



Stony Brook University

Chapter of the National Academy of Inventors

*Stony Brook University Chapter of
The National Academy of Inventors*

Annual Meeting

**NAI Member Induction Ceremony,
Award Ceremony and Reception**

**Tuesday, May 1, 2018
5:00-7:00 PM**

*Charles B. Wang Center
Stony Brook University*



Stony Brook University

The State University of New York



**STONY BROOK UNIVERSITY CHAPTER
of
THE NATIONAL ACADEMY OF INVENTORS**



Imagination is more important than knowledge, for imagination embraces the world. – Albert Einstein

In universities across the nation and around the world, great scientists, scholars and educators are teaching the next generation of researchers and inventors.

The **National Academy of Inventors** (NAI) was founded at the University of South Florida to recognize and encourage inventors who have a patent issued from the U.S. Patent and Trademark Office (USPTO); enhance the visibility of university technology and academic innovation; encourage the disclosure of intellectual property; educate and mentor innovative students; and translate the inventions of its members to benefit society.

A researcher's contribution reaches the benchmark of inventorship as recognized by the USPTO because its discovery had no significant prior art, was not obvious to someone else skilled in the field, and had a specific use. Although every invention and every inventor is unique, some things are common to all. It takes imagination and ingenuity to be an inventor.

Without inventors we would not have our iPads, smart phones, automobiles or new sources of energy. As a society, we are eager in anticipation of the cure for cancer, HIV, diabetes, and neurological disorders such as Alzheimer's or Parkinson's disease. An inventor feels a sense of pride when the years of hard work come to fruition with either a miraculous discovery in medicine or the next generation of information technology.

Inventors truly should be recognized for their imagination and accomplishments, and called upon to share their special translational talents within the university and the wider community.

Therefore, the **Stony Brook University Chapter of the National Academy of Inventors** has been established to recognize the contributions of scientist-inventors across all disciplines in our university community.

The Stony Brook University Chapter of the National Academy of Inventors (NAI-SBU Chapter) is open to all members of the university community, including faculty, staff, alumni and affiliates, who have received an issued patent from the USPTO. An annual meeting and recognition ceremony will be held during the academic year and a list of members will be published, in order to enhance networking, recognition, and the opportunity to share your experiences.

Membership in the NAI is available through local university chapters only. Chapter members are automatically enrolled as members of the NAI, with all rights and privileges thereof.

The NAI-SBU Chapter is looking forward to working with the campus community and affiliated institutions for encouraging and bolstering academic inventions and entrepreneurship, as well as education cultivating the next-generation of academic inventors.

Sincerely yours,

Iwao Ojima, Ph.D.
President, NAI-SBU Chapter,
NAI Fellow

NAI-SBU Chapter

Chapter President: Iwao Ojima; Executive Director, Peter Donnelly

Executive Committee: Arie Kaufman, Gerald Smaldone, Roger Johnson

Chapter Board: Ester Takeuchi, Benjamin Chu, Benjamin Hsiao, Iwao Ojima, Jahangir Rastegar, Lorne Golub, Arie Kaufmann, Clinton Rubin

Administrator: Roxanne Brockner, Treasurer: Linda Galvin, Secretary: Maureen Case



Stony Brook
University



SBU Chapter of the National Academy of Inventors

Annual Meeting and Reception Tuesday, May 1, 2018

5:00 - 5:30 pm
6:30 - 7:00 pm

Reception

5:30 - 5:40 pm

Opening Remarks

Moderator: Peter Donnelly, M.B.A., Executive Director, NAI-SBU Chapter
Richard Reeder, Ph.D., Vice- President for Research, Stony Brook
University
Iwao Ojima, Ph.D., President, NAI-SBU Chapter

5:40 – 6:00 pm

Induction Ceremony

Moderator: Peter Donnelly, M.B.A., Executive Director, NAI-SBU Chapter
Presenter: Iwao Ojima, Ph.D., President, NAI-SBU Chapter

6:00 – 6:20 pm

Keynote Lecture

Moderator: Iwao Ojima, President, NAI-SBU Chapter
Clinton Rubin, Ph.D. Chapter Board Member, Fellow of the National
Academy of Inventors

6:20 – 6:30 pm

Award Ceremony for Young Academic Inventors

Moderator: Peter Donnelly, M.B.A., Executive Director, NAI-SBU Chapter
Presenter: Iwao Ojima, Ph.D., President, NAI-SBU Chapter
Winners: Amirhossein Goldan, Ph.D.,
Dmytro Gudkov, Ph.D.,
Ming-Yu Ngai, Ph.D.

