National Academy of Engineering
October 2, 2021

CLASS OF 2021
Members and International Members
In February 2021 the members of the NAE elected 104 new members and 24 new international members. Election to the NAE is one of the highest professional distinctions conferred on engineers. The main criteria for membership in the National Academy of Engineering are outstanding personal contributions and accomplishments in one or both of the following categories:

1. Engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature.
2. Pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education, or providing engineering leadership of major endeavors.

The following pages feature the names, photographs, and election citations of each newly elected member and foreign member. The numbers following their names denote primary and secondary NAE section affiliations.

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Dr. Russell J. Allgor (8, 3)
Chief Scientist
Amazon

For application of operations engineering to design and improve logistics and fulfillment systems for ecommerce.

Dr. Santokh S. Badesha (12, 9)
Corporate Fellow & Manager Open Innovation
Xerox Corporation

For developing materials enabling the broad use of laser printing and the creation of color laser printing.

Dr. Barry Arkles (9, 3)
Chairperson and CEO
Gelest Inc.

For contributions to organosilicon materials and organometallic and biochemical reagents.

Dr. James L. Barnard (4)
Global Practice and Technology Leader
Black & Veatch, Engineers-Architects

For the development and implementation of biological nutrient removal in water treatment.

Mr. James R. Arnold (11)
Principal
Taproot Construction, LLC

For commercial application of processes for gold and silver recovery and implementation of advanced environmental controls.

Dr. Luiz Andre Barroso (5)
Vice President and Google Fellow
Google, Inc.

For contributions to the architecture, design, and performance of energy-efficient warehouse-scale computing.

Dr. John G. Aunins (2)
Senior Advisor Bioprocess and Manufacturing
Seres Therapeutics, Inc.

For advances in bioprocess engineering, the introduction of new vaccines and development of microbiome-based products.

Dr. James G. Bellingham (12, 11)
Executive Director
Institute for Assured Autonomy
Johns Hopkins University

For design, development, and deployment of autonomous underwater vehicles to advance understanding of the ocean and its resources.
Dr. David Bem (3, 9)
Chief Technology Officer and Vice President of Science & Technology
PPG Industries, Inc.
For business leadership and a sustained record of materials discovery to commercialization.

Dr. Zoltan J. Cendes (7)
Adjunct Professor
Carnegie Mellon University
For contributions to theory, development, and commercialization of electromagnetics simulation software.

Prof. Christopher N. Bowman (3, 2)
James and Catherine Patten Endowed Chair and Distinguished Professor
University of Colorado Boulder
For development of photopolymerization reactions for adaptable polymer networks and their innovative applications.

Ms. Lili Cheng (5)
Corporate Vice President Conversation AI
Microsoft Corporation
For scientific and industrial leadership in user interface design, social computing, and computing education.

Dr. Julia J. Brown (7)
Senior Vice President and Chief Technology Officer
Universal Display Corporation
For contributions to materials and device technologies for phosphorescent light emitting diode displays, and their commercialization.

Professor James E. Colgate (10, 5)
Breed University Professor of Design Mechanical Engineering
Northwestern University
For development of haptic interface technologies, including surface haptics for touchscreens.

Dr. Christopher B. Burke (4)
Chief Executive Officer
Christopher B. Burke Engineering, Ltd.
For leadership in executing complex water resources projects and service to the engineering community.

Dr. Lance R. Collins (10, 3)
Vice President and Executive Director of the Innovation Campus
Virginia Tech
For contributions to understanding turbulent processes, leadership in engineering, and contributions to the diversity of the profession.

Mr. Carlos A. Cabrera (3, 2)
Executive Chairman
Genomatica, Inc.
For leadership in developing and commercializing widely adopted processes for fuels and intermediate chemicals.

Dr. Catherine F. Corrigan (2)
Chief Executive Officer and President
Exponent, Inc.
For elucidation of injury mechanisms and mitigation, and leadership in biomechanical engineering and scientific consulting.
Mr. Erroll B. Davis, Jr. (6)
Board Member
Atlanta Public Schools
For leadership in research and development of renewable resources integration with the grid, and public education.

Dr. William T. Freeman (5)
Principal Scientist
Google, Inc.
For contributions to computer vision and image enhancement.

Professor Peter J. Delfyett, Jr. (7)
Pegasus Professor & University Trustee Chair
University of Central Florida
For contributions to development and commercialization of low-noise, high-power ultrafast semiconductor lasers.

Professor Andrés J. García (2)
Regent’s Professor Woodruff School of Mechanical Engineering
Georgia Institute of Technology
For contributions to molecular engineering of biomaterial surfaces and cell adhesion force technology to characterize stem and cancer cells.

Professor Jonathan S. Dordick (2, 3)
Institute Professor
Rensselaer Polytechnic Institute
For contributions to methods for rapidly screening drug efficacy and toxicity, and biocatalytic technologies for improving human health.

