

CURRICULUM VITA

Name and academic rank: Janet Gbur
Ph.D. Student Materials Science and Engineering
Case Western Reserve University

Degrees:	M.S.E. Mechanical Engineering	Youngstown State University	2011
	B.E. ICP-Materials Engineering	Youngstown State University	2008
	B.S. Biology/Pre-Medicine	Kent State University	2006

Related experience:

2013 Visiting Graduate Student, Biomedical Engineering, Cleveland Clinic, Lerner Research Institute
2013 *Spring* Teaching Assistant, EMSE 303 Mechanical Behavior, Case Western Reserve University
2012 *Fall* Teaching Assistant, EMSE 372 Materials Related to Design, Case Western Reserve University
2012 *Spring* Teaching Assistant, EMSE 303 Mechanical Behavior, Case Western Reserve University
2011-2013 Graduate Assistant, Materials Science and Engineering, Case Western Reserve University
2008-2012 Engineering Intern-Research, CleveMed
2010-2011 Research Assistant IV, Mechanical and Industrial Engineering, Youngstown State University
2010 *Fall* Teaching Assistant, ENGR 1550 Engineering Concepts, Youngstown State University
2010 *Summer* Lab Assistant II, Mechanical and Industrial Engineering, Youngstown State University
2010 *Spring* Lab Assistant I, Mechanical and Industrial Engineering, Youngstown State University
1991-1992 Student Intern, Department of Orthotics and Prosthetics, The Cleveland Clinic Foundation
1991 Student Intern, Shamp Prosthetic Orthotic Clinic, Inc.
1990 Student Intern, Shamp Professional Center, Inc.

Consulting and patents:

Patent application: "Electrode for Measuring Electrophysiological Signals," Application No. 12/509,858
Filing date July 27, 2009, Attorney docket No. CMD-071

Professional society membership:

ACerS, The American Ceramic Society
AIST, Association for Iron & Steel Society
ASM International
ASTM, American Society for the Testing of Materials
E08, Fatigue and Fracture, Committee Member
E28, Mechanical Testing, Committee Member
MRS, Materials Research Society
MSNO, Microscopy Society of Northeastern Ohio
SAMPE, Society for the Advancement of Material and Process Engineering
TMS, The Minerals, Metals and Materials Society

Certifications:

NIH Responsibility in Research, May, 2012
Laboratory & Animal Care Use, NEOUCOM IACUC, May 26, 2010

Honors and awards:

Youngstown State University Graduate Commencement Speaker, May 2011
Omicron Delta Kappa, 2010
Golden Key International Honour Society, 2009
Order of the Engineer, 2007
Honor Ring, Zeta Tau Alpha Fraternity (highest service award given nationally to an individual), 2002
Who's Who Among Students in American Universities and Colleges, 1995-1996
Arby's Scholarship Award for Outstanding Undergraduate Student Leader, 1995
Order of Omega, 1995

Institutional and professional service:

University committees and service:

Materials Research Society University Chapter, Founding President, Case Western Reserve University, 2013
Introduce a Girl to Engineering, WISER Program, Volunteer, Case Western Reserve University, February 2013
Graduate Materials Society, President, Case Western Reserve University, 2012-2013
ASM Materials Camp, Student Assistant, Youngstown State University, July 2010
Student Trustee, Youngstown State University, 1995
Board of Trustees - Student Affairs Committee, Youngstown State University, 1995
Board of Trustees - Intercollegiate Athletics Committee, Youngstown State University, 1995

Community professional and public discipline related service:

Northern Strut Twirling Teams, Owner/Director, 1995-2013
Boardman High School Spartan Twirler Instructor, 2002-2013
Pink Ribbon Tea Committee, The Junior League of Youngstown, 1997-2013
Case Western Reserve University Intersections Judge, 2012
Solon Middle School Science Fair Judge, 2011
National Co-Chair, Advisor Academy for Leadership Development, Zeta Tau Alpha Fraternity, 2000-2004
Membership Co-Chair, Youngstown Panhellenic Association, 1999-2001
Board of Directors, The Junior League of Youngstown, 1997-2001
Province President XII-A, Zeta Tau Alpha Fraternity, 1997-2000
General Advisor, Zeta Tau Alpha Fraternity-Zeta Gamma Chapter, 1996-1997

Professional development:

Funded grants:

“Mechanical Characterization of 316 LVM Wires: A Comparative Study of Flex Bending Fatigue and Rotating Bending Fatigue and its Utility in Fatigue Testing for Biomedical Applications” (J. Gbur, PI), Case Western Reserve University, ASTM International Student Grant, Funded \$500.
“Self Abrading Rapidly Applied (SARA) Electrode” Research Assistant (S. Weimer, PI), Cleveland Medical Devices, Inc., National Institute of Health 2R44NS053116-02A1, Funded \$571,880.
“Biomechanical Evaluation of Proximal Femur Failure Strength after Partial/Full Implant Removal” Research Assistant (H. Marie, PI), Youngstown State University, St. Elizabeth Health Partners Medical Research Committee, Funded \$10,000.
“Biomechanical and Elastographic Analysis of Mesenchymal Stromal Cell Treated Tissue Following Surgery” Research Assistant (H. Marie, PI), Youngstown State University, St. Elizabeth Health Partners Medical Research Committee, Funded \$5,000.
“Adherence Activity & Outcome Measure Belt for Yoga” Research Assistant (M. Tarler, PI), Cleveland Medical Devices, Inc., National Institute of Health 1R43AT004122-01, Funded \$245,093.
“Clinical Step Recorder” Research Assistant (M. Tarler, PI), Cleveland Medical Devices, Inc., National Institute of Health 5R44HL083996-03, Funded \$695,678.
“Hot Flash Ambulatory Monitor” Research Assistant (M. Tarler, PI), Cleveland Medical Devices, Inc., National Institute of Health 1R43AT003215-01, Funded \$250,000.
“Novel Fast Install EEG Electrode” Research Assistant (S. Weimer, PI), Cleveland Medical Devices, Inc., National Institute of Health 1R43NS053116-01A2, Funded \$182,648.
“Ultrathin Sensor of Force Direction and Magnitude” Research Assistant (M. Tarler, PI), Cleveland Medical Devices, Inc., National Institute of Health 5R44HD041853-03, Funded \$414,497.

