Tennessee, U.S.
MBA	2014-2015	Business Administration, University of Tennessee, U.S.
BS	2010-2014	Computer Engineering, Clemson University, U.S.

Professional Experience

Current — *R&D Assistant Staff, Oak Ridge National Laboratory*
- Built data analysis pipelines for predicting properties from AM process data

2017-2019 — *Graduate Research Assistant, University of Tennessee*
- Implemented AI optimization for scan path in EB-PBF for localized microstructure control
- Designed alpha version of metal AM Digital Thread

2016-2017 — *Post Masters, University of Tennessee*
- Developed visual analytics software for metal AM for process investigation and improvement

Awards and honors

UT-Battelle Research Accomplishment Award, 2020. Successful fabrication, characterization, certification, and deployment of nickel superalloy turbine blades fabricated via AM.

Publications

1 A. Plotkowski, J. Ferguson, B. Stump, W. Halsey, et al., *"A stochastic scan strategy for grain structure control in complex geometries using electron beam powder bed fusion"*, Additive Manufacturing, Volume 46, 2021

2 W. Halsey, J. Ferguson, A. Plotkowski, R. Dehoff, V. Paquit, *"Geometry-independent microstructure optimization for electron beam powder bed fusion additive manufacturing"*, Additive Manufacturing, Volume 35, 2020

3 M. Kirka, D. Rose, W. Halsey, et al., *"Analysis of Data Streams for Qualification and Certification of Inconel 738LC Airfoils Processed through Electron Beam Melting"* in Structural Integrity of Additive Manufactured Materials and Parts, ed. N. Shamsaei and M. Seifi (West Conshohocken, PA: ASTM International, 2020), 352-366.

4 C. Steed, W. Halsey, et al., *"Falcon: Visual analysis of large, irregularly sampled, and multivariate time series data in additive manufacturing"*, Computers & Graphics, Volume 63, 2017

5 L. Scime, J. Haley, W. Halsey, et al., *"Report on Progress of correlation of in-situ and ex-situ data and the use of artificial intelligence to predict defects"*, United States, 2020

6 L. Scime, J. Haley, W. Halsey, et al., *"Development of Monitoring Techniques for Laser Powder Bed Additive Manufacturing of Metal Structures (Progress Report)"*, United States, 2020

Books

Encyclopedia of Materials: Metals and Alloys, Chapter: "Application of Data Science and Engineering", Elsevier, 2021