

CURRICULUM VITAE

J. Gary Bledsoe

Biomedical Engineering Building
Saint Louis University
3507 Lindell Blvd.
St. Louis, MO 63103

314-977-8357 Office
314-977-8288 Fax
bledsoeg@slu.edu

EDUCATION

DEGREE	DISCIPLINE	INSTITUTION	YEAR
Bachelor of Science	Engineering Technology	University of Tennessee, Martin	1989
Master of Science	Biomedical Engineering	University of Memphis	1995
Doctor of Philosophy	Engineering	University of Memphis	1999

EXPERIENCE

POSITION	DEPARTMENT/DIVISION	INSTITUTION/COMPANY	PERIOD
Associate Engineer	Network Design	Contel of Virginia, Inc.	1989-90
Engineer	Network Design	Contel of Virginia, Inc.	1990-91
Research Assistant	Biomedical Engineering	University of Memphis	1992-99
Assistant Professor	Biomedical Engineering	Saint Louis University	1999-05
Associate Professor	Biomedical Engineering	Saint Louis University	2005-P
Interim Associate Dean	Parks College of Engineering, Aviation and Technology	Saint Louis University	2006-07
Associate Dean	Parks College of Engineering, Aviation and Technology	Saint Louis University	2007-08

HONORS/AWARDS

HONOR/AWARD	INSTITUTION/COMPANY/ORGANIZATION	YEAR
Herff College of Engineering Internship	University of Memphis	1995
St. Francis of Assisi Fellowship	University of Memphis	1997

TEACHING EXPERIENCE

SUBJECT (<i>Undergraduate</i>)	INSTITUTION
Pre-Algebra, College Algebra, Trigonometry	University of Tennessee, Martin
Pre-Calculus, Calculus I, Calculus II	University of Memphis
Mechanics of Materials, Biomechanics, Materials Science, Biomaterials, Tissue Engineering, Fluids, Senior Projects	Saint Louis University

PROFESSIONAL MEMBERSHIPS

Biomedical Engineering Society
Society for Biomaterials
American Society for Engineering Education

RESEARCH/SCHOLARSHIP ACTIVITIES

PUBLICATIONS

REFEREED JOURNAL PUBLICATIONS

1. W. Huang, R. T. Yen, M. McLaurine, and G. Bledsoe. "Morphometry of the Human Pulmonary Vasculature." *Journal of Applied Physiology*. 81: 2123-2133, 1996.
2. J. Gary Bledsoe and Steven M. Slack. "Tissue Factor Expression by Rat Osteosarcoma Cells Adherent to Tissue Culture Polystyrene and Selected Orthopaedic Biomaterials." *Journal of Biomaterials Science, Polymer Edition*. 9: 1305-1312, 1998.
3. J. Gary Bledsoe. "Determining the Rules: Applying Ethics in a Tissue Engineering Course." *Proceedings of the American Society of Engineering Education*, June 2002.
4. J. Gary Bledsoe, Vincent T. Turitto, and Steven M Slack. "Cyclic Mechanical Strain Alters Procoagulant Activity by Rat Osteosarcoma Cells Cultured on Titanium Substrates." *Journal of Biomedical Materials Research*, 70A(3): 490-496, September 2004.
5. Stacy Skornia, J. Gary Bledsoe, Rebecca Willits, "Tensile and Peel Properties of poly(ethylene glycol)-diacrylate Hydrogels." *Journal of Applied Biomaterials and Biomechanics*, 5: 176-183, September-December 2007.
6. Brian Fissel, MD, Berton R. Moed, MD and J. Gary Bledsoe. "Biomechanical Comparison of A 2 And 3 Proximal Screw Configured Antegrade Piriformis IM Nail With A Trochanteric Reconstruction Nail In An Unstable Subtrochanteric Fracture Model." *Journal of Orthopaedic Trauma*, 22:337-341, May/June 2008
7. Kevin Quigley, MD, Dirk Alander, MD and J. Gary Bledsoe. "An In-Vitro Biomechanical Investigation: Variable Positioning of Leopard™ Carbon Fiber Interbody Cages." *Journal of Spinal Disorders and Techniques*, 21(6): 442-447, August 2008.
8. Chris Lenarz, MD., Gary Bledsoe, PhD, J. Tracy Watson, MD, "Circular External Fixation Frames with Divergent Half Pins: A Biomechanical Study." *Clinical Orthopaedics and Related Research*, 466(12): 2933-2939, December 2008.
9. Scott Zehnder, J. Gary Bledsoe, and Aki Puryear, "The Effects of Screw Orientation in Severely Osteoporotic Bone: A comparison with locked plating." *Clinical Biomechanics*, 24(7):589-594, August 2009.
10. Randall Otto, MD, Moed, Berton R. MD, and Bledsoe, J. Gary, "Biomechanical Comparison of Polyaxial-Type Locking Plates and a Fixed-Angle Locking Plate for Internal Fixation of Distal Femur Fractures." *Journal of Orthopaedic Trauma*, 23(9):640-644, October 2009.
11. Grisell, Margaret, MD, Moed, Berton R. MD, and Bledsoe, J. Gary, "A Biomechanical Study of the Comparison of Proximal Screw Configurations in a Subtrochanteric Fracture Model." *In Review Journal of Orthopaedic Trauma*.