Mr. Gary J. Goldberg (11)
Director
BHP Group Limited
For promoting safety, sustainability, inclusion, value, ethics, and responsibility in the mining industry.

Professor Francis J. Doyle, III (2, 3)
John A. & Elizabeth S. Armstrong Professor and Paulson Dean, Engineering & Applied Sciences
Harvard University
For insights into natural biological control systems and innovative engineering of diabetes control devices.

Dr. Charles N. Haas (4, 12)
LD Betz Professor of Environmental Engineering
Drexel University
For contributions to quantitative microbial risk assessment for drinking water quality and public health.

Professor Frederick Dryer (10, 1)
Professor
Mechanical Engineering and Aeronautical Engineering
University of South Carolina
For contributions to understanding of combustion processes for propulsion and transportation applications and for fire safety.

Dr. Craig J. Hawker (9)
Director of the California NanoSystems Institute
Director of Dow Materials Institute
University of California, Santa Barbara
For contributions to polymer chemistry through synthetic organic chemistry concepts and the advancement of molecular engineering principles.
Mr. Nick Hazen (11, 3)  
President & CEO  
Hazen Research, Inc.  
For leadership in the commercial development of hydrometallurgical processes for recovering metals from ores.

Dr. Patricia N. Hurter (3)  
Chief Executive Officer and President  
Lyndra Therapeutics  
For leadership in formulation technologies, amorphous dispersions, and continuous processing for hepatitis C and cystic fibrosis treatments.

Professor Mary C. Hill (11, 12)  
Professor of Geology  
University of Kansas  
For contributions to development and application of methods for parameter estimation and sensitivity analysis in hydrologic models.

Professor William W. Hogan (8)  
Raymond Plank Professor of Global Energy Policy  
Harvard University  
For contributions to electricity industry restructuring, electricity market design, and energy policy modeling and analysis.

Professor Marija D. Ilic (6)  
Senior Research Scientist Laboratory for Information and Decision Systems  
Massachusetts Institute of Technology  
For contributions to electric power system analysis and control.

Professor Jonathan P. How (1, 5)  
Richard Cockburn Macaulay Professor  
Massachusetts Institute of Technology  
For contributions to decision making and control of intelligent autonomous aerospace vehicles.

Dr. Donald E. Ingber (2)  
Founding Director Judah Folkman Professor of Vascular Biology  
Harvard University  
For interdisciplinary contributions to mechanobiology and microsystems engineering, and leadership in biologically inspired engineering.

Dr. Kathryn J. Jackson (6, 12)  
Owner  
Dr. Kathryn Jackson, LLC  
For contributions to management of large-scale power system technology, and harmonization of engineering solutions with public policy.

Dr. Christopher T. Jones (1)  
Chief of Operations  
The Leadership Compass  
For leadership of defense logistics, sustainment, training, and system readiness in support of US national security.

Dr. Hao Huang (6, 1)  
Technology Chief (Retired)  
General Electric Aviation  
For contributions to advances in electric machines and power electronics technologies for aerospace electrical systems.
Dr. Zakya H. Kafafi (9, 7)
Distinguished Research Fellow Electrical and Computer Engineering
Lehigh University
For contributions to materials technologies for organic optoelectronics.

Dr. Witold F. Krajewski (12, 4)
Rose & Joseph Summers Chair in Water Resources Engineering
The University of Iowa
For advances in flood prediction and mitigation.

Professor David L. Kaplan (2)
Stern Family Professor of Engineering and Distinguished University Professor
Tufts University
For contributions to silk-based materials for tissue engineering and regenerative medicine.

Mr. Roger A. Krone (1, 7)
Chairman and Chief Executive Officer
Leidos, Inc.
For technical leadership in industry engineering and advances in aerospace and information technology programs.

Ms. Terri L. Kelly (12)
Director
United Rentals
For leadership in product development and commercialization by advancing management practices that foster innovation.

Dr. Rajiv Laroia (7)
Co-Founder & CTO
Light Labs
For contributions to adaptive multiuser orthogonal frequency division multiplexing for cellular voice and data systems.

Dr. Thomas F. Kelly (9)
Founder, President and CEO
Steam Instruments, Inc.
For design and commercialization of the local electrode atom probe to yield 3D atomic-scale analysis of materials.

Ms. Shelley K. Lavender (1)
Retired Sr. Vice President, Strike, Surveillance and Mobility, Boeing Defense, Space, and Security
The Boeing Company
For contributions to technological advances of military aircraft platforms and systems.

Dr. Anne S. Kiremidjian (4, 12)
C. L. Peck, Class of 1906 Professor
School of Engineering
Stanford University
For research and dissemination of probabilistic seismic hazard methods and mentoring.