Publications:

“Biomechanical Response of Composite Bone Following Removal of Proximal Femoral Fixation Hardware” JL Gbur, Thesis, Youngstown State University Department of Mechanical and Industrial Engineering, May 4, 2011.
“Experimental and Finite Element Analysis of Tong Load Slip Versus Clamping Force” Editing, DR Verenski PE, DH Suchora PhD PE, CW Allen, Proceedings of the ASME 2010 International Mechanical Engineering Congress & Exposition, IMECE2010, November 12-18, 2010, Vancouver, British Columbia, Canada.
“Allen Hunter’s Youngstown State University X-Ray Structure Analysis Lab Manual: A Beginner’s Introduction” Editing, AD Hunter, Winter 1999 Draft Release: Version W99D1.

Presentations:

- “Fatigue Analysis of Laser-Treated Nitinol Wires” JL Gbur, H Lavvafi, M Young, JJ Lewandowski, TMS Annual Meeting, March 2013.
- “Bending Fatigue of Laser Machined 316LVM and Nitinol Wires,” JL Gbur, H Lavvafi, M Young, JJ Lewandowski, ASTM E08 Fatigue and Fracture Student Presentation, November 2012.
- “Rotating Bending Fatigue and Flex Bending Fatigue of Nitinol and 316LVM Wires Used in the Biomedical Industry,” JL Gbur, H Lavvafi, JR Lewandowski, M Young, JJ Lewandowski, MS&T Novel Methods for Deformation Testing of Metals and Materials Symposium, October 2012.
- “Parametric Studies on Femtosecond laser cutting of Ni-Ti Shape Memory Alloys,” H Lavvafi, JL Gbur, JR Lewandowski, M Young, JJ Lewandowski, MS&T Novel Methods for Deformation Testing of Metals and Materials Symposium, October 2012.
- “Effects of Ultrafast Laser Micromachining on Structure and Mechanical Properties of 316 LVM Stainless Steel,” H Lavvafi, JL Gbur, M Young, D Davinski, JJ Lewandowski, TMS Fatigue and Corrosion in Metallic Materials: Fundamentals, Modeling and Prevention Symposium, March 2012.
- “Fun with Materials Science” JL Gbur, Physical Science Class, Poland High School, June 2011.
- “Biomechanical Response of Composite Bone Following Removal of Proximal Femoral Fixation Hardware” JL Gbur, Thesis Defense, Youngstown State University, May 2011.
- “Biomechanical Response of Composite Bone Following Removal of Proximal Femoral Fixation Hardware” JL Gbur, STEM Showcase, Youngstown State University, April 2011.
- “Biomechanical Response of Composite Bone Following Removal of Proximal Femoral Fixation Hardware” JL Gbur, Quest, Youngstown State University, April 2011.
- “YSU Department of Mechanical Engineering: Active Materials Research” JL Gbur, M McCombs, ASM Materials Camp, July 2010.

Posters:

- “Rotating Bending and Flex Bending Fatigue of Oxide-Finished Nitinol Wire” JL Gbur, JJ Lewandowski, TMS Annual Meeting, March 2013 and Research ShowCASE April 2013.
- “Rotating Bending and Flex Bending Fatigue of Oxide-Finished Nitinol Wire” JL Gbur, JJ Lewandowski, Research ShowCASE, Case Western Reserve University April 2013.
- “Nitinol Commercialization Accelerator – Ohio Third Frontier” JL Gbur, JR Lewandowski, H Lavvafi, M Young, D Schwam, JD McGuffin-Cawley, MV Nathal, S. Padula II, JJ Lewandowski, SAS Annual Conference, Research ShowCASE, Case Western Reserve University, April 2013.
- “Nitinol Commercialization Accelerator – Ohio Third Frontier” JL Gbur, JR Lewandowski, H Lavvafi, M Young, D Schwam, JD McGuffin-Cawley, MV Nathal, S. Padula II, JJ Lewandowski, SAS Annual Conference, TMS Annual Meeting, March 2012 and March 2013.
- “Nitinol Commercialization Accelerator – Ohio Third Frontier” JL Gbur, JR Lewandowski, H Lavvafi, M Young, D Schwam, JD McGuffin-Cawley, MV Nathal, S. Padula II, JJ Lewandowski, SAS Annual Conference, SAS Annual Conference, May 2012.