NC STATE UNIVERSITY Chemical and Biomolecular Engineering



CBE Schoenborn Research Symposium

October 15-16, 2026
McKimmon Center

Judged Competitions of Student Research

Made Possible By

The Edward M. Schoenborn Graduate Student Fund, established by Russ and Susie O'Dell

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2026 CBE Schoenborn Research Symposium

McKimmon Center

Thursday, October 15, 2026

Poster Session I — 4:30 – 6:30 PM

2nd and 3rd Year Graduate Students and Undergraduate Researchers

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Friday, October 16, 2026

Coffee Mixer — 9:30 – 9:55 AM

Welcome — 9:55 – 10:00 AM

Keynote Speaker: Shalini Gupta — 10:00 – 10:55 AM

From Colloidal Self-Assembly to Cancer Diagnostics: A 20-Year Journey in Translational Science

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Three-Minute Thesis Competition — 11:10 – 12:30 PM

Lunch — 12:30 – 1:45 PM

Young Alumni Panel: Starting Your Career — 1:45 – 3:00 PM

Dennis Lee, Stony Brook University
Jessica Lee, Think Bioscience
Sahand Saberi Bosari, BASF

Poster Session II — 3:00 – 4:55 PM

4th and 5th Year Ph.D. Students

Closing and Winner Announcements — 4:55 – 5:00 PM

From Colloidal Self-Assembly to Cancer Diagnostics: A 20-Year Journey in Translational Science



Shalini Gupta

Founder and CEO of Asima Health

Nineteen years after completing my PhD at NC State, I return to reflect on a scientific journey spanning fundamental research, academic leadership, and entrepreneurship. One theme has remained constant: a fascination with how complex biological and materials systems organize, interact, and give rise to emergent behavior. This lecture traces that curiosity from my doctoral work in colloidal and interfacial science at NC State, through postdoctoral research at Imperial College London and a faculty career at the Indian Institute of Technology Delhi, where I built an interdisciplinary program in novel bioassays, electrically interfaced microsensors, and translational diagnostics. I will share how experiences inside and outside the laboratory shaped my view of scientific impact and led me from academia to entrepreneurship.

The second half focuses on the science behind Asima Health, a biotechnology company developing a blood-based platform for cancer monitoring. I will describe how physical chemistry, self-assembly, and biomolecular interactions inspired a new approach to detecting tumor-derived cell-free DNA, and discuss the opportunities and challenges of translating fundamental discoveries into clinical technologies. I hope to offer students a perspective on the many pathways through which scientific discoveries can create impact.

BIO: Dr. Shalini Gupta is Founder and CEO of Asima Health, a Canadian health technology company developing innovative blood-based solutions for cancer detection. Prior to founding Asima Health, she was a tenured Professor of Chemical Engineering at the Indian Institute of Technology (IIT) Delhi, where she led research on new types of bioassays, electrically interfaced microsensors, and colloidal systems for in vitro diagnostics. Dr. Gupta received her Ph.D. in Chemical Engineering from NC State University under the mentorship of Prof. Orlin Velev and completed postdoctoral training with Prof. Molly Stevens at Imperial College London. Her work has focused on translating advances in engineering and biotechnology into practical healthcare solutions. She has authored more than 50 peer-reviewed publications, holds multiple patents, and has founded two technology ventures. Dr. Gupta is the recipient of the National Award for Research Excellence from the President of India (2020) for contributions to technology development with societal impact. Through her work in academia and entrepreneurship, she remains committed to advancing accessible healthcare technologies and translating scientific innovation into real-world patient benefit.

Young Alumni Panel: Starting Your Career



Dennis Lee

Dennis Lee is an Assistant Professor in the Department of Materials Science and Chemical Engineering at Stony Brook University, where he joined the faculty in January 2024. He earned degrees in Chemical Engineering from Gachon University (B.S., 2011), KAIST (M.S., 2013), and NC State (Ph.D., 2019, with Prof. Gregory Parsons). He then completed postdoctoral research at Johns Hopkins University with Prof. Michael Tsapatsis. His research develops innovative materials processing strategies for advanced composite materials with tunable properties for energy, environmental sustainability, and global health. His honors include the 2018 Vivian T. Stannett Fellow Award from NC State and the 2021 Elevator Pitch Competition Award from Johns Hopkins.



Jessica Lee

Jessica Lee is a Principal Scientist in Cell Biology at Think Bioscience, a startup focused on drug discovery. She earned her PhD in 2021 from the Department of Chemical and Biomolecular Engineering, working in Dr. Keung's lab. At Think Bioscience, Jessica designs drug screening assays and leads translational studies that help move candidate therapeutics toward the clinic. Her work bridges fundamental cell biology with applied drug discovery, translating mechanistic insights into practical screening strategies.



Sahand Saberi Bosari

Sahand Saberi Bosari earned an undergraduate degree in Chemical Engineering in Iran, then a Ph.D. in Chemical and Biomolecular Engineering at NC State (2020) in Dr. Adriana San Miguel's laboratory, developing microfluidic devices and machine-learning tools to study complex biological systems. He joined BASF through its Leadership Development Program, working as a Research Scientist, Contract Manufacturing Manager, and Market Development Manager. He then became a Regional Category Manager in Procurement, overseeing about $80 million in annual spend and supporting renewable and circular alternatives. As an Account Manager, he now manages more than $65 million in annual sales across a portfolio of upstream commodity products. His career pairs a strong technical foundation with experience in research, procurement, business development, and commercial management.

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