Mr. B. Gentry Lee (1)
Chief Engineer for Solar System Exploration
Planetary Flight Systems Directorate
Jet Propulsion Laboratory
For contributions to 20 planetary exploration missions to Mars, Jupiter, asteroids, and comets.
Dr. Claire Leon (1, 12)
Owner
Claire Leon Consulting, LLC
For technical and engineering management of national security space systems.

Dr. Josh Makower (2, 10)
General Partner
New Enterprise Associates
For inventing balloon sinuplasty, and for leading the commercialization of this and multiple other innovations.

Dr. Frances E. Lockwood (10)
Chief Technology Officer
Valvoline
For contributions and leadership in the development of sustainable lubricants in automotive and industrial applications.

Mr. James O. Malley (4)
Group Director and Senior Principal
Degenkolb Engineers
For leadership in improving seismic design.

Dr. Azad M. Madni (12, 8)
Chief Executive Officer & Chief Technology Officer
Intelligent Systems Technology, Inc.
For advances in low-cost simulation-based training using interdisciplinary model-based approaches.

Dr. Louis A. Martin-Vega (12, 8)
Professor and Dean of Engineering
North Carolina State University
For support of engineering and engineering education through industry-academic collaboration and opportunities for underrepresented groups.

Mr. William D. Magwood, IV (6)
Director General
Organization for Economic Cooperation and Development
For leadership and contributions to research programs that drive innovation in global nuclear energy enterprises.

Professor Margaret R. Martonosi (5)
Hugh Trumbull Adams ’35 Professor
Princeton University
For contributions to power-aware and power-efficient computer architectures and mobile systems.

Dr. Hani S. Mahmassani (4, 8)
William A. Patterson Distinguished Chair in Transportation Director, Transportation Center Northwestern University
For contributions to modeling of intelligent transportation networks and to interdisciplinary collaboration in transportation engineering.

Dr. Marcia K. McNutt (11)
President
National Academy of Sciences
For elucidation of lithosphere geomechanics and leadership in earth resources engineering.
Ms. Pamela A. Melroy (1)
Chief Executive Officer
Melroy & Hollett Technology Partners, LLC
For contributions to human space flight, space access, space situation awareness, and military aeronautics systems.

Dr. Danielle W. Merfeld (6)
Vice President & Chief Technology Officer GE Renewable Energy
General Electric Company
For leadership and development of products for large wind turbines and solar photovoltaic systems.

Dr. Sumita B. Mitra (9)
Founder and Partner
Mitra Chemical Consulting, LLC
For designing and engineering nanomaterials that have revolutionized dental care worldwide.

Mr. Mick C. Mountz (8, 10)
Founder & CEO (retired)
Kiva System, Inc.
For advancing industrial mobile robotic material handling systems for order fulfillment.

Dr. Julio A. Navarro (1, 7)
Senior Technical Fellow Boeing Research & Technology
The Boeing Company
For development and implementation of phased array sensors and communication systems for aerospace applications.

Professor Oyekunle Olukotun (5)
Cadence Design Professor Electrical Engineering and Computer Science
Stanford University
For contributions to on-chip multiprocessor architectures and advancement to commercial realization.

Professor Mari Ostendorf (5, 7)
System Design Methodologies Professor
University of Washington
For contributions to statistical and prosodic models for speech and natural language processing and for advances in conversational dialogue systems.

Dr. Maria Palasis (3)
President & CEO
Lyra Therapeutics
For outstanding contributions to the design of medical devices and drug delivery systems.

Professor Jong-Shi Pang (8)
Epstein Family Chair of Industrial and Systems Engineering
University of Southern California
For the development of methods to advance the theory and applications of optimization and operations research.

Dr. Mario J. Paniccia (7)
CEO
Anello Photonics
For contributions to integrated silicon photonic devices and their commercialization.


**Mr. Glaucio H. Paulino (10, 4)**
Raymond Allen Jones Chair and Professor Civil and Environmental Engineering
Georgia Institute of Technology

For contributions to topology optimization and its applications to medicine and engineering.

**Professor Laura J. Pyrak-Nolte (11)**
Distinguished Professor of Physics and Astronomy
Purdue University

For advances in understanding of the processes that link the mechanical, hydraulic, and seismic properties in discontinuities.

**Dr. Fernando C. Pereira (5)**
Vice-President and Engineering Fellow
Google, Inc.

For contributions to speech, natural language, and machine learning.

**Dr. William A. Radasky (12)**
President and Managing Engineer
Metatech Corporation

For leadership in the development and application of electromagnetic transient disturbance and protection standards for national security and commercial systems.

**Professor David J. Perreault (6, 7)**
Joseph F. and Nancy P. Keithley Professor of Electrical Engineering
Massachusetts Institute of Technology

For contributions to power electronics technology and design techniques for very high frequency energy conversion.

