

## Benjamin Boesl

### 1. Name and Academic Rank

Benjamin Boesl, Associate Professor, Associate Chair  
Department of Mechanical and Materials Engineering

### 2. Education

<u>Institution</u>	<u>Degree</u>	<u>Dates</u>
University of Florida	Aerospace Engineering	Ph.D. – 2009
University of Florida	Aerospace Engineering	M.S. – 2009
University of Florida	Aerospace Engineering	B.S. – 2005

### 3. Academic experience

Associate Professor	MME Dept. FIU	2018-present
Undergraduate Prog. Dir.	MME Dept. FIU	2017-present
Assistant Director	AMERI, FIU	2016-2018
Assistant Professor	MME Dept. FIU	2012-2018

### 4. Non-academic experience

Post Doctorate Scholar	US Army Research Lab	2009-2012
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### 5. Certifications or professional registrations

N/A

### 6. Current membership in professional organizations

The Mineral, Metal and Material Society (TMS)  
American Society of Mechanical Engineers (ASME)  
American Institute of Aeronautics and Astronautics (AIAA)

### 7. Honors and awards

FIU Top Scholar - Junior Faculty with Significant Grants (Sciences)  
Nanomaterials and Energy Prize (Best Paper in the journal), 2020

### 8. Service activities (within and outside of the institution)

Faculty Advisor to the ASME Student Chapter at FIU, College Curriculum Committee, and several faculty search & screen committees, NSF Reviewer, DOE Reviewer, ARO Reviewer

### 9. Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- J Bustillos, X Lu, P Nautiyal, C Zhang, B Boesl, A Agarwal. Boron Nitride Nanotube–Reinforced Titanium Composite with Controlled Interfacial Reactions by Spark Plasma Sintering. *Advanced Engineering Materials*, 2000702

- A Nisar, C Zhang, B Boesl, A Agarwal. A perspective on challenges and opportunities in developing high entropy-ultra high temperature ceramics. *Ceramics International* Volume 46, Issue 16, Part A, November 2020, Pages 25845-25853
- T Paul, C Zhang, B Boesl, A Agarwal. Analytical Review of Reinforcement Addition Techniques during Ultrasonic Casting of Metal Matrix Composites. *Advanced Engineering Materials*, 2000524
- J Bustillos, A Loganathan, R Agrawal, BA Gonzalez, MG Perez, S Ramaswamy, B. Boesl, A Agarwal. Uncovering the mechanical, thermal, and chemical characteristics of biodegradable mushroom leather with intrinsic antifungal and antibacterial properties. *ACS Applied Bio Materials* 3 (5), 3145-3156
- C Young, C Zhang, A Loganathan, P Nautiyal, B Boesl, A Agarwal. Densification and oxidation behavior of spark plasma sintered Hafnium Diboride-Hafnium Carbide composite. *Ceramics International*. Volume 46, Issue 10, Part A, July 2020, Pages 14625-14631
- JF Rojas-Sanchez, T Schmack, B Boesl, R Bjekovic, F Walther. Strain rate-dependent characterization of carbon fibre-reinforced composite laminates using four-point bending tests. *Journal of Reinforced Plastics and Composites* 39 (5-6), 165-174
- P Nautiyal, N Denis, T Dolmetsch, C Zhang, B Boesl, A Agarwal. Interface Engineering and Direct Observation of Strengthening Behavior in Field-Sintered Boron Nitride Nanotube-Magnesium Alloy Composite. *Advanced Engineering Materials*. <https://doi.org/10.1002/adem.202000170>
- J Bustillos, C Zhang, A Loganathan, B Boesl, A Agarwal. Ultralow Temperature Densification of a Titanium Alloy by Spark Plasma Sintering. *Advanced Engineering Materials* 2000076
- S Bhusal\*, C Zhang, J Bustillos\*, P Nautiyal\*, B Boesl, A Agarwal. *A computational approach for predicting microstructure and mechanical properties of plasma sprayed ceramic coatings from powder to bulk*. *Surface and Coatings Technology* 374, 1-11
- P Nautiyal, C Zhang, V Champagne, B Boesl, A Agarwal. *In-situ creep deformation of cold-sprayed aluminum splats at elevated temperatures*. *Surface and Coatings Technology* Surface and Coatings Technology 372, 353-360
- P Nautiyal\*, C Zhang, A Loganathan\*, B Boesl, A Agarwal. *Surface and Coatings Technology* 372, 353-360 *High Temperature Mechanics of Boron Nanotube "Buckypaper" for Engineering Advanced Structural Materials*. *ACS Applied Nano Materials* 2019 2, 7, 4402-4416

**10. Briefly list the most recent professional development activities**

Received a Summer Faculty Fellowship at the Kansas City National Security Campus, a DOE laboratory administered by Honeywell FM&T.