



BME Spring 2023 Seminar Series

Skeletal mechanoadaptation

Dr. Sandra Shefelbine

Associate Dean for Space and Special Initiatives,
Office of the Dean Professor, Mechanical and Industrial
Engineering

Professor, Bioengineering

Northeastern University

Friday March 10, 2023 12pm – 1pm in MCHU 101

WebEx: Join [here](#)



Abstract: The skeletal system adapts readily to changes in mechanical load, allowing bone to alter shape and structure in response to its mechanical environment. In this talk Dr. Shefelbine will show a snapshot of her current work in which she uses experiments, imaging and computational modeling to probe the link between mechanics and bone growth, maintenance, and aging. From salamander limbs to elite ice hockey players, and mice to paraplegics she combines animal experiments, computational modeling, and clinical observations to examine the role of mechanics in skeletal adaptation.

Biography: Dr. Sandra J. Shefelbine is currently in the Department of Mechanical and Industrial Engineering and the Department of Bioengineering at Northeastern University. She received her BSE from Princeton University in Mechanical and Aerospace Engineering, an MPhil in Engineering Design from Cambridge University, and a PhD from Stanford University in Mechanical Engineering. After a post-doctoral positions at the Institute for Orthopedic Research (Ulm, Germany) and in the Department of Radiology at UCSF, she joined the Department of Bioengineering at Imperial College London (2005-2013) before moving to Northeastern.