**Professor Theodore S. Rappaport (7, 5)**
David Lee/Ernst Weber Chaired Professor
New York University Tandon School of Engineering

For contributions to the characterization of radio frequency propagation in millimeter wave bands for cellular communication networks.

**Dr. Mark T. Peters (6, 11)**
Executive Vice President for Laboratory Operations
Battelle Memorial Institute

For leadership and contributions in advancing US nuclear energy capabilities and infrastructure.

**Dr. Lutgarde M. Raskin (4)**
Vernon L. Snoeyink Distinguished University Professor
Altarum/ERM Russell O’Neal Professor of Engineering
University of Michigan

For application of genetic tools to improve anaerobic biological water treatment.

**Dr. Joseph B. Powell (3, 12)**
Chief Scientist Chemical Engineering Chemicals & New Energies Technology
Shell Technology Center

For contributions to process developments in energy, chemicals, and biofuels technologies.

**Dr. Peter B. Roemer (2, 7)**
GE Healthcare (Retired)

For contributions to performance improvement and widespread availability of MRI technology.
Ms. Jeanne M. Rosario (1, 10)
Former Vice President and General Manager
Engineering Division
General Electric Aviation
For leadership in advancing aircraft engine
design, global engineering, and support for
women in engineering.

Professor J. Marshall Shepherd (12, 11)
Georgia Athletic Association Distinguished
Professor and Director
University of Georgia
For development of methods to understand the
Earth’s hydrometeorological and hydroclimate
system, and for climate science public
communication and outreach.

Dr. Krishan K. Sabnani (7, 5)
Networking Research VP Emeritus
Bell Labs, Nokia
For contributions to software-defined routing
and networks.

Dr. John B. Simpson (2)
Staff Cardiologist
Sequoia Hospital
For contributions to coronary angioplasty and
atherectomy, and their widespread application.

Professor Kamal Sarabandi (12, 7)
Rufus S. Teesdale Endowed Professor of
Engineering
University of Michigan
For contributions to the science and technology
of radar remote sensing.

Professor Winston O. Soboyejo (9)
Senior Vice President and Provost
Worcester Polytechnic Institute
For contributions to understanding dynamic
behavior of materials and for leadership in
STEM outreach in Africa.

Mr. Mark P. Sarkisian (4)
Partner Structural and Seismic Engineering
Skidmore Owings and Merrill, LLP
For innovation in efficient and aesthetic design
of tall buildings and structures.

Dr. S.V. Sreenivasan (8)
Joe C. Walter Endowed Chair in Engineering
The University of Texas at Austin
For research, innovation, and entrepreneurship
in industrial deployment of nanoimprint
lithography equipment.

Professor Rachel A. Segalman (3, 9)
Department Chair and Edward Noble Kramer
Professor
University of California, Santa Barbara
For contributions to semiconducting block
polymers, polymeric ionic liquids, and hybrid
thermoelectric materials.

Dr. Kathleen J. Stebe (3)
Goodwin Professor,
Applied Sciences & Engineering
University of Pennsylvania
For contributions to understanding of nonequilibrium processes at soft matter
interfaces and their impact on new technologies.
Dr. Yu-Chong Tai (7, 2)
Anna L. Rosen Professor of Electrical Engineering and Medical Engineering
California Institute of Technology
For contributions to microelectromechanical system technologies and parylene-based biomedical microdevices.

Dr. Juming Tang (12)
Regents Professor and Distinguished Chair of Food Engineering
Washington State University
For invention and commercialization of electromagnetic spectrum wave based food processes.

Professor Jefferson W. Tester (3, 11)
Croll Professor of Sustainable Energy Systems
Cornell University
For leadership in development of novel renewable energy systems.

Dr. Michael M. Thackeray (9)
Argonne Emeritus, Distinguished Fellow and Senior Scientist
Argonne National Laboratory
For invention of cathode materials that dominate in Li-ion batteries for electric vehicles and grid storage.

Professor Levi T. Thompson (3, 9)
Elizabethe Inez Kelley Professor and Dean, College of Engineering
University of Delaware
For advances in catalysis and energy storage, entrepreneurship, and academic leadership.

Dr. Arthur J. Tipton (2)
Founder and CEO
Vulcan Gray
For the development and commercialization of drug delivery systems, business leadership, and fostering STEM education of disadvantaged students.

Dr. Nikhil C. Trivedi (11, 9)
Senior Partner
Idekin International
For development of minerals processing technologies and mineral products for the paper, polymer, and building industries.

Dr. Hongtei E. Tseng (10, 5)
Senior Technical Leader
Ford Research and Innovation Center
Ford Motor Company
For contributions to control systems for enhancing vehicle safety.

