

Departments of Physics Colloquium

Do Fruit flies Sleep and Why Should We Care?

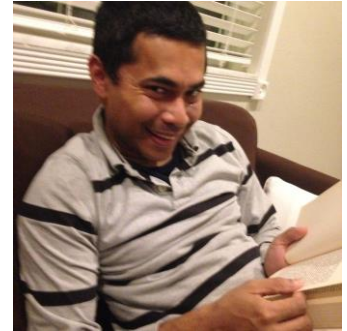
Dr. Sheyum Syed

Department of Physics, University of Miami

Friday, November 20, 2015

1:30-2:20 PM

Venue: OE 134, MMC



Abstract: Sleep is a common yet mysterious act in the animal world. Most animals spend significant amount of time in this vulnerable state not for pleasure but out of necessity. Why is sleep so essential? What happens if we do not sleep? Surprisingly, for a behavior so ancient and so ubiquitous, answers to these basic questions remain unknown. Motivated by a need for fundamental insights into sleep, the fruit fly was recently established as a model organism for studying the neurobiology of this behavior. In this talk, I will focus on our recent findings on sleep architecture of the fruit fly. I will present our rationale for studying the probability distributions of fly sleep and wake epochs and show preliminary results of statistical models that mimic wild-type and mutant fly data. The talk will end with implications of these findings on our understanding of how sleep is likely regulated at the molecular level.

Biography: Sheyum Syed is an Assistant Professor of Physics at the University of Miami. His doctoral work at Columbia University was in condensed matter physics. After two postdoctoral stints, the first at the University of Illinois on single molecule biophysics and the second at the Rockefeller University on the fruit fly circadian clock, Sheyum started his own laboratory at UM in 2013. The laboratory uses the fruit fly to understand the biophysics of behaviors like sleep and activity that are under strongly modulated by the circadian clock.

The event is free and open to the public.

Future seminars can be found at <http://physics.fiu.edu/seminars/>