

Fall 2023

Fall 2023
**NAI-NJIT Workshop on Sustainable Societies:
Advancing Healthcare Through Technology Translation**

Integrated with

**2023 NJIT Faculty Research Showcase
Featuring FY24 New Faculty**

November 13, 2023, 9 a.m. – 4 p.m.
Ballroom A/B and Gallery, Campus Center, NJIT

Recent technological and pharmaceutical advances in healthcare have yielded tremendous improvements in the diagnosis and treatment of deadly maladies, from cancers to infectious diseases. Yet a critical problem remains: Too few people, and particularly those in under-resourced communities in both impoverished and affluent nations, have access to the life-changing remedies many of us take for granted. These disparities are unsustainable in a functioning global society.

What we need are cheaper, simpler and more effective healthcare technologies that can be administered easily in a wide range of settings. This is not merely a research and development challenge that is solved by ingenious inventors, but one of market validation and translation as well. These devices must win the acceptance of users, clinicians, payors and regulatory agencies. Partnerships among academic researchers, healthcare providers, regulators and businesspeople that enable them to pool ideas, expertise, resources and investments will speed the commercialization of new personalized, preventive and precision healthcare applications. In keynote and panel discussions at the fall NAI-NJIT workshop, leaders from each of these key stakeholder groups will discuss potential pathways to success.

Also, please join us at the 2023 NJIT Faculty Research Showcase this afternoon to learn about exciting new research projects from our new faculty, recipients of NJIT's Technology Innovation Translation and Acceleration seed grants and researchers from other New Jersey universities. The workshop and showcase will be held in-person in Ballroom A at the Student Campus Center. Light lunch will be served. All faculty, staff and students are invited to attend.

Agenda

- 8:30 a.m. – 9 a.m.** **REGISTRATION AND BREAKFAST**
- 9 a.m. – 9:10 a.m.** **WELCOME REMARKS**
Atam Dhawan, Senior Vice Provost for Research
- 9:10 a.m. – 9:45 a.m.** **DISTINGUISHED KEYNOTE-1**
Sustainable Global Healthcare and Technology Innovations
*Tiffani Lash, PhD, Program Director,
 NIH-NIBIB Point-of-Care Research Network*
- 9:45 a.m. – 10:45 a.m.** **DISTINGUISHED PANEL DISCUSSION**
Advancing Healthcare Through Technology Translation
*Senayet Agonafer, MD, Regional Breast Division Chief
 for New York South, Lenox Hill Radiology*
*Srini Tridandapani, Ph.D., M.D., M.B.A., Vice Chair
 Imaging Informatics, Division Director, Imaging Informatics
 Professor, Cardiopulmonary Imaging Section,
 University of Alabama, Birmingham*
*Reynold A. Panettieri, Jr., M.D., Vice Chancellor, Clinical &
 Translational Science, Rutgers Institute for Translational
 Medicine and Science Professor of Medicine
 Robert Wood Johnson Medical School, Rutgers University*
- Session Chair and Moderator:
*Atam Dhawan, Senior Vice Provost of Research, NJIT
 Chair, NIH POCTRN Independent Expert Advisory Board*
- 10:45 a.m. – 11:45 a.m.** **DISTINGUISHED STUDENT PANEL DISCUSSION**
**Technology Research and Innovation Translation:
 A Student Perspective**
Stuti Mohan, Biomedical Engineering
Melisa Bilgili, Chemical and Material Engineering
Kevin Diggs, Computer Science
Maryom Rahman, Chemical and Material Engineering
- Session Chair and Moderator: Robert Cohen
*Chair, NJIT Board of Trustees
 President, Stryker Digital Robotics, and Enabling Technology*

11:45 a.m. – 12:15 p.m.

DISTINGUISHED KEYNOTE-2

**Technology Innovation Translation to Market:
A Business Perspective**

Steven Schachter, M.D.