6:30 pm

Closing Remarks

Peter Donnelly, M.B.A., Executive Director, NAI-SBU Chapter

NAI Fellows



Dr. Iwao Ojima received his B.S., M.S., and Ph.D. (1973) degrees from the University of Tokyo, Japan. He joined the Sagami Institute of Chemical Research and held a position of Senior Research Fellow until 1983. He joined the faculty in the Department of Chemistry, State University of New York at Stony Brook first as Associate Professor (1983), was promoted to Professor (1984), Leading Professor (1991), and then to Distinguished

Professor (1995). He served as the Department Chairman from 1997 to 2003. He has been serving as the founding Director for the Institute of Chemical Biology and Drug Discovery (ICB&DD) from 2003. He has a wide range of research interests in synthetic organic and medicinal chemistry as well as chemical biology, including discovery and development of anticancer agents and antimicrobials, targeted drug delivery, catalytic methodologies and asymmetric synthesis. His awards and honors include Arthur C. Cope Scholar Award (1994), E. B. Hershberg Award for Important Discoveries of Medicinally Active Substances (2001), the Medicinal Chemistry Hall of Fame (2006), ACS Award for Creative Work in Fluorine Chemistry (2013) from the American Chemical Society; the Chemical Society of Japan Award (1999); Outstanding Inventor Award (2002) from the Research Foundation of the State University of New York; Elected Fellow of J. S. Guggenheim Memorial Foundation, the American Association for the Advancement of Science, the New York Academy of Sciences, the American Chemical Society and the National Academy of Inventors.



Dr. Esther Takeuchi received her B.S. from the University of Pennsylvania in Chemistry and History and completed her Ph.D. in Chemistry at Ohio State University. She completed her post-doctoral research at the University of North Carolina and the State University of New York at Buffalo. Upon completing her post-doctoral research, Dr. Takeuchi was employed at Greatbatch, Inc. in Clarence, NY where she conducted research on batteries for unique environments, including implantable applications. She led the battery research team and was involved in the development of several battery systems including the lithium/silver vanadium oxide (Li/SVO) battery, which powers the majority of implantable cardiac defibrillators (ICDs). Dr. Takeuchi began her academic career at SUNY Buffalo where she held joint appointments in the Department of Chemical and Biological Engineering and the Department of Electrical Engineering. Dr. Takeuchi was awarded the National Medal of Technology and Innovation by President Obama (2009). She was inducted into the National Inventors Hall of Fame (2011), elected as a Charter Member of the National Academy of Innovation (2013), received the E. V. Murphree Award and the Astellas Award from the American Chemical Society and the Battery Division Technology Award from the Electrochemical Society. She is a Fellow of the Electrochemical Society (ECS) and the American Institute of Medical and Biological Engineering and a member of the National Academy of Engineering. A prolific inventor, Dr. Takeuchi holds over 150 patents.



Dr. Benjamin S. Hsiao received his B.S. degree from National Taiwan University, Ph.D. from the University of Connecticut, and post-doctorate training at the University of Massachusetts. He joined the DuPont Company as a staff scientist and spent 8 years in R&D before coming to Stony Brook University. He served as Chair of the Chemistry Department and as Vice President for Research at Stony Brook

University. Currently, Dr. Hsiao is a Founding Co-Director of Innovative Global Energy Solutions Center, aiming to prototype 'sustainability for off-grid communities of tomorrow', using the Turkana Basin Institute in northern Kenya as a living laboratory. He is also the Director of Center for Advanced Technology in Integrated Electric Energy Systems, with the mission to enhance the development and integration of advanced technologies into electric energy systems on multiple scales. Dr. Hsiao has a distinguished reputation in polymer science, and his research interests are mainly focused on the development of sustainable nanostructured materials for energy and water purification applications. He was elected as Fellow of American Association for the Advancement of Science, Fellow of American Chemical Society, Fellow of the American Physical Society, Fellow of Materials Research Society, Fellow of National Academy of Inventors, and received SUNY Distinguished Professor, Honorary Professor from University of Queensland in Australia, Chang-Jiang Scholar from Education Ministry of China, Co-operative Research Award from Division of Polymeric Materials Science and Engineering of American Chemical Society, NSF Special Creativity Award and DuPont Young Faculty Award.



Dr. Benjamin Chu received his B.S. degree, magna cum laude from St. Norbert College (1955) and his Ph.D., from Cornell University (1959). At the University of Kansas, he served as Assistant Professor of Chemistry (1962-1965) and Associate Professor of Chemistry (1965-1968). At the State University of New York at Stony Brook, he served as Chairman of the Department of Chemistry (1978-1985),