Ms. Vickie A. VanZandt (6)
President
VanZandt Electric Transmission Consulting, Inc.
For contributions to advanced transmission, protection, and wide area monitoring systems.

Dr. Yurii Vlasov (7, 2)
GEBI Founder Professor of Engineering
Electrical and Computer Engineering
University of Illinois at Urbana-Champaign
For contributions to development and commercialization of silicon photonics for optical data communications.
Ms. Cindy L. Wallis-Lage (4)
Executive Director and President Water Business
Black & Veatch, Engineers-Architects
For applying innovative technology to complex large-scale water infrastructure systems.

Mr. Christopher J. Wiernicki (12, 4)
Chairman, President and CEO
ABS Group of Companies
For innovations in the design, engineering, and operation of ships and offshore structures.

Professor Donald R. Wilton (7, 5)
Professor Emeritus
Department of Electrical and Computer Engineering
University of Houston
For contributions to computational electromagnetics of highly complex structures.

Dr. Murty V. Yalla (6, 7)
Vice President & General Manager
Beckwith Electric Co., Inc.
For contributions to digital protection and control devices for the grid.

Professor Jackie Y. Ying (2, 3)
Senior Fellow
Agency for Science, Technology and Research (A*STAR)
For contributions at the interface of nanostructured materials, nanomedicine, and diagnostic devices to improve human health.

Dr. Matthew J. Zaluzec (9, 8)
Professor of Materials Science and Engineering
University of Florida
For innovation of lightweight materials and manufacturing technologies to improve automotive fuel economy and safety and reduce the carbon footprint.
Dr. Takuzo Aida (9, 3)
Professor of Chemistry and Biotechnology
University of Tokyo

For contributions to the engineering of smart and adaptive molecular materials using physical perturbation of multivalent interactions.

Dr. Peter Fratzl (9, 12)
Director, Prof. Dr. Dr. h.c.
Department of Biomaterials
Max Planck Institute of Colloids and Interfaces

For studies of structure and physical properties of biological materials and their application in materials science and medicine.

Dr. AbdulHameed AlHashem (9)
Principal Research Scientist Petroleum Research Center
Kuwait Institute for Scientific Research

For research in support of improved materials for the energy sector, and establishment of atmospheric corrosion maps for Kuwait.

Professor Xiaobing Fu (2)
Professor and Director
College of Life Sciences
General Hospital of PLA

For achievements in elucidating wound healing mechanisms and sweat gland regeneration, and national leadership in clinical management of trauma.

Dr. Paula M. Alves (2)
CEO
iBET, Instituto de Biologia Experimental e Tecnologica

For leadership in biomanufacturing, advanced biotherapeutics, and bridging the gap between academia and industry.

Professor Luis E. Garcia (4)
Honorary Professor
Universidad de Los Andes

For contributions to the earthquake-resistant design, construction, and building code development of concrete structures.

Dr. Giuseppe Bellussi (3)
Senior Vice President Development, Operations and Technology Division (retired)
Eni S.p.A

For development and commercialization of environmentally beneficial chemical processes.

Dr. Elisabeth L. Guazzelli (3, 10)
Distinguished Senior Researcher
Matière et Systèmes Complexes
CNRS-University of Paris VI

For experiments and theory that enhance understanding of dispersed particulate systems.

Dr. Sebastian Ceria (8)
Chief Executive Officer
Qontigo

For application of optimization tools to advance integer programming and financial engineering.

Dr. Sudhir K. Jain (4)
Director
Indian Institute of Technology Gandhinagar

For leadership in earthquake engineering in developing countries.
Dr. Jyeshtharaj B. Joshi (3)
Emeritus Professor of Eminence
University Institute of Chemical Technology (UICT)
For contributions in rational design of multiphase chemical process equipment and leadership in shaping the Indian chemical industry.

Dr. Mario V. Pereira (8)
President and Chief Innovation Officer
PSR Energy Consulting and Analytics
For contributions to methodology and implementation of multi-stage stochastic optimization in hydroelectric scheduling, energy planning, and policy.

Professor Johann W. Kolar (6)
Professor Information Technology and Electrical Engineering
ETH Zurich
For contributions to power-electronic technologies, multiobjective design optimization, education, and technology transfer to industry.

Professor Barbara Sherwood Lollar (11)
University Professor of Earth Sciences
University of Toronto
For contributions to understanding of the evolution of Earth’s groundwater and atmosphere.

Professor Khaled B. Letaief (7, 5)
Chair Professor & New Bright Professor of Engineering
The Hong Kong University of Science and Technology
For contributions to adaptive resource allocation in multuser orthogonal frequency-division multiplexing wireless systems and for academic leadership.

Professor Pierre M. Suquet (10)
Distinguished Senior Scientist
Laboratoire de Mecanique et d’Acoustique
CNRS-University of Paris VI
For contributions to the mechanics of nonlinear behavior of heterogeneous viscoplastic solids.

