

The 30th Annual

Petersheim



2026 Academic **EXPOSITION**

SHARE. HONOR. UNITE.

Opening Ceremony

Monday, April 20, 2026

Noon – 2 p.m. | Bethany Hall, Rooms B and C



1 8 5 6

PROGRAM

CALL TO ORDER

Sulie L. Chang, Ph.D.

*Distinguished University Research Professor
Director, Institute of NeuroImmune Pharmacology*

INVOCATION

Reverend Joseph R. Laracy, S.T.D.

Associate Professor and Chair of Systematic Theology

WELCOME

Monsignor Joseph R. Reilly, S.T.L., Ph.D.

President, Seton Hall University

BIG EAST and ICUNJ UNDERGRADUATE RESEARCH POSTER SYMPOSIUM CERTIFICATE CEREMONY

Erik Lillquist, Ph.D.

Interim Provost, Seton Hall University

INTRODUCTION OF KEYNOTE SPEAKER

Erik Lillquist, Ph.D.

Interim Provost, Seton Hall University

KEYNOTE SPEAKER

Jose L. Lopez, Ph.D.

*Professor of Physics, Department of Physics
Director, Office of Grants and Research Services*

*Sponsored by the Office of the Provost,
Division of Student Services and
The Institute of NeuroImmune Pharmacology.*

*Special thanks to the Division of University Relations
and Teaching, Learning and Technology Center
and University Advancement for their assistance.*



EXPLORE THE FULL SCHEDULE
OF THE EXPO EVENTS AT

www.shu.edu/petersheim-schedule

It Starts with a Spark ⚡: Artificial Intelligence and the Future of Thinking



■ Jose L. Lopez is Professor of Physics at Seton Hall University in South Orange, New Jersey, USA where he further serves as the Director of the Office of Grants and Research Services (OGRS) within the Office of the Provost in the Academic Affairs Division. He earned a B.S. in Physics from Saint Peter's University in Jersey City, New Jersey in 2000, an M.S. in Physics in 2003 and a Ph.D. in Physics in 2006 from the Stevens Institute of Technology in Hoboken, New Jersey.

In 2005, he returned to Saint Peter's University as an Assistant Professor of Physics. During his tenure there, he was a co-founder of the Department of Applied Science and Technology in 2008. In 2009, he founded and became Director of the Center for Microplasma Science and Technology (CMST), a United States Congressional



Designated National Center of Excellence dedicated to the scientific study of microplasmas.

In 2011, Professor Lopez joined the Faculty of Seton Hall University as a member of the Department of Physics where he holds the rank of tenured, full Professor of Physics. He is the founder of the Laboratory of Electrophysics and Atmospheric Plasmas (LEAP) and is the current Director of LEAP, whose research group studies, develops, and applies a wide range of theoretical and experimental techniques to understand, predict, and design novel electron-driven processes to generate low temperature plasmas with applications in lighting, energy conversion, materials modification, and environmental technologies. Professor Lopez's research has led to the development of various novel environmental remediation technologies, which use atmospheric and high-pressure plasmas to clean and remove contamination in air and water. His research with ozone generation processes using microplasmas has led to substantial increased performance and optimization of large-scale industrial ozone generators used in municipal water treatment facilities all over the World. Most recently, Dr. Lopez has expanded his research interests into the areas of plasma catalysis for hydrogen generation and the use of atmospheric low temperature plasmas for agriculture applications leading to discoveries for the enhancement of plant growth and food product yield.

