

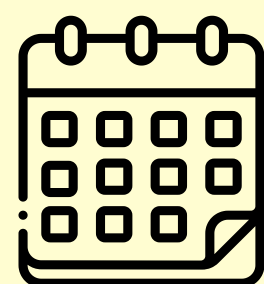


Department of Nutrition Biology

Organising

*International webinar on*

# “Microbial Biofilms for Biotransformation Reactions”



Thursday,  
25th, April, 2024

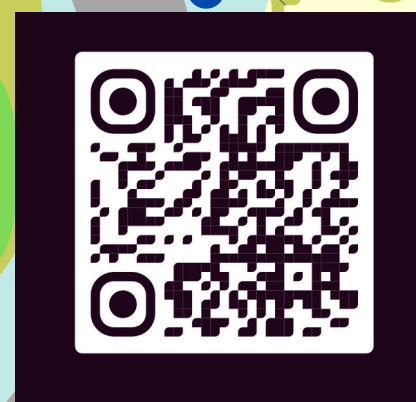


10:30 onwards

Google meet link

<https://meet.google.com/hmt-axjk-hgp>

Google meet QR code



**CHIEF-PATRON**

Prof. (Dr) Tankeshwar Kumar  
Vice-Chancellor



**PATRON**

Prof. (Dr) Sushma Yadav  
Pro Vice-Chancellor



**CHAIRPERSON**

Prof. (Dr) Neelam Sangwan  
Dean SIAS & Dean Research



**CO-CHAIRPERSON**

Prof. (Dr) Kanti Parkash Sharma  
Head (Nutrition Biology)



**SPEAKER**

Dr. Saurabh Dhiman  
South Dakota University of  
Mines & Technology, USA



**CONVENER**

Dr. Ashwani Kumar  
Associate Prof. (Nutrition Biology)



# About speaker

## Brief Bio

Dr. Saurabh Dhiman is an System Biologist deploying “Genome-to-Phenome, and "Network-Biology" approaches for the biomanufacturing of next-generation industrially relevant biomolecules through the sequestration of unconventional carbon feedstock.

## Research Expertise

His research focuses on an in-depth understanding of molecular interactions controlling microbial sensing, communication, and adhesion properties in natural landscapes. State-of-the-art genome editing techniques and in-silico tools have been applied to identify the novel gene clusters and metabolic pathways controlling the microbial stress mechanisms. Fundamentals of the System Biology approach have been revisited to reveal the unexplored facets of microbial “Rules of Life.”

## Research

Over the past 14 years, he has been the PI or co-PI on over US \$33.8 million in funded research. His accomplishments in research and advising include supervision of ~15 Ph.D. MS and post-docs. He has 2 patents and published ~50 peer-reviewed articles in international journals of high repute. Dr. Dhiman has been on the proposal panel for the Federal Agencies (i) NASA, (ii) National Science Foundation. Dr. Dhiman has been leading a research consortium funded by the NSF with the aid of 48 scientists and engineers. Dr. Dhiman is working with renowned industrial partners (POET, Battelle) and premier institutions (Massachusetts Institute of Technology, Boston University)

## Teaching.

BIOL 692/ CEE 792: Biofilm Engineering (3 Cr) – Study microbes' environmental interactions (materials and ecology) in hostile environments (deep biosphere, hot springs) and industrial applications through (i) quorum sensing; (ii) CRISPR & Protein Engineering.

CEE 592/ BIOL 492: Environmental Microbiology (3 Cr) – An introductory course for enrolling in medical or graduate school describing solutions that protect public and environmental health in the near and long term.

BIOL 331: Microbiology (3 Cr) – An introductory course for enrolling in medical or graduate school prepares for microbial physiology, metabolism, genetics, and future academic and research commitments, e.g., renewable energy and xenobiotics.

CEE 492/592: Bioresource Engineering (3 Cr) – Mechanistic understanding of the transformation of resources available on the earth's crust and underground, e.g., Carbon Capture and Sequestration. Problem-based learning (PBL), Concept Maps, and Outdoor activities strengthen conceptual details.