

## Benjamin Boesl

### Name and academic rank:

Benjamin Boesl, Assistant Professor

### Degrees with fields, institution, and date:

University of Florida College of Engineering Gainesville, FL

Ph.D. - Aerospace Engineering: GPA: 3.80 Spring '05 to Spring '09

Dissertation Topic: Fracture Mechanisms in Nanocomposites using Multi-Scale Analysis

Advisor: Dr. B. V. Sankar, Co-Advisor: Dr. W. G. Sawyer

University of Florida College of Engineering Gainesville, FL

Masters of Science - Aerospace Engineering: GPA 3.80 Spring '05 to Spring '09

University of Florida College of Engineering Gainesville, FL

Bachelors of Science - Aerospace Engineering: GPA 3.41 Cum Laude Fall '00 to Fall '04

### Number of years service of this faculty, date of original appointments, and dates of advancement in rank:

2 Years, Assistant Professor, Mechanical and Materials Engineering Department (Spring 2012 to Current)

### Other related experience:

U.S. Army Research Laboratory – Materials Division Aberdeen, MD

ORISE/ORAU Post Doctorate Researcher – Materials Response and Design Branch May 2009 to June 2012

### Consulting, patents, etc.:

United States Patent 20070225178

Inventors: Sawyer, Wallace Gregory. Boesl, Ben Peter. McCook, Nicole Lee. Burris, David L.

Title: Wear resistant lubricious composite.

Publication Date: 09/27/2007

### State in which registered:

N/A

### Principal publications (Last five years):

B. Boesl, D. Lahiri, S. Behdad, A. Agarwal. Direct Observation of CNT Induced Strengthening in Al Composite via In Situ Tensile Tests. Submitted to Journal Carbon.

S. B Pitchuka; B. Boesl; C. Zhang; D. Lahiri; A. Nieto; G Sundararajan; A. Agarwal. Dry Sliding Wear Behavior of Cold Sprayed Aluminum Amorphous/Nanocrystalline Alloy Coatings. Submitted to Journal Wear

S. Behdad, **B. Boesl**. Multiscale Characterization and Experimentation on Particulate Reinforced Composites. 54th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, 2013, 10.2514/6.2013-1957

**B. Boesl**, G. R. Bourne, and B. V. Sankar. In situ multiscale analysis of fracture mechanisms in nanocomposites. Composites: Part B 42 (2011) 1157–1163.

C-F. Yen, **B. Boesl**, A. Quabili, J. Yu, S. Ghiorse. Dynamic Characterization and Modeling of 3D Woven Composite Ballistic Behavior. Proceedings of the American Society of Composites, 26th Annual Technical Conference. 2011 (#1137)

C.-F. Yen and **B. Boesl**. Progressive Failure Micromechanical Modeling of 3D Woven Composites. Proceedings of the 52<sup>nd</sup> Annual AIAA SDM Conference. 2011 (AIAA-2011-1796).

**B. Boesl**, R. L. Karkkainen, and C.-F. Yen. Modeling Dynamic Response of 3D Woven Composite Protection Systems. Proceedings of the American Society of Composites, 25th Annual Technical Conference. 2010 (#1148)

R. L. Karkkainen, **B. Boesl**, and C.-F. Yen. Dynamic Micromechanical Modeling for Failure Investigation of 3D Woven Composites. Proceedings of the American Society of Composites, 25th Annual Technical Conference. 2010 (#1146)

**B. Boesl**, G. R. Bourne, B. V. Sankar, R. L. Karkkainen, and W. Greg Sawyer. Analysis of Fracture Mechanisms in Composites Reinforced with Hard, Metal-Oxide Nanoparticles Using a Multi-scale Approach. Proceedings of Society for the Advancement of Material and Process Engineering Annual Meeting. 2010 (1-11).

R. L. Karkkainen, C.-F. Yen, and **B. Boesl**. Dynamic Modeling for Rate-dependent Interface Failure of Composite Materials. Proceedings of Society for the Advancement of Material and Process Engineering Annual Meeting. 2010 (1-11).

David L. Burris, **B. Boesl**, Gerald R. Bourne, W. Gregory Sawyer. Polymeric Nanocomposites for Tribological Applications. Macromol. Mater. Eng. 2007, 292, 387–402.

N.L. McCook, **B. Boesl**, D.L. Burris and W.G. Sawyer. Epoxy, ZnO, and PTFE nanocomposite: friction and wear optimization. Tribology Letters 2006, Vol 22, Num 3, 253-257.

**Memberships in scientific and professional societies:**

American Institute of Aeronautics and Astronautics 2009 to Present

AIAA Young Professionals Committee (YPC) Member 2012 to Present

Member of the YPC Communications Sub-committee 2012 to Present

YPC Liaison to the Career and Workforce Development Committee 2012 to Present

American Society of Mechanical Engineers 2011 to Present

Faculty Advisor to FIU ASME Student Chapter 2012 to Present

American Society of Composites 2005 to Present

Society for the Advancement of Materials and Process Engineering 2009 to Present

Society of Tribologists and Lubrication Engineers 2005 to 2008

**Honors and awards:**

Florida Space Grant Research Award 2008

**Institutional and professional services (Last five years):**

**Professional Development Activities (Last five years):**

JEOL 4500 Focused Ion Beam Operation 2012

Advanced Options in LS-DYNA – LSTC (Al Tabiei) 2011

An Introduction to the IMPETUS Solver 2010

Designing, Testing, and Assessing for Survivability – Dyanalytics, inc. 2009