*Chief Academic Officer for the Consortia for
Improving Medicine with Innovation &
Technology (CIMIT), Professor of Neurology
Harvard Medical School, Co-PI, NIH POCTRN
Coordinating Center*

12:15 p.m. – 1 p.m.

LUNCH AND NETWORKING

1 p.m. – 3 p.m.

NEW NJIT FACULTY PRESENTATIONS

New faculty will give a brief 3 minutes overview presentations on their research expertise, ongoing projects and collaboration needs and opportunities followed by 2 minutes of Q&A period

3 p.m. – 4 p.m.

**TRANSLATION RESEARCH
IN HEALTHCARE SHOWCASE**

Rutgers: NJACTS

Princeton University

Rowan University

Stevens Institute of Technology

NJIT Technology Innovation Translation Acceleration Projects (TITA)

CORE Lab

Center for Injury Biomechanics, Materials and Medicine (CIBM3)

BIOSMART

Biophotonics & Bioimaging Lab

Vision and Neural Engineering Laboratory

Sensorimotor Quantification and Rehabilitation Laboratory (SQRLab)

Biographical Sketches

Tiffani Lash, Ph.D.

Dr. Tiffani Bailey Lash serves as a Health Scientist Administrator for the National Institutes of Biomedical Imaging and Bioengineering (NIBIB) at the National Institutes of Health (NIH). Dr. Lash is the Program Director for the NIH Rapid Acceleration of Diagnostics (RADx[®]) Tech and Advanced Technology Platforms initiative, NIH Technology Accelerator Challenge (NTAC), Digital Health - Mobile Health and Telehealth, and the NIBIB Point of Care Technologies Research Network. She also serves as co-coordinator for the NIH Common Fund's Harnessing Data Science for Health Discovery and Innovation in Africa. Her research portfolio includes Point of Care Technologies and Digital Health, both with the goal of developing biomedical technologies through collaborative efforts that merge scientific and technological capabilities with clinical need.

Prior to her current position, Dr. Lash worked within the NIH's science policy administration. During that time, she worked at the National Institute of General Medical Sciences and National Heart Lung and Blood Institute, as well as the NIH Office of the Director. Dr. Lash has been selected as a science policy fellow for both the American Association for the Advancement of Science (AAAS) and the National Academy of Engineering. She also has a background in small business innovation and intellectual property. Dr. Lash earned her Ph.D. in Physical Chemistry from North Carolina State University via a collaboration between the Departments of Chemistry and Chemical and Biomolecular Engineering. Her interdisciplinary research interests include microfluidics, biopolymers with controlled molecular architecture, and biosensor technologies.

Reynold A. Panettieri, Jr, M.D.

Reynold A. Panettieri, Jr, MD, is Professor of Medicine, Vice Chancellor for Translational Medicine and Science at Rutgers University, and the Director of the Institute for Translational Medicine and Science. This Institute fosters translational studies in health and disease, and integrates the expertise of the disciplines of epidemiology, pharmacology, cell biology, genetics, biochemistry, health economics and informatics across the Rutgers Biomedical and Health Sciences (RBHS) network. Previously, he was the Robert L. Mayock and David A. Cooper Professor of Medicine in the Pulmonary, Allergy and Critical Care Division of the Department of Medicine, and served as Deputy Director of the Center of Excellence in Environmental Toxicology at the University of Pennsylvania Perelman School of Medicine where he remains Professor Emeritus. He developed expertise in human exposure to ozone, toxicants and particulate matter in the modulation of airway inflammation and hyperresponsiveness. Dr. Panettieri also focuses on proteomic and genomic studies to identify unique proteomic signatures in COPD and asthma. His translational science interests use state-of-the-art cellular and molecular techniques to characterize airway smooth muscle as an immunomodulatory cell, and in the study of cell signaling mechanisms inducing glucocorticoid insensitivity and excitation-contraction coupling. His fundamental studies also focus on translational targets for new therapeutics and bench-to-bedside testing of novel approaches in the treatment of severe asthma and COPD.