His applied and basic scientific investigations have garnered funding of over \$6 million from various sources such as the Air Force Office of Scientific Research (AFOSR), Department of Energy (DOE), National Science Foundation (NSF), Army Office Research (ARO), National Institute of Health (NIH), National Institute of Standards and Technology (NIST), National Aeronautical and Space Agency (NASA) along with various corporations, industrial partnerships and private research foundations. He is the author of more than 30 scientific publications including the book "Complex Plasmas – Scientific Challenges and Technological Applications". He has presented invited lectures at various prestigious universities and international conferences throughout the World. As well as been the organizer of various educational and scientific



programs, workshops, and conferences in the local New Jersey-New York region. He served as the General Chair for the 2017 IEEE International Conference on Plasma Science (ICOPS 2017) held in Atlantic City, New Jersey. He further served as the Senior Editor of Industrial, Commercial, and Biological Applications of Plasmas for the scientific journal, IEEE Transactions on Plasma Science published by the Institute for Electrical and Electronic Engineers (IEEE).

Since 2014, Dr. Lopez has also served as a Visiting Professor and Researcher in the Discovery Plasma Science Department at the Princeton Plasma Physics Laboratory (PPPL) in Plainsboro, New Jersey, a U.S. Department of Energy (DOE) National Laboratory affiliated with Princeton University. From 2021 to 2023, he served as Program Director for Plasma Physics in the Division of Physics at the U.S. National Science Foundation (NSF), where he helped manage the Federal investment into plasma research with direct strategic leadership for low temperature plasmas. While at NSF he helped establish the ECosystem for Leading Innovation in Plasma Science and Engineering (ECLIPSE) meta-program bridging funding across multiple NSF Directorates, allowing for translational research at the interface between fundamental plasma science and technological innovation.

Aside from his contributions in plasma science and engineering, Professor Lopez has been an active contributor to interdisciplinary research initiatives. He is a founder and core Faculty member of the Academy for Nature and Nurture (ANN) at Seton Hall, which investigates interdisciplinary approaches to treating addiction and substance abuse issues by integrating biomedical science, psychotherapy, as well Catholic theology and spirituality. Professor Lopez is an Affiliated Faculty member of the Stanley Jaki Academy for Theology and Science which seeks to renew and expand the Catholic Intellectual Tradition's engagement with the sciences by fostering research, teaching and public dialogue at the intersection of theology and scientific inquiry. In collaboration with Professor Sulie Chang, Distinguished University Research Professor at Seton Hall University and the Director of the Institute of NeuroImmune Pharmacology (INIP), he serves as the co-Chair of the Planning and Organizing



Committee of the annual The Petersheim Academic Exposition, which annually showcases the University-wide scholarly and research accomplishments by undergraduate and graduate students, faculty, administrators and staff from among the various disciplines. Further, since 2023, Professor Lopez has served as the Director of the Office of Grants and Research Services (OGRS) which supports and enhances the scholarly and research efforts at Seton Hall University by supporting seeking external funding.

Professor Lopez is furthermore a strong proponent that scientists should educate more broadly from younger age groups to the general public, and directly to teachers of varying levels from grade school to high school to college and universities. To this end, he has participated in science education outreach from preschool children to retirees. Moreover, Professor Lopez is a highly acclaimed science communicator to broadcast mass media where he has served as a science and technology expert to various local, national, and international news organizations such as NJ News, New Jersey Star-Ledger, MSNBC and Fox News. He additionally served as the science and technology correspondent for the Emmy award-winning news panel discussion television series, Fresh Outlook.

The recipient of various awards and distinctions throughout his career, Professor Lopez has been Nationally honored for his contributions to the United States of America by the U.S. Customs and Border Protection of the U.S. Department of Homeland Security. He was recognized in 2012 by Inside Jersey of the New Jersey Star-Ledger and NJ.com as one of the “Top 20 Biggest Brains in New Jersey”, whose exceptional intellect are changing the World. Additionally, he was conferred the President’s Award for Student Service for his accomplishments in teaching and mentoring of students at Seton Hall University. ■

PETERSHEIM ACADEMIC EXPOSITION PLANNING COMMITTEE

Committee Co-Chairs

Sulie L. Chang, Ph.D., Distinguished University Research Professor and Director,
Institute of Neuroimmune Pharmacology, Office of the Provost

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Office of the Provost and Professor of Physics,
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