

**CURRICULUM VITAE**  
**Ryan R. Dehoff, Ph.D.**

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**Education**

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

**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 Deposition
    - Ultrasonic Consolidation
- 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

**Publications**

1. T. R. Watkins, Bilheux, K. An, C. A. Brice, E. A. Payzant, R.R. Dehoff, C. E. Duty, C. A. Blue, W. H. Peter, *Neutron Characterization for Additive Manufacturing*, Advanced Materials and Processes (AMP), Vol. 171, Issue 3, pp. 23-27, 2013
2. R.R. Dehoff, C. R. Tallman, K. An, C. E. Duty, W. H. Peter, Y. Yamamoto, W. Chen, C.A. Blue, *Case Study: Additive Manufacturing of Aerospace Brackets*, Advanced Materials and Processes (AMP), Vol. 171, Issue 3, pp. 19-22, 2013
3. C. Holshouser, C. Newell, S. Palas, L. J. Love, V. Kunc, R. F. Lind, P. D. Lloyd, J. C. Rowe, C.A. Blue, C. E. Duty, W. H. Peter, R.R. Dehoff, *Out of Bounds Additive Manufacturing*, Advanced Materials and Processes (AMP), Vol. 171, Issue 3, pp. 15-17, 2013
4. L. J. Love, B. S. Richardson, R. F. Lind, R.R. Dehoff, W. H. Peter, L. E. Lowe, C.A. Blue, *Freeform Fluidics*, Dynamic Systems, Measurement and Controls, Vol. 136, Issue 6, pp. 19-22, 2013 and International Journal of Fluid Power, Vol. 1, Issue 2, pp. 17-22, 2013
5. Bi, M. P. Paranthaman K. An, P. A. Menchhofer, R.R. Dehoff, C. A. Bridges, M. Chi, B. Guo, X. Sun, S. Dai, *Self-Organized Amorphous TiO<sub>2</sub> Nanotube Arrays on Porous Ti Foam for Rechargeable Lithium and Sodium Ion Batteries*, Journal of Power Sources, Vol. 222, Issue 1, pp. 461-466, 2013
6. W. H. Peter, W. Chen, Y. Yamamoto, R.R. Dehoff, T. R. Muth, S. D. Nunn, J. O. Kiggans, M. B. Clark, A. S. Sabau, S. B. Gorti, C.A. Blue, Williams, *Current Status of Ti PM: Progress, Opportunities and Challenges*, Key Engineering Materials, Vol. 520, pp. 1-7, 2012
7. P. J. Blau, R.R. Dehoff, *Development of a Two-body Wet Abrasion Test Method with Attention to the Effects of Reused Abradant*, Wear, Vol. 11, Issue 11.040, pp. 40, 2012
8. S. F. Franzen, J. Karlsson, R.R. Dehoff, U. Ackelid, O. Rios and W. H. Peter, *Microstructural Properties of Gamma Titanium Aluminide Manufactured by Electron Beam Melting*, Supplemental Proceedings: General Paper Selections, Vol. 3, 2011.
9. R.R. Dehoff and S.S. Babu, *Characterization of Interfacial Microstructures in 3003 Aluminum Alloy Blocks Fabricated by Ultrasonic Additive Manufacturing*, Acta Materialia, Vol. 58, Issue 13, pp. 4305-4315, 2010.
10. Schick, Hahnen, R.R. Dehoff, Collins, S. S. Babu, Dapino and Lippold, *Microstructural Characterization of Bonding Interfaces in Aluminum 3003 Blocks Fabricated by Ultrasonic Additive Manufacturing*, Welding Journal, Vol. 89, Issue 5, pp. 105S-115S, 2010.
11. R.R. Dehoff, P.M. Sarosi, P.C. Collins, H.L. Fraser, M.J. Mills, *Microstructures of LENS<sup>TM</sup> Deposited Nb-Si Alloys*, Mat. Res. Soc. Symp. Proc., Vol 842, 285 (2005).
12. R.R. Dehoff, P.M. Sarosi, P.C. Collins, H.L. Fraser, M.J. Mills, *Microstructural Evaluation of LENS<sup>TM</sup> Deposited Nb-Ti-Si-Cr Alloys*, Mat. Res. Soc. Symp. Proc., Vol 753, 77 (2003).

## **Honors and Awards**

**2013** UT Battelle Awards Night – Early Career Award for Engineering

**2012 R&D 100 Award**– NanoSHIELD Coating [Nano-Super Hard-InExpensive-Laser Deposited Coatings]

**2012 R&D 100 Award**– Low-Cost, Lightweight Robotic Hand Based on Additive Manufacturing

**2007** Outstanding Doctoral Student, NASA/DoD URETI for Aeropropulsion & Power Technology

**2001** Arthur Watts Scholarship, The Ohio State University

**2000** Boyd Engineering Scholarship, The Ohio State University

**1999** HV Glunz Scholarship, The Ohio State University

**1998** Demorest Metallurgical Engineering Scholarship, The Ohio State University

**1997-99** National Buckeye Award

**1997** Scarlet and Gray Scholarship