Srini Tridandapani, Ph.D., M.D., M.B.A.

Dr. Srini Tridandapani is Professor and Vice Chair for Imaging Informatics in the Department of Radiology at University of Alabama and an Adjunct Professor with the School of Electrical and Computer Engineering, Georgia Institute of Technology. She developed novel gating strategies for optimizing cardiac computed tomography funded by a K23 from the National Institute for Biomedical Imaging and Bioengineering. Subsequently, he has been funded by NSF and NIH SBIR grants to his start-up, Camerad Technologies, which is commercializing a technology to increase quality and patient safety in medical imaging. Srini has published over 75 peer-reviewed manuscripts and full-length conference proceedings, secured three US patents, and has provided over 75 invited lectures at local, regional, national and international institutions of higher learning and conferences.

Dr. Tridandapani is an Associate Editor of the IEEE Journal of Translational Engineering in Health and Medicine (JTEHM), an Associate Editor of the ACR Case-in-Point, and an Assistant Editor of the American Journal of Roentgenology. He serves on numerous national committees in both engineering and radiology. He is the chair of the RSNA Research Study Section, and has served as a reviewer for the NSF, the NIH, and the US Army Medical Research and Materiel Command, and the ARRS Scholar Awards. Srini is a member of the Roentgen Fund Board of Trustees, and a past president of the Radiology Research Alliance (RRA) of the AUR. He is a member of the editorial steering committee of IEEE JTEHM and a past co-chair of the IEEE Technical Committee on Translational Engineering for Healthcare Innovations.

Steven C. Schachter, M.D.

Dr. Steven Schachter, a Professor of Neurology at Harvard Medical School, is Chief Academic Officer for the Consortia for Improving Medicine with Innovation & Technology (CIMIT; www.cimit.org) since 2009. In this role, he has directed the scientific grant review process and been responsible for the implementation and success of the CIMIT model, particularly with respect to identification of unmet medical needs, and facilitation of programs, collaborations and project across the entire CIMIT portfolio. Dr. Schachter has led two POCTRN (Pointe-of-Care Research Network) Centers; the latter being a Coordinating Center. Through the Coordinating Center, he has directed the extramural activities of RADx Tech since April, 2020 to support the development, commercialization, and production scale-up of accurate, rapid assays that directly detect the presence of SARS-CoV-2 in symptomatic and asymptomatic persons.

Dr. Schachter is Past President of the American Epilepsy Society and served on the Epilepsy Foundation of America Board of Directors. He has published over 250 articles and chapters and edited or written 35 books. He is the Clinical Editor for Journal of Translational Engineering in Health and Medicine, a member of the Advisory Board of IEEE Open Access Journal of Engineering in Medicine and Biology and founding editor and former editor-in-chief of the medical journals Epilepsy & Behavior and Epilepsy & Behavior Case Reports.

Robert Cohen, Ph.D.

Robert Cohen is a pioneer and successful inventor in the field of total knee and hip joint replacement implants and surgery with 29 US and international patents. His leading innovations and inventions revolutionized the orthopedic joint replacement implant concepts and associated surgical preparation procedures. He laid the foundation of the innovative design of joint implants for the construction of artificial knee and hip implants and enabling technologies for proven significant improvements enhancing the success, stability, efficacy, and longevity of implants avoiding the need of revision surgery. His technological inventions have been used in joint replacement knee/hip implants and surgical procedures for more than 4 million patients worldwide. He has built an ecosystem of technology innovations and their translation to clinical applications that have and continue to transform the entire global field of orthopedic joint replacement surgery creating a tremendous positive impact on patient mobility, quality of life, and global healthcare. He is a Fellow of the American Institute of Medical and Biological Engineering. He serves as the Chair of the Board of Trustees of the New Jersey Institute of Technology and member of numerous advisory boards including R&D Council of NJ, and American Institute for Medical and Biological Engineering.