PRESENTATIONS and CONFERENCE PROCEEDINGS

INVITED PRESENTATIONS

1. J. Gary Bledsoe. "The Effects of Mechanical Loading on Osteoblast-like Cells." Presented at the NSF Industry/University Center for Biosurfaces Meeting in Memphis, February 6-7, 1997.
2. J. Gary Bledsoe. "Functional Biomaterial Coatings: Where Do I Go from Here?" Presented at the UM/UT Joint Program Seminar Series, University of Memphis, Memphis, TN, February 25, 2005.
3. J. Gary Bledsoe. "Improving the Surface of Orthopaedic Implants: Undergrads Pursuing Novel Technologies," Presented at the Illinois Institute of Technology, Department of Biomedical Engineering Graduate Seminar Series, Chicago, IL, March 31, 2006.

CONFERENCE PROCEEDINGS

1. Wei Huang, Matt McLaurine, Gary Bledsoe, and Michael R. T. Yen. "Morphometry of the Human Pulmonary Arteria and Venous Trees." Presented at the Annual Meeting of the Biomedical Engineering Society, Memphis, TN, October 21-24, 1993.
2. W. Huang, M. McLaurine, G. Bledsoe, M. Headrick, and R. T. Yen. "Morphometry of the Human Pulmonary Vasculature." Presented at the Annual Meeting of the Federation of American Societies for Experimental Biology, Atlanta, GA, 1995.
3. J. G. Bledsoe, S. M. Slack, V. T. Turitto, J. Furgeson. "Expression of Tissue Factor by Rat Osteosarcoma Cells Adherent to Tissue-culture Polystyrene and Selected Orthopedic Biomaterials." Presented at the Annual Meeting of the American Chemical Society, San Francisco, CA, April 15-19, 1997.
4. J. G. Bledsoe and S. M. Slack. "Expression of Tissue Factor by Rat Osteosarcoma Cells Adherent to Tissue-culture Polystyrene and Selected Orthopedic Biomaterials." Presented at the First Tennessee Conference on Biomedical Engineering, Memphis, TN, April 4-5, 1998.
5. J. Gary Bledsoe and Steven M. Slack. "Cyclic Mechanical Strain Alters the Expression of Procoagulant Activity by Rat Osteosarcoma Cells cultured on Titanium Substrates." Presented at the First Joint Meeting of BMES and EMBS, Atlanta, GA, October 13-16, 1999.
6. J. Gary Bledsoe, Rebecca K. Willits, Lucas Elmer, Chris Strube, Patricia Arauz. "Tensile Properties of Randomly Oriented Collagen Gels of Varying Concentration." Presented at the Annual Meeting of the Biomedical Engineering Society, Durham, N.C., October 4-7, 2001.
7. J. Gary Bledsoe, "Determining the Rules: Applying Ethics in a Tissue Engineering Course." Presented at the Annual Meeting of the American Society of Engineering Education, Montreal, Quebec, Canada, June 16-19, 2002.
8. J. Gary Bledsoe, "Ethical Discussions in an Undergraduate Tissue Engineering Course." Presented at the 2nd Joint Conference of the IEEE Engineering in Medicine and Biology and the Biomedical Engineering Society. Houston, TX, October 2002
9. Bret G. Kelso, Gary Bledsoe, Rebecca K Willits, "Between the Sheets-Mechanical Properties at the Interface of Two Polymer Gels." Presented at 2003 Summer Bioengineering Conference, Key Biscayne, FL, June 25-29, 2003.
10. B. Kelso, P. Arauz, J. G. Bledsoe, R. Kuntz Willits, "Fabricating Composite Hydrogels for Orthopedic Tissue Engineering Applications." Presented at the 2003 Annual Fall Meeting of the Biomedical Engineering Society, Nashville, TN, October 1-4, 2003.
11. J. Gary Bledsoe and Rebecca K. Willits. "Interfacial Strength of Layered Composite Poly(ethylene glycol) Hydrogels." Presented at the 20th Annual Fall Meeting and Exposition of the Society for Biomaterials, Memphis, TN, April 2005.
12. Brian Fissel, MD, Berton R. Moed, MD and J. Gary Bledsoe, "Biomechanical Comparison of A 2 And 3 Proximal Screw Configured Antegrade Piriformis IM Nail With A Trochanteric Reconstruction Nail In An Unstable Subtrochanteric Fracture Model." Presented at the 2005 Annual Meeting of the Mid-America Orthopaedic Association, Amelia Island, FL April 2005.
13. M. Sridharan, M. Peterson, R. Kokenyesi, and G. Bledsoe, "Mechanical Properties of Mouse Fetal Membranes: Effect of Thrombospondin-2." Presented at the 2005 Annual Fall meeting of the Biomedical Engineering Society, Baltimore, MD, September 29-October 1, 2005.
14. Kevin Quigley, MD, Dirk Alander, MD, J. Gary Bledsoe, "An In-Vitro Biomechanical Investigation: Variable Positioning of Leopard™ Carbon Fiber Interbody Cages." Presented at the 2006 Annual Meeting of the Mid-America Orthopaedic Association, San Antonio, TX, April 19-23, 2006.
15. Meg Grisell, Roy Moed, Gary Bledsoe "Biomechanical Study of the Comparison of Proximal Screw Configurations in a Subtrochanteric Fracture Model" Orthopaedic Research Society, Boca Raton, FL, February 11-14, 2007.

