

Joint Biomedical Engineering Seminar Series

MU ▪ MCW ▪ UWM

SEMINAR

Friday, April 14th, 2017

12:00 – 1:00 pm

HRC Auditorium



Ranjan K. Dash, PhD

Associate Professor

Departments of Biomedical Engineering and

Physiology

Medical College of Wisconsin

“Probing Cellular and Molecular Mechanisms through Computational Modeling”

The behavior of biological systems (e.g. a cell) is usually non-intuitive and non-linear, making it very challenging to understand how such systems function in health, how they are disrupted in disease, and what are the possible impacts of potential treatments. Computational systems biology is concerned with the study of biological functions and mechanisms by means of signal- and system-oriented computational modeling approaches, which is Dr. Dash’s broad area of research. Dr. Dash will provide a brief overview of integrated mathematical and computational modeling approaches used to uncover a mechanistic understanding of a variety of cellular and molecular systems. Examples will focus on the kinetic/molecular modeling of the mitochondrial cytochrome c oxidase (a key regulator of mitochondrial respiration and ATP synthesis) and cardiomyocyte L-type Ca^{2+} channel (a key pathway for Ca^{2+} entry into the cardiac cell) regulations under various experimental conditions.

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Medical College of Wisconsin is located at 1101 N. 87th St., Milwaukee, WI 53226. Parking is available across the street in visitor parking. Refreshments will be served.