

Dean's Colloquium

Dr. Stephen Guimond, Associate Professor
Department of Atmospheric and Planetary Sciences



When: Wednesday, November 29th, 2023

Where: Turner 129

Time: 3:30 – 3:50 pm, Q&A: 5 min

Title: Research and Development in the Geophysical Fluid Dynamics Group

Abstract: Geophysical fluid dynamics (GFD) is the study of the underlying flows that govern the evolution of weather and climate on Earth and other planets. In this talk, I will discuss my current research projects that are being started at Hampton University (HU) with a focus on the GFD of extreme weather on Earth. These projects are funded by a wide range of federal agencies, and I will focus my time on basic research projects into the dynamics of hurricanes using advanced mathematical models and remote sensing instruments. I will also briefly discuss my vision for the HU Severe Weather Research Center (SWRC) to expand and grow this unique campus resource.

Bio: Dr. Stephen Guimond joined HU in August 2023 as an Associate Professor in the Department of Atmospheric and Planetary Sciences and is the new director of the HU SWRC. Dr. Guimond holds a B.S. degree in Atmospheric Science from Iowa State University and an M.S. and Ph.D. degree in Atmospheric Science from Florida State University. For the last 13 years, he worked at NASA Goddard Space Flight Center and the University of Maryland in various roles. He has been involved with several NASA airborne field experiments studying extreme weather as both a mission and instrument scientist working with the latest remote sensing technology. Dr. Guimond earned several awards while working at NASA GSFC for his science, software, and algorithm development including the Robert H. Goddard award (highest award at GSFC) for his contributions to the success of the high-altitude airborne radar group. His papers have made new discoveries in understanding the interaction of waves, turbulence and convection in hurricanes and in developing algorithms for remote sensing and numerical simulation.