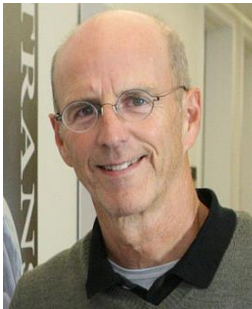
Professor of Chemistry (1968-1988), Professor of Materials Science and Engineering (1982-1992), Leading Professor of Chemistry (1988-Present) and Distinguished Professor (1992-Present). Dr. Chu has been awarded the Alfred P. Sloan Research Fellow (1966-1968), John Simon Guggenheim Fellow (1968-1969), Humboldt Award for Senior U.S. Scientists (1976-1977, 1992-1993), American Physical Society Fellow, American Institute of Chemists Fellow, High Polymer Physics Prize of the American Physical Society (1993), Langmuir Distinguished Lecturer Award, Division of Colloid and Surface Chemistry of the American Chemical Society (1994), Award for Distinguished Service in Advancement of Polymer Science by the Society of Polymer Science, Japan (1997), Gutenberg Lecture Award, Johannes Gutenberg University (2007), and National Academy of Inventors Fellow (2013). He is an Honorary Member of the Society of Polymer Science, Japan (2008). Dr. Chu has 650 publications, 41 patents/patent applications and written 6 books. His research is focused on environmental problems, especially those related to water and air.

NAI Fellows



Dr. Jahangir Rastegar received his B.S. from SMU in 1969 and his M.S. and Ph.D. degrees from the Mechanical Engineering Department of Stanford University in 1972 and 1977 respectively. He joined the General Engineering and Bioengineering faculty at the University of Illinois at Urbana-Champaign. He then worked five years in engineering firms designing

machinery for the steel industry. In 1987, he joined the Mechanical Engineering Department at SUNY at Stony Brook. His current research interests include the optimal design of structures for machinery and devices, kinematics, dynamics, biomechanics, vibration and control as related to high speed and precision machinery and robotics, passive and active vibration isolation and damping, the development of smart materials based actuators and systems, sensor and actuation devices. He is a co-founder of Omnitek Partners, LLC. He has published over 240 journal and conference papers. He is former Associate Editor of the ASME Journal of Mechanical Design for Mechanisms and Robotics and Associate Editor of the ASME Journal of Medical Devices. He has 206 U. S. and seven foreign patents issued and over 90 pending. He is a Fellow of the American Society of Mechanical Engineers (ASME). He is the recipient of the American Society of Mechanical Engineers (ASME) "2010 Machine Design Award," for "eminent achievements as an inventor and scholar in the field of machine design, particularly in the area of smart actuation and control." He is a fellow of the National Academy of Inventors.



Dr. Clinton Rubin received his B.A. in Physiology from Harvard University and a Ph.D. in Anatomy from University of Bristol, United Kingdom. Dr. Rubin is a SUNY Distinguished Professor of Biomedical Engineering, and Director of the Center for Biotechnology at Stony Brook University in Stony Brook, New York. Rubin's research is targeted towards understanding the cellular mechanisms responsible for the growth,

healing, and homeostasis of bone, and how mechanical stimuli mediate these responses through the control of mesenchymal and hematopoietic stem cell differentiation and proliferation, to establish non-drug treatment strategies for osteoporosis, obesity and diabetes. Dr. Rubin holds ~30 patents in the area of wound repair, stem cell regulation, and treatment of metabolic disease, and is a founder of Exogen, Juvent, and Marodyne Medical, which use physical signals to regulate biologic processes. He has published over 300 articles, has been cited ~24,000 times, with an H-index of 80. He is a fellow of AAAS and AIMBE, and a recipient of the Presidential Young Investigator Award from the NSF.



Dr. Lorne Golub received his D.M.D. (1963) and M.Sc. degrees (1965) from the University of Manitoba, Canada. With support from the National Research and Medical Research Councils (Canada), he completed his clinical specialty training (Periodontics) at the Harvard School of Dental Medicine, with additional research training at the Mass. Gen. Hospital, Harvard Medical School (1968). He returned to Manitoba to co-

develop the first specialty training program (Periodontics) combined with a Ph.D. in Oral Biology. He was a founding member of the faculty when the SUNY Stony Brook School of Dental Medicine opened in 1973. He was promoted to Professor in 1977, and SUNY Distinguished Professor in 2003. He served as Associate Dean for Research (1993-2003) and Interim-Dean of the Dental School (2008-2009). In 2006, his research was highlighted in "Technology Transfer Stories - 25 Innovations that Changed the World." AUTM, The Better World Report, Ch.24. He has generated innovations on matrix-metalloproteinases and their therapeutic inhibition by inventing FDA (and internationally)-approved novel NON-antibiotic tetracycline formulations as inhibitors of collagenolysis during a variety of oral and systemic diseases (periodontitis, arthritis, cancer, diabetes, heart and lung diseases). More recently, he, and his Department of Chemistry colleague, developed and patented novel chemically-modified curcumins as pleiotropic MMP-inhibitors. He holds 55 U.S. and 104 international patents which were licensed to and marketed by several corporations and is scientific co-founder of two start-up companies. He has published more than 300 scientific articles .