Professor Alejandro López Valdivieso (11)
Professor Investigador
Area de Ingenieria de Minerales
Universidad Autonoma de San Luis Potosi
For contributions to the processing of complex sulfide ores and educational leadership.

Professor Christopher Toumazou (7, 2)
Regius Professor of Engineering
Imperial College London
For innovations in electronics for medicine, including rapid diagnostics.

Dr. Yoelle Maarek (5)
VP of Research
Amazon
For contributions to online information retrieval and data management, and leadership in applied industrial research.

Dr. Marinus A. Van den Brink (12)
President and Chief Technology Officer
ASML
For driving advances in optical and extreme ultraviolet lithography that enable smaller, faster, and more energy-efficient semiconductor devices.
Professor Luc Van den hove (7)
President & CEO
Interuniversity Microelectronics Center (IMEC)
For leadership in major international industry-university collaborations for the semiconductor industry.

Professor Wanming Zhai (4, 10)
Dean of Faculty
Southwest Jiaotong University
For contributions to the design and operation of high-speed rail transportation networks.

Professor Yangsheng Xu (10)
President
The Chinese University of Hong Kong
For contributions in space robotics and autonomous systems.

Professor Xiaoxin Zhou (6)
Honorary President
China Electric Power Research Institute
For contributions to the development and implementation of power systems technology in China.
CLASS OF 2021
By Section and Geographic Location
SECTION 1 AEROSPACE ENGINEERING (PRIMARY SECTION)
How, Jonathan P.
Jones, Christopher Tyler
Krone, Roger A.
Lavender, Shelley K.
Lee, B. Gentry
Leon, Claire
Melroy, Pamela Ann
Navarro, Julio A.
Rosario, Jeanne M.

SECTION 2 BIOENGINEERING (PRIMARY SECTION)
Alves, Paula Marques
Aunins, John Grant
Corrigan, Catherine Ford
Dordick, Jonathan S
Fu, Xiaoping
García, Andrés Jose
Kaplan, David L.
Makower, Josh
Ingber, Donald E.
Kafafi, Zakya H.
Keller, Thomas F.
Mitra, Sumita B.
Soboyejo, Winston Olusola
Thackerey, Michael Makepeace
Zaluzec, Matthew J.

SECTION 3 CHEMICAL ENGINEERING (SECONDARY SECTION)
Aida, Takuzo
Allgor, Russell John
Akrles, Barry
Collins, Lance R.
Dordick, Jonathan S
Doyle, Francis J., III
Hazen, Nick
Ying, Jackie Y.

SECTION 4 CIVIL & ENVIRONMENTAL ENGINEERING (PRIMARY SECTION)
Barnd, James L.
Burke, Christopher B.
García, Luis Enrique
Haas, Charles N.
Jain, Sudhir K.
Kremidjian, Anne Setian
Mahmassani, Hani S.
Malley, James O.
Raskin, Litgarde M.
Sarkisian, Mark Peter
Wallis-Lage, Cindy L.
Zhai, Wanming

SECTION 5 COMPUTER SCIENCE AND ENGINEERING (PRIMARY SECTION)
Barros, Luiz André
Cheng, Lili
Freeman, William T.
Maarek, Yoelle
Martonosi, Margaret R.
Olukotun, Oyekunle
Ostendorf, Mari
Pereira, Fernando C.

SECTION 6 ELECTRIC POWER/ENERGY SYSTEMS ENGINEERING (PRIMARY SECTION)
Brown, Julia J.
Cendes, Zoltan J.
DeIllyett, Peter J., Jr.
Laroia, Rajiv
Letainel, Khaled Ben
Pancia, Mario J.
Rappaport, Theodore Scott
Sabnani, Krishan K.
Tao, Yu-Chong
Tourziou, Christofer
Van den hove, Luc
Vlasov, Yuri
Wilton, Donald R.

SECTION 7 ELECTRONICS, COMMUNICATIONS & INFORMATION SYSTEMS ENGINEERING (SECONDARY SECTION)
Kafafi, Zakya H.
Krone, Roger A.
Navarro, Julio A.
Ostendorf, Mari
Perreault, David J.
Roeper, Peter Bernard
Sabnani, Krishan K.
Tseng, Hongtai Eric
Xu, Yangsheng

SECTION 8 INDUSTRIAL, MANUFACTURING, AND OPERATIONAL SYSTEMS ENGINEERING (PRIMARY SECTION)
Aida, Takuzo
Allgor, Russell John
Ceria, Sebastian
Hogan, William Walter
Mountz, Mick C.
Pang, Jong-Shih
Perreira, Mario Veiga Ferraz
Sreenivasan, S.V.

