

CURRICULUM VITAE
OF
JU SUN
Department of Mechanical and Materials Engineering
College of Engineering and Computing
Florida International University

EDUCATION

- Ph.D., State University of New York at Stony Brook, Mechanical Engineering, Dec. 2002
- M.S., State University of New York at Stony Brook, Mechanical Engineering, Dec. 1999
- B.S., Beijing University of Technology, Thermal Energy Engineering, Jul. 1994

FULL-TIME ACADEMIC EXPERIENCE

- Florida International University, University Instructor, Mechanical Engineering, Aug. 2018
- Florida International University, Senior Instructor, Mechanical Engineering, Aug. 2012 – July 2018
- Florida International University, Instructor, Mechanical Engineering, Jan. 2007 ó Jul. 2012
- Florida International University, Visiting Instructor, Mechanical Engineering, Aug. 2004 ó Dec. 2006
- The University of Texas Medical Branch, Postdoctoral Fellow/Researcher, Center for Biomedical Engineering, Jul. 2003 ó Aug. 2004
- State University of New York at Stony Brook, Research Assistant, Mechanical Engineering, Aug. 1997 ó Aug. 2002

NON-ACADEMIC EXPERIENCE

- MesoScribe Technologies, Inc., Senior Research Engineer, Sep. 2002 ó Jun. 2003

EMPLOYMENT RECORD AT FIU

- University Instructor, Aug. 2018
- Senior Instructor, Aug. 2012 ó Jul. 2018
- Instructor, Jan. 2007 ó Jul. 2012
- Visiting Instructor, Aug. 2004 ó Dec. 2006

TEACHING AWARDS AND RECOGNITIONS

- Faculty Senate Award for Excellence in Teaching, FIU, Oct. 2014
- Faculty Council Award for Excellence in Teaching, College of Engineering and Computing, FIU, Nov. 2012
- Nomination to Dean's Award of Teaching, FIU, March 2007

TEACHING

- Undergraduate Courses Taught:
 - EGN 3311 Statics
 - EGN 3321 Dynamics
 - EGN 3343 Thermodynamics I
 - EML 4706 Design of Thermal/Fluids Systems
 - EML 4601 Principle of Refrigeration and Air Conditioning
 - EML 4906L Mechanical Engineering Lab
 - EML 3101 Thermodynamics II
 - EML 3126L Transport Phenomena Lab
 - EGN 3365 Materials in Engineering
- Course, Curriculum Development Activities:
 - Have developed the course EGN 3321 Dynamics into Hybrid mode.
 - Have worked with Dr. Sabri Tosunoglu (Department UPD) and other instructors to develop and implement the college-wide on-line common exam strategy for EGN 3311 Statics and EGN 3321 Dynamics.
- Other Teaching-Related Activities:

Have initiated course teaching in FIU Broward Pines Center via FEEDS video conference, including EGN 3311 Statics and EGN 3321 Dynamics.

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

- Have served in the Curriculum Committee of the Department
- Have served in Faculty Search and Screen Committee for Cluster Hiring of the CEC College
- Have served in the Non-Tenure-Track Promotion Committee of the Department
- Have served in the Outreach Taskforce Committee of the CEC College to promote FIU engineering programs to local high schools.

PUBLICATIONS IN DISCIPLINE

- Articles:
 1. B. Gong, J. Sun, G. Vargas, Q. Chang, Y. Xu, D. Srivastava, P. J. Boor, "Nonlinear Imaging Study of Extracellular Matrix in Chemical-Induced, Developmental Dissecting Aortic Aneurysm: Evidence for Defective Collagen Type III," *Birth Defects Research Part A: Clinical and Molecular Teratology*, Vol. 82, No. 1, pp. 16-24, January 2008.
 2. J. Sun, T. Shilagard, B. Bell, M. Motamedi, and G. Vargas, "In Vivo Multimodal Nonlinear Optical Imaging of Mucosal Tissue," *Optics Express*, Vol. 12, No. 11, pp. 2478-2486, May 2004.
 3. J. Sun, and J. P. Longtin, "Effects of A Gas Medium on Ultrafast Laser Beam Delivery and Materials Processing," *Journal of the Optical Society of America B*, Vol. 21, No. 5, pp. 1081–1088, May 2004.

Selected for collection by *Virtual Journal of Ultrafast Science*, Vol. 3, No. 5, 2004.