16. C. J. Lenarz, J. G. Bledsoe, and J. T. Watson. "Divergent Half Pin Frames: A Biomechanical Comparison to Traditional Ring Fixator Fxation." Presented at the 2007 Annual Meeting of the Mid-America Orthopaedic Association, Boca Raton, FL, April 11-15, 2007.
17. M. K Grisell, B. R Moed, and J. G. Bledsoe. "Biomechanical Comparison of Proximal Screw Construction, Subtrochanteric Fractures of the Femur." Presented at the Annual Meeting of the Mid-America Orthopaedic Association, Boca Raton, FL, April 11-15, 2007.
18. Phillips MT, Alander DH, Oliver D and Bledsoe JG, "Biomechanical Study of the Leopard Carbon Fiber Interbody Cage in Variable Positions Under Shear Stress." Presented at the Annual Meeting of the Mid-America Orthopaedic Association, Boca Raton, FL, April 13, 2007.
19. Comeron Ghobadi, Harsh Patel, and J. Gary Bledsoe. "Methods for Loading Multilevel Lumbar Spine Segments: Force vs. Displacement." Presented at the 2008 Annual Fall meeting of the Biomedical Engineering Society, St Louis, MO, October 1-4, 2008.
20. Zehnder, Scott W, Puryear, Aki S, and Bledsoe JG. "The Effects of Screw Orientation in Severely Osteoporotic Bone: A comparison with locked plating." Presented at the Annual Meeting, Mid-America Orthopaedic Association, Amelia Island, FL, April 2009.
21. Otto, Randall J, Moed, Berton R, and Bledsoe, J. Gary. "Biomechanical Comparison of Polyaxial Type Locking Plates and a Fixed-Angle Locking Plate for Internal Fixation of Distal Femur Fractures." Presented at the Annual Meeting, Mid-America Orthopaedic Association, Amelia Island, FL, April 2009.
22. Brown, Emily and Bledsoe, J. Gary, "Biomechanical Properties of Formalin Fixed Lumbar Intervertebral Discs." 2009 Annual Fall meeting of the Biomedical Engineering Society, St. Louis, MO, October 7-10, 2009.
23. Mudd, Christopher T.; Watson, J.Tracy; Bledsoe, Gary. "Role of the Proximal Tibio-Fibular Joint and Interosseous Membrane on Lateral Tibial Plateau Fracture Stability:A Biomechanical Evaluation." Orthopaedic Trauma Association 25th Anniversary Annual Meeting, October 7-10, 2009