SECTION 9 MATERIALS ENGINEERING (PRIMARY SECTION)
Aida, Takuzo
AldHashem, AbdulHameed
Akrles, Barry
Fratzi, Peter
Hawker, Craig J.
Kalafi, Zakya H.
Kelly, Thomas F.
Mitra, Sumita B.
Soboyejo, Winston Olusola
Thackerey, Michael Makepeace
Zaluzec, Matthew J.

SECTION 10 MECHANICAL ENGINEERING (PRIMARY SECTION)
Colgate, James Edward
Collins, Lance R.
Dordick, Jonathan S
Garcia, Luis Enrique
Kafafi, Zakya H.
Krone, Roger A.
Navarro, Julio A.
Ostendorf, Mari
Perreault, David J.
Roeper, Peter Bernard
Sabnani, Krishan K.
Tseng, Hongtai Eric
Xu, Yangsheng

SECTION 11 MECHANICAL ENGINEERING (SECONDARY SECTION)
AlHashem, AbdulHameed
Akrles, Barry
Fratzi, Peter
Hawker, Craig J.
Kalafi, Zakya H.
Kelly, Thomas F.
Mitra, Sumita B.
Soboyejo, Winston Olusola
Thackerey, Michael Makepeace
Zaluzec, Matthew J.
SECTION 11
EARTH RESOURCES ENGINEERING
(PRIMARY SECTION)
Arnold, James R.
Goldberg, Gary J.
Hazen, Nick
Hill, Mary Catherine
López Valdivieso, Alejandro
McNutt, Marcia
Pyrak-Nolte, Laura J.
Sherwood Lollar, Barbara
Trivedi, Nikhil C.

SECTION 12
SPECIAL FIELDS AND INTERDISCIPLINARY ENGINEERING
(PRIMARY SECTION)
Badesha, Santokh S.
Bellingham, James Gladen
Kelly, Temi L.
Krajewski, Witold F.
Madni, Azad M.
Martin-Vega, Louis A.
Radasky, William A.
Sarabandi, Kamal
Shepherd, J. Marshall
Tang, Juming
Van den Brink, Marinus Aart
Wiernicki, Christopher J.

SECTION 11
EARTH RESOURCES ENGINEERING
(SECONDARY SECTION)
Bellingham, James Gladen
Peters, Mark Todd
Shepherd, J. Marshall
Tester, Jefferson W.
ALABAMA
Tipton, Arthur J.

CALIFORNIA
Barroso, Luiz André
Corrigan, Catherine Ford
Hawker, Craig J
Kremidjian, Anne Setian
Lee, B. Gentry
Leon, Claire
Madni, Azad M.
Malley, James O.
Olukotun, Oyekunle
Pang, Jong-Shi
Radasky, William A.
Sarkisian, Mark Peter
Segalman, Rachel A.
Simpson, John B.
Tai, Yu-Chong

COLORADO
Bowman, Christopher N.
Goldberg, Gary J.
Hazen, Nick

DELAWARE
Kelly, Tem L.
Thompson, Levi Theodore

DISTRICT OF COLUMBIA
McNutt, Marcia

FLORIDA
Cendes, Zoltan J.
Dellytet, Peter J.
Mitra, Sumita B.
Roemer, Peter Bernard
Yalla, Murty V. S.
Zaluzec, Matthew J.

GEORGIA
Davis, Erroll Brown
Garcia, Andres Jose
Paulino, Glauco H.
Shepherd, J. Marshall

IOWA
Krajewski, Wilold F.

KANSAS
Barnard, James L.
Hill, Mary Catherine

KENTUCKY
Lockwood, Frances E.

MASSACHUSETTS
Aurins, John Grant
Bellingham, James Cladon
Doyle, Francis J.
Freeman, William T.
Hogon, William Walter
How, Jonathan P.
Hurter, Patricia Nell
Illic, Manja D.
Ingber, Donald E.
Kaplan, David L.
Mountz, Mick C.
Palasis, Maria
Perneault, David J.
Soboyejo, Winston Oluwole

MICHIGAN
Fang, Jing-Shi

MISSOURI
Lavender, Shelley K.
Wallis-Lage, Cindy L.

NEW JERSEY
Brown, Julia J.
Laroia, Raju
Martinou, Margaret R.
Sambani, Krishan K.

NEW YORK
Badesha, Santokh S.
Cenia, Sebastian
Dordick, Jonathan S
Rappaport, Theodore Scott
Tester, Jefferson W.

NORTH CAROLINA
Martin-Vega, Louis A.
Merfeld, Danielle W.

OHIO
Peters, Mark Todd

PENNSYLVANIA
Akray, Barry
Bem, David
Haas, Charles N.
Jackson, Kathryn J.
Stebe, Kathleen J.
Trivedi, Nikhil C.

SOUTH CAROLINA
Arnold, James R.
Dryer, Frederick
Rosario, Jeanne M.

