Sandra J. Shefelbine
Curriculum Vitae

Academic Appointment

Northeastern University

2021- Associate Dean of Space and Special Initiatives
2019- Professor
2013-2019 Associate Professor
Department of Mechanical and Industrial Engineering (now joint 50%)
2015- Department of Bioengineering (50%)
Northeastern University

Past Appointments

2012 - 2013 **Imperial College London**
Reader
Department of Bioengineering
2010 – 2012 Senior Lecturer
2005 - 2009 Lecturer

Post-doctoral Appointments

2004 - 2005 **University of California San Francisco**
Musculoskeletal and Quantitative Imaging Department
Research Topic: Kinematic imaging of joints using magnetic resonance imaging
Advisor: Professor Sharmila Majumdar

2002 - 2004 **University of Ulm**
Institute for Orthopaedic Research and Biomechanics
Research Topic: Biomechanics in fracture healing
Advisors: Professor Lutz Claes and Professor Peter Augat

Education

1998 - 2002 **Stanford University**
Ph. D., Mechanical Engineering, Biomechanics Division
Dissertation Topic: Mechanical Regulation of Bone Growth
Advisor: Professor Dennis Carter

1997 - 1998 **Cambridge University**
M. Phil., Engineering Design
Dissertation Topic: Requirements capture for medical device design

1993 - 1997 **Princeton University**
B.S.E., Mechanical and Aerospace Engineering
Suma cum laude (top 5% of class)

Academic Awards and Honors

2020	Northeastern College of Engineering Mentorship Award
2011	Imperial College London Rector's Medal of Excellence in Teaching
2010	Royal Academy of Engineering Exxon Mobil Teaching Award (£10,000)
2010	Faculty of Engineering Outstanding Teaching Award (£10,000)
2010	Department of Bioengineering student selected 'Best Teacher' Award
2005	RCUK Academic Fellowship
2002	National Science Foundation International Research Fellowship
2000	European Society of Biomechanics Student Award Finalist
1998	National Science Foundation Graduate Fellowship
1998	Stanford Graduate Fellowship
1997	Winston Churchill Foundation Fellowship
1997	Phi Beta Kappa Honor Society
1997	Sigma Xi Research Honor Society
1996	Tau Beta Pi Engineering Honor Society

Current Federal Research Grants Awarded

Current Dates		
9/2020-8/2023	$653,650	National Science Foundation (2010010): *Manipulating fluid flow in mechanoadaptation of bone* PI: SJ Shefelbine (80%), co-I Monaghan (20%)

Refereed Journal Articles

https://scholar.google.com/citations?user=PNsfo7oAAAAJ&hl=en

Books

Cerrolaza, M., **Shefelbine, S.J.**, & Garzón-Alvarado, D. A. (2017). *Numerical Methods and Advanced Simulation in Biomechanics and Biological Processes - 1st Edition*. Elsevier.

S. J. Shefelbine, J. Clarkson, R. Farmer, S. Eason. 2002 *Good design practice for medical devices and equipment – requirements capture.* Institute for Manufacturing: UK.

Patents

R Vaidyanathan, R. Woodward, N. Nowlan, **S. Shefelbine**, *Biomechanical Activity Monitoring,* US Patent application 15/034,165, notice of allowance granted

Editorial Board

Journal of Biomechanics
Bone
Journal of Biomechanical Engineering