

20 Savio L-Y. Woo

20 DISTINGUISHED LECTURESHIP



Jay D. Humphrey, PhD

Jay D. Humphrey is currently John C. Malone Professor and Chair of Biomedical Engineering at Yale University. Author of more than 285 archival journal papers, Professor Humphrey is a recognized expert in vascular mechanics and mechanobiology areas, with particular emphasis on vascular aging, hypertension, aneurysms, and tissue engineering. He served for 12 years as a U.S. representative to the World Council for Biomechanics and served previously as Chair of the U.S. National Committee on Biomechanics. He is a Fellow of the American Institute of Medical and Biological Engineering and the American Society of Mechanical Engineers and is an elected member of the Connecticut Academy of Science and Engineering.

► THURSDAY, MARCH 19, 2020

4 p.m. | Lecture | 157 Benedum Hall

5 p.m. | Reception | Lobby Benedum Hall

Mechanical Homeostasis in Aortic Health and Disease

W. Cannon introduced the concept of “homeostasis” in 1926, suggesting that physiological systems seek to maintain particular quantities near preferred levels, or set-points. It is now well known that many aspects of vascular biology, physiology, and mechanics can be understood within the context of a mechanical homeostasis (Humphrey 2008; Humphrey et al., 2014), which can be formalized in terms of a mechanobiological framework (Cyron and Humphrey, 2014; Latorre and Humphrey, 2019)

In this talk, we will consider three vignettes within the field of aortic mechanics related to mechanical homeostasis. First, we will examine the role of homeostasis in hypertensive aortic remodeling. Second, we will consider when the mechanical set-points are set during development. Third, we will consider the loss of homeostasis in thoracic aortic aneurysms. We will conclude with a brief consideration of a general approach to modeling aortic growth (changes in mass) and remodeling (changes in structure) in terms of mechanobiological equilibrium and stability.

► FRIDAY, MARCH 20, 2020

9 a.m. | Lecture | G31 Benedum Hall

Effective Communication – A Key to Academic Success

Academic success is typically assessed in terms of research productivity (mainly scholarship), teaching (including mentoring), and service (to both the university and the profession). Intellectual ability, creativity, a strong work ethic, persistence, and the ability to receive constructive criticism are keys to achieving academic success. In addition, however, effective communication is fundamental to many aspects of academic pursuit, including the publication of books and papers, winning grant support, communicating findings at conferences and seminars, teaching, and so forth. In this brief conversation, we will explore methods of effective communication and reasons why they should be given our very best attention.



IN HONOR OF SAVIO L-Y. WOO, PhD

Savio L-Y. Woo is a Distinguished University Professor Emeritus of Bioengineering and the Founder and Director of the Musculoskeletal Research Center, a diverse multidisciplinary research and educational center in the Department of Bioengineering, Swanson School of Engineering at the University of Pittsburgh. He arrived at the University of Pittsburgh in 1990 after spending 20 years at the University of California, San Diego as a Professor of Surgery and Bioengineering.

Professor Woo, a pioneer in bioengineering, is renowned for his 50 years of translational research and education to improve healing and repair of soft tissues. He and his colleagues have published 311 original research papers that have led to paradigm shifts in clinical management to improved patient outcome. Professor Woo is a member of the National Academy of Engineering, National Academy of Medicine and Academia Sinica.