Stony Brook University
The State University of New York

Department of Biomedical Informatics
School of Medicine and College of Engineering and Applied Sciences

Special Seminar

Title: Exploring the implications of biological data modeling and beyond

Satyaki Roy, PhD
Postdoctoral Research Associate, Department of Genetics,
University of North Carolina, Chapel Hill &
Bioinformatician, Frederick National Laboratory for Cancer Research

Friday, June 3, 2022
11:00 am – 12:00 pm

Join Zoom Meeting
https://stonybrook.zoom.us/j/93106594285?pwd=cjZ6cUN3eVFoSkVsbzVzRGRFRnI3QT09

Meeting ID: 931 0659 4285
Passcode: 673007

Bio: Satyaki Roy received his Ph.D. degree in computer science from the Missouri University of Science and Technology, Rolla, MO, USA, in 2019. He has been a Postdoctoral Research Associate with the Department of Genetics, University of North Carolina, Chapel Hill and is currently a bioinformatician at Frederick National Laboratory for Cancer Research. His research interests include computational biology, network science and optimization, epidemiology, machine learning, and parallel computing.

Abstract: The transcriptional regulatory network (TRN) is a biological network whose innate robustness is a function of its underlying graph topology. In this presentation, I delve into my prior efforts to analyze TRNs as well as the current endeavors to leverage network motifs to characterize their topology and robustness, gather knowledge about diseases and drugs, and infer significant genes and pathways from genomic and clinical data. Later, I touch upon other project on the application of informatics tools for pandemic mitigation, where I focus on ongoing and future efforts to design a unified framework for real-time data collection and behavioral recommendation. The goal is to fuse mobility schedules and epidemiological parameters to inform human decisions and curb contagion.