Ryan R Dehoff
Deposition Science and Technology Group Leader
Oak Ridge National Laboratory

Dr. Ryan Dehoff is the Deposition Science and Technology Group Leader for Oak Ridge National Laboratory. Dr. Dehoff facilitates the development of additive manufacturing of components, utilizing various techniques including electron beam melting, laser metal deposition and ultrasonic additive manufacturing. He is developing processing techniques and exploring new materials via additive manufacturing to improve energy efficiency during component production, decrease material waste, and improve material performance. Projects include near net shape fabrication of Titanium and nickel base super alloy components using low cost feedstock materials and developing laser processing techniques for forming nanocomposite coatings and bulk components utilizing amorphous based powder materials.

Education:

- Ph.D., Materials Science & Engineering, The Ohio State University, Columbus, OH, 2008
- M.S., Materials Science & Engineering, The Ohio State University, Columbus, OH, 2005
- B.S., Materials Science & Engineering, The Ohio State University, Columbus, OH, 2002

Professional Experience:

- 6/2015-Present, Group Leader, Deposition Science & Technology
- 2012-Present, Metal Additive Manufacturing Lead, Manufacturing Demonstration Facility (MDF), Oak Ridge National Laboratory, Oak Ridge, TN
    - Facilitating the development of additive manufacturing of components utilizing various techniques including electron beam melting, laser metal deposition and ultrasonic additive manufacturing.
    - Developing processing techniques and exploring new materials via additive manufacturing to improve energy efficiency during component production, decrease material waste, and improve material performance
    - Projects include:
        - Near-net-shape fabrication of Titanium components using low cost feedstock materials and developing laser processing techniques for forming nanocomposite coatings and bulk components utilizing amorphous based powder materials.
        - Metal Powder Bed Consolidation
        - Direct Metal Depostion
        - Ultrasonic Consoldation
- 2009-Present, Research Staff Member, Oak Ridge National Laboratory, Oak Ridge, TN. As research staff member, worked on process development of laser engineered net shaping pertaining to Nb-Si based alloys in conjunction with the mechanical behavior, microstructural characterization, and high temperature oxidation performance of these materials.
- 2008-2009, Post-Doctoral Research Associate, The Ohio State University, OH.