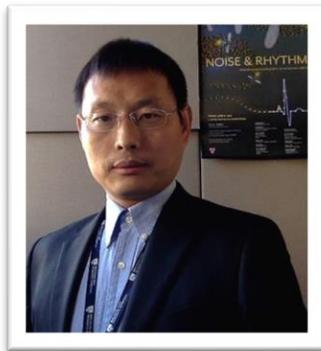




2022 SRS Board of Directors Candidate

Director-at-Large

Kun Hu, PhD



I am writing this letter to express my interest in serving on the SRS Board of Directors as a Director-at-Large. I am a physiologist currently working at Brigham & Women's Hospital (BWH), Harvard Medical School (HMS). I joined the SRS as a postdoctoral fellow in 2006. Since then, I have been an active member of the society. Between 2011-2017, I served in the SRS Research Committee between 2011-2017. Currently I am serving in the SRS Diversity, Equity, and Inclusion Committee.

I was trained in statistical physics and obtained expertise in nonlinear dynamic analysis of complex signals during my doctoral training. Between 2005-2009, I obtained my postdoctoral training in human experimental studies in two laboratories: Medical Chronobiology Program under the supervision of Dr. Steven Shea and Dr. Frank Scheer in the Division of Sleep and Circadian Disorders at BWH (sleep/circadian physiology); and SAFE (Syncope and Falls in the Elderly) Laboratory under the supervision of Dr. Vera Novak at Beth Israel Deaconess Medical Center (BIDMC) (aging research). Between 2009-2011, I continued my advanced training in sleep/circadian physiology at BWH while learning about animal models involving neural lesions and gene knockouts in Dr. Clifford Saper's lab in the Department of Neurology at BIDMC and in system biology under the guidance of Prof. Walter Fontana in the Department of System Biology at Harvard University.

With my multidisciplinary training, I have been promoting the application of the concepts/methods derived from statistical physics and nonlinear dynamics in medicine during the last 16 years. To foster such translational research in sleep medicine, I established Medical Biodynamics Program (MBP) in the Division of Sleep Medicine at HMS (<https://sleep.hms.harvard.edu/research/labs-divisions/medical->

biodynamics-program-mbp). The goal of the program is to create new data analysis methods, mathematical theories, and mechanistic, experimentally-based models for the study of neurophysiological systems. The research in the program has been continuously funded by the NIH during the past 11 years. In collaborations with scientists with diverse backgrounds (clinicians, mathematicians, and engineers), I have led a number of translational research projects using large-scale longitudinal design to understand the role of sleep/circadian dysfunction in the development and progression of Alzheimer's disease and related dementia.

If selected, I will bring to this position my expertise in interdisciplinary research of nonlinear dynamics, sleep/circadian physiology, and neurodegenerative diseases.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kun Hu', with a stylized flourish at the end.

Kun Hu, Ph.D.