FUNDING

1. J. Gary Bledsoe, "Surface Tissue Factor Activity of Rat Calvarial Osteoblasts: Effect of Cyclic Mechanical Strain." Beaumont Faculty Development Fund of Saint Louis University, February 2000. (\$5,000.00) **FUNDED**
2. J. Gary Bledsoe, "Comparison of a 3 Proximal Screw Femoral Intramedullary Nail with a Reconstruction Nail in a Subtrochanteric Fracture Model." DePuy ACE, Inc., October 2003 (\$20,454.00) **FUNDED**
3. J. Gary Bledsoe, "Sticking it to Medical Implants: Is Polymer Coated Titanium Strong Enough?" Summer Research Award of Saint Louis University, January 2004 (\$7,759.00) **FUNDED**
4. J. Gary Bledsoe. "An In-Vitro Biomechanical Investigation: Variable Positioning of LeopardTM Carbon Fiber Interbody Cages." DePuy Spine, Inc., January 2005 (\$15,000.00) **FUNDED**
5. J. Gary Bledsoe. "Effects of Annular Tears on Intradiscal Pressure." DePuy Spine, Inc., November 2009 (\$26,861.25) **FUNDED**

GRADUATE STUDENTS AND RESIDENTS MENTORED

Cris WC Liu, MS
Jonathan Likarish, MS
James Buchheit, MS
Rebecca Cardin, MS
Colleen Steinkoenig, MS
Meghan Fessenden, MS

Brian Fissel, MD
Jason Joice, MD

Frank Corrigan, MD
Kevin Quigley, MD
Margaret Grisell, MD
Mathew Phillips, MD
David Ajibade, MD
Chris Lenarz, MD
Christopher Mudd, MD
Scott Zehnder, MD
Cody Bellard, MD

Randy Otto, MD
Rob Otto, MD
Charles Grimshaw, MD
Brad Warlick, MD
Maegan Wallace, MD
A.D. Davis, MD
Chris O'Boynick, MD
Paul Halgren, DDS

SERVICE ACTIVITIES

BME Faculty Search Committee (for BME chair, 2001, 2002, committee chair 2003)
SLU 2000 New Faculty Positions Review Committee, member 2000
Science Fair Judge at University City Middle School, February 2000
Wildwood Park Neighborhood Association
 Neighborhood Watch Volunteer 1999 – **Present**
 Secretary/Treasurer 2003 – 2007.
Summer Research Award, Review Committee Member 2002
Calculus Coordinating Committee, member 2001-2003
Parks Faculty Affairs Committee, member 2000-2003
Biology Faculty Search Committee, member 2001
Parks Academic Affairs Committee, member 2001-2003, Chair 2001-2003
Parks Assessment Council, member 2002
Alpha Chi Honor Society, Sponsor, 2003 – 2006
Orthopedic Surgery Research Committee, BME representative 2003- **Present**
Parks College of Engineering, Aviation and Technology Executive Committee (Secretary, Fall 2003; Vice-Chair, Spring 2004; Parliamentarian, 2004- 2005; Chair, 2005-2006, 2009-**Present**)
Reviewer, Journal of Orthopaedic Trauma, 2004 – **Present**
SLU Undergraduate Initiatives Committee, 2005- 2006
Center for Orthopaedic Biomechanics and Related Applications, Associate Director, 2006 - **Present**
Sigma Xi Poster Competition Judge, 2006
Habitat for Humanity, volunteer 2002 – **Present**
Parks College of Engineering, Aviation and Technology Assessment Coordinator 2006-2009
Aviation Science Search Committee, Chair 2007-2008
BMES Annual Meeting Planning Committee (for 2008 meeting in St Louis) 2006-2008
Higher Learning Commission Criterion 4 Subcommittee (at SLU) 2009-**Present**
Parks College of Engineering, Aviation and Technology Rank and Tenure Committee 2009-**Present**