Dr. Arie Kaufman received his B.S. in Mathematics and Physics from the Hebrew University of Jerusalem, M.S. in Computer Science from the Weizmann Institute of Science, Israel, and a Ph.D. in Computer Science from Ben-Gurion University, Israel. He is a Distinguished Professor of Computer Science and Radiology, the Director of the Center of Visual Computing (CVC), the Chief

Scientist of the Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University (SBU). He joined the faculty at SBU in 1985 and served as Chair of Computer Science for 18 years (1999-2017). He also held posts at the Hebrew University, Tel-Aviv University, Florida International University, Ben-Gurion University, Columbia University and Harvard University. Dr. Kaufman is most well-known for developing virtual colonoscopy for colon cancer screening that has been licensed, FDA approved and commercialized; the Cube hardware for real-time volume rendering that has been licensed and commercialized, enabling 3D medical imaging on PCs; and the Reality Deck, the largest resolution immersive visualization facility, enabling visual analytics of big data. He received the prestigious IEEE Visualization Career Award and was inducted into the LI Technology Hall of Fame. He holds 99 patents, 52 of which have been licensed to 9 companies. He is the co-founder of Viatronix, Inc. He has published in excess of 330 refereed papers/books/chapters, and more than 300 conference presentations, and was the founding Editor-in-Chief of IEEE Transaction on Visualization and Computer Graphics (TVCG), 1995-98. He is a member of the European Academy of Sciences, IEEE Fellow, ACM Fellow, and NAI Fellow.

NAI New Members



Dr. John Brittelli

Clinical Assistant Professor
Respiratory Care Program
Stony Brook School of Medicine



Dr. Imin Kao

Professor
Department of Mechanical
Engineering and Executive
Director of SUNY Korea



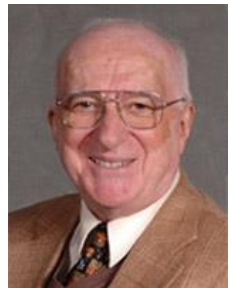
Dr. Dale Deutsch

Professor
Department of Biochemistry and
Cell Biology



Dr. Hsi-Ming Lee

Associate Professor of
Research
Department of Oral Biology
and Pathology



Dr. Dennis Galanakis

Professor of Pathology and
Medicine
Director of Blood Bank



Dr. Craig Lehmann

Dean, School of Health
Technology and Management
Professor, Department of
Clinical Laboratory Sciences,
Clinical Chemist



Dr. Arthur Grollman

Distinguished Professor
Department of Pharmacological
Sciences



Dr. Devinder Mahajan

Professor and
Graduate Program Director
Department of Materials
Science and Chemical
Engineering



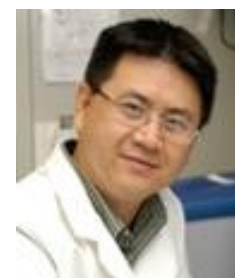
Dr. Robert Grubbs

Professor
Department of Chemistry



Dr. Klaus Mueller

Professor
Department of
Computer Sciences



Dr. Jingfang Ju

Professor
Department of Pathology



Dr. Thomas Robertazzi

Professor
Department of Electrical
Computer Engineering

NAI New Members



Dr. Satya Sharma

Visiting Professor

Department of Mechanical Engineering
Executive Director, CEWIT



Dr. Balaji Sitharaman

Associate Professor

Department of Biomedical Engineering



Dr. Arnold Wishnia,

Associate Professor of Research

Department of Chemistry

Honorary Members



Ronald Baron, Ph.D., J.D.

Attorney at Law

Hoffman and Baron, LLP



Peter Bernstein, Ph.D., J.D.

Attorney at Law

Scully, Scott, Murphy & Presser, PC



Donna Tumminello

Assistant Director
Business Development,
Office of Technology Licensing
Stony Brook University

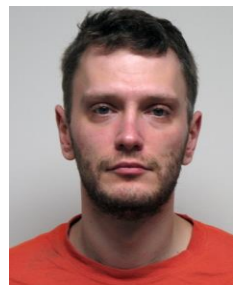
Young Academic Inventor's Award Recipients



Amirhossein Goldan, Ph.D.

Assistant Professor of Research
Department of Radiology

For his innovative development and fabrication of medical imaging detectors for positron emission tomography (PET) and digital mammography.



Dmytro Gudkov, Ph.D.

Research Scientist, Department of Electrical Engineering

For his innovative design and development of ultra-sensitive single and multi-channel fluorescent detectors for application in the field of life sciences.



Ming-Yu Ngai, Ph.D.

Assistant Professor,
Department of Chemistry

For his inventions of highly efficient synthetic methods for pharmaceuticals and agrochemicals, as well as radiopharmaceuticals for PET imaging

*The Stony Brook University Chapter of
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Department of Medicine
Department of Oral Biology and Pathology
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