



# SCHOOL OF CHEMISTRY

SAMBALPUR UNIVERSITY

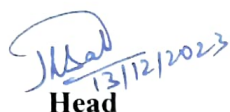
Jyoti Vihar, Burla-768019

DIST.- SAMBALPUR, ORISSA (INDIA)

## Seminar Notice

The School of Chemistry is organizing a Seminar on the topic titled “*Data Science for Translational Research*” by **Prof. Debashis Sahoo** from University of California, San Diego (USA) on 15<sup>th</sup> December 2023 at 3.00 PM in Prof. Sripati Pani Seminar Hall of the School of Chemistry.

All the faculty members, research scholars and M.Sc. students are invited to attend the seminar talk.

  
13/12/2023

Head

School of Chemistry

  
13/12/2023

Teacher-in-Charge  
Chemistry Seminar

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### Abstract:

Translational research aims to swiftly apply basic science discoveries in practical healthcare. Productivity hurdles can impede the quick translation of research into healthcare breakthroughs, with issues like reproducibility and generalizability of biological results in clinical settings posing significant challenges. Concerns about irreproducible results are on the rise, with over 70% of researchers reportedly facing challenges reproducing others' experiments, and more than half struggling with their own. Drug development, a crucial facet of translational research, maintains a low success rate despite past efforts. Part of the problem lies in the tools of data science and statistics used. I will introduce you to a new approach—Boolean analysis of large and diverse biological datasets. In my research group, we have pioneered this method and developed computational tools to uncover invariant logical relationships between genes. Join me as we explore how leveraging these invariant relationships can enhance the reproducibility of current approaches. We will discuss how Boolean analysis can transform the power of AI/ML approaches.



### About the Speaker:

Dr. Debashis Sahoo received B.Tech. degree in Computer Science and Engineering from the Indian Institute of Technology, Kharagpur, in 2000, and the M.S. and Ph.D. degrees in Electrical Engineering from Stanford University, in 2003 and 2008, respectively. He is currently a joint Associate Professor of Computer Science and Engineering and Pediatrics at the University of California, San Diego. His research interests include analysis of biological systems and formal verification of hardware designs.