4. C. H. Fan, J. Sun, and J. P. Longtin, "Plasma Absorption of Ultrashort Laser Pulses in Dielectrics," *Journal of Heat Transfer, Special Issue on Micro/Nanoscale Heat and Mass Transfer, Transactions of ASME*, Vol. 124, No. 2, pp. 275–283, Apr 2002.
 5. C. H. Fan, J. Sun, and J. P. Longtin, "Breakdown Threshold and Localized Electron Density in Water Induced by Ultrashort Laser Pulses," *Journal of Applied Physics*, Vol. 91, No. 4, pp. 2530–2536, Feb 2002.
 6. J. Sun, and J. P. Longtin, "Inert Gas Beam Delivery for Ultrafast Laser Micromachining at Ambient Pressure," *Journal of Applied Physics*, Vol. 89, No. 12, pp. 8219–8224, Jun 2001.
 7. J. Sun, J. P. Longtin, and P. M. Norris, "Ultrafast Laser Micromachining of Silica Aerogels," *Journal of Non-Crystalline Solids*, Vol. 281, Issues 1–3, pp. 39–47, Mar 2001.
 8. J. Sun, J. P. Longtin, and T. F. Irvine Jr., "Laser-Based Thermal Pulse Measurement of Liquid Thermophysical Properties," *International Journal of Heat and Mass Transfer*, Vol. 44, No. 3, pp. 641–653, Feb 2001.
 9. J. Sun, and J. P. Longtin, "Novel Beam Delivery Technique for Ultrafast Laser Processing," *Thermal Science and Engineering*, Vol. 7, No. 6, pp. 81–85, Nov 1999.
- Proceedings
 1. B. Gong, J. Sun, G. Vargas, P. J. Boor, "Quantitative Morphologic Assessment on Extracellular Matrix in Chemical-Induced Developmental Dissecting Aortic Aneurysm using Multiphoton Fluorescence and Second Harmonic Generation Microscopy," *2006 Weinstein Cardiovascular Development Conference*, St. Petersburg, FL, U.S.A., May 11-13, 2006.
 2. J. Sun, T. Shilagard, B. Bell, M. Motamedi, and G. Vargas, "Imaging Oral Carcinogenesis using Two-Photon Fluorescence and Second Harmonic Generation Microscopy," *21st Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, U.S.A., Feb 12–13, 2004.
 3. J. Sun, and J. P. Longtin, "Effects of Gas Medium on Femtosecond Laser Beam Delivery," presented at the *21st International Congress on Applications of Lasers & Electro-Optics (ICALEO2002)*, Scottsdale, AZ, U.S.A., Oct. 14–17, 2002.
 4. J. Sun, C. H. Fan, J. P. Longtin, and S. Sampath, "Micromachining of Vias through Thermal-Sprayed Multilayer Structures Using Ultrafast Lasers," presented at the *2001 International Mechanical Engineering Congress and Exposition*, New York, NY, U.S.A., Nov 11–16, 2001.
 5. C. H. Fan, J. Sun, and J. P. Longtin, "Localized Electron Evolution Induced by Femtosecond Laser Pulses in Water," presented at the *2001 International*

Mechanical Engineering Congress and Exposition, New York, NY, U.S.A., Nov 11-16, 2001.

6. J. Sun, and J. P. Longtin, "Ultrafast Laser Micromachining with a Liquid Film," presented at the *20th International Congress on Applications of Lasers & Electro-Optics (ICALEO2001)*, Jacksonville, FL, U.S.A., Oct 15-18, 2001.
7. J. Sun, C. H. Fan, J. P. Longtin, and S. Sampath, "Laser Processing of Thermal Spray Patterns Using Femtosecond Pulses," presented at the *35th National Heat Transfer Conference*, Anaheim, CA, U.S.A., Jun 10-12, 2001. Proceedings of the 35th National Heat Transfer Conference, NHTC0161823.
8. C. H. Fan, J. Sun, and J. P. Longtin, "Time- and Space-Resolved Plasma Absorption of a Femtosecond Laser Pulse in Dielectrics," presented at the *35th National Heat Transfer Conference*, Anaheim, CA, U.S.A., Jun 10-12, 2001. Proceedings of the 35th National Heat Transfer Conference, NHTC01611222.
9. J. Sun, J. P. Longtin, and P. M. Norris, "Laser Processing of Silica Aerogels Using Ultrashort Pulses," presented at *2000 ASME International Mechanical Engineering Congress and Exposition*, Orlando, FL, U.S.A., Nov 5-10, 2000. Proceedings of the ASME, Heat Transfer Division 2000, Vol. 3, pp. 195-200.
10. J. Sun, J. P. Longtin, and P. M. Norris, "Micromachining of Silica Aerogels Using Femtosecond Lasers," presented at the *Brooklyn Polytechnic ME-100 Conference*, New York City, U.S.A., Nov 4-6, 1999.
11. J. Sun, J. P. Longtin, and T. F. Irvine Jr., "Laser-Based Measurement of Liquid Thermal Conductivity and Thermal Diffusivity," presented at the *33rd National Heat Transfer Conference*, Albuquerque, New Mexico, U.S.A., Aug 15-17, 1999. Proceedings of the 33rd National Heat Transfer Conference, NHTC996266.

PRESENTED PAPERS AND LECTURES

1. "Imaging Oral Carcinogenesis using Two-Photon Fluorescence and Second Harmonic Generation Microscopy," *21st Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, U.S.A., Feb 12-13, 2004.
2. "Effects of Gas Medium on Femtosecond Laser Beam Delivery," *21st International Congress on Applications of Lasers & Electro-Optics (ICALEO 2002)*, Scottsdale, AZ, U.S.A., Oct. 14-17, 2002.
3. "Micromachining of Vias through Thermal-Sprayed Multilayer Structures Using Ultrafast Lasers," *2001 International Mechanical Engineering Congress and Exposition*, New York, NY, U.S.A., Nov 11-16, 2001.
4. "Ultrafast Laser Micromachining with a Liquid Film," *the 20th International Congress on Applications of Lasers & Electro-Optics (ICALEO 2001)*, Jacksonville, FL, U.S.A., Oct 15-18, 2001.
5. "Laser Processing of Thermal Spray Patterns Using Femtosecond Pulses," *35th National Heat Transfer Conference*, Anaheim, CA, U.S.A., Jun 10-12, 2001.

6. "Laser Processing of Silica Aerogels Using Ultrashort Pulses," *2000 ASME International Mechanical Engineering Congress and Exposition*, Orlando, FL, U.S.A., Nov 5–10, 2000.