TEXAS
Huynh, Hao
Powell, Joseph B.
Sreenivasan, S.V.
Wiernicki, Christopher J.
Wilton, Donald R.

VIRGINIA
Collins, Lance R.
Jones, Christopher Tyler
Kafafi, Zakya H.
Krone, Roger A.
Melroy, Pamela Ann

WASHINGTON
Allgor, Russell John
Cheng, Lili
Navarro, Julio A.
Ostendorf, Mari
Tang, Juming
VanZandt, Vicki A.

WISCONSIN
Kelly, Thomas F.

BELGIUM
Van den hove, Luc

BRASIL
Pereira, Mario Veiga Ferraz

CANADA
Sherwood Lollar, Barbara

CHINA
Fu, Xiaobing
Xu, Yangsheng
Zhai, Wanning
Zhou, Xiaoxin

COLOMBIA
Garcia, Luis Enrique

FRANCE
Guazzelli, Elisabeth Louise Marie
Magwood, William D.
Sukquet, Pierre Marie

GERMANY
Fratzl, Peter

HONG KONG
Lekai, Khaled Ben

INDIA
Jain, Sudhir K.
Joshi, Jeytharaj Bhalchandra

ISRAEL
Maarek, Yoelle

ITALY
Bellussi, Giuseppe

JAPAN
Aida, Takuzo

KUWAIT
AlHashem, AbdulHameed

MEXICO
Lopez Valdivieso, Alejandro

NETHERLANDS
Van den Brink, Marinus Aart

PORTUGAL
Alves, Paula Marques

SINGAPORE
Ying, Jackie Y.

SWITZERLAND
Kolar, Johann W.

UNITED KINGDOM
Toumazou, Christofer
NAE
Anniversary
Members
### 50+ Years
Members whose names are in boldface type are celebrating their 50th year.

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthur E Bryson</td>
<td>Steven J Fenves</td>
<td>H. Norman Abramson</td>
<td>C. Kumar N Patel</td>
</tr>
<tr>
<td>John S Foster, Jr.</td>
<td>A. J. Field</td>
<td>Alfredo H Ang</td>
<td>J. R. Anthony Pearson</td>
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<tr>
<td>Roy W Gould</td>
<td>Merton C Flemings</td>
<td>Daniel Berg</td>
<td>Marc J Pelegrin</td>
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<td>Richard J Grosh</td>
<td>Douglas W Fuerstenau</td>
<td>Donald L Bitzer</td>
<td>Karl S Pister</td>
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<tr>
<td>Robert G Loewy</td>
<td>Ivar Giaever</td>
<td>Andrew H Bobeck</td>
<td>John M Prausnitz</td>
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<tr>
<td>J. Ross Macdonald</td>
<td>James F Gibbons</td>
<td>Lewis M Branscomb</td>
<td>Ronald F Probstein</td>
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<tr>
<td>William J Perry</td>
<td>Ralph E Gomory</td>
<td>J. Fred Bucy</td>
<td>James R Rice</td>
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<tr>
<td></td>
<td>John B Goodenough</td>
<td>Joseph M Hendrie</td>
<td>Herbert H Richardson</td>
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<td>John C Hancock</td>
<td>John P Hirth</td>
<td>Irwin W Sandberg</td>
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<tr>
<td></td>
<td></td>
<td>Nick Holonyak, Jr.</td>
<td>Theodore Stern</td>
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<td></td>
<td>Kenneth Thompson</td>
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<td></td>
<td></td>
<td>Andrew J Viterbi</td>
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<td></td>
<td></td>
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<td>James Wei</td>
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<td></td>
<td></td>
<td></td>
<td>Jasper A Welch, Jr.</td>
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<td>Lloyd R Welch</td>
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<td></td>
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<td></td>
<td>Albert R Westwood</td>
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<td></td>
<td></td>
<td></td>
<td>Gerald L Wilson</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Takeo Yokobori</td>
</tr>
</tbody>
</table>

### 45 to 49 Years
Members whose names are in boldface type are celebrating their 45th year.

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>H. Norman Abramson</td>
<td>Ronald L Geer</td>
<td>Hans Mark</td>
<td>J. R. Anthony Pearson</td>
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<tr>
<td>Alfredo H Ang</td>
<td>Stephen E Harris</td>
<td>James K Mitchell</td>
<td>Marc J Pelegrin</td>
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<tr>
<td>Daniel Berg</td>
<td>Charles L Hosler, Jr.</td>
<td>Gordon E Moore</td>
<td>Karl S Pister</td>
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<tr>
<td>Donald L Bitzer</td>
<td>Paul C Jennings</td>
<td>Ivan E Sutherland</td>
<td>John M Prausnitz</td>
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<tr>
<td>Andrew H Bobeck</td>
<td>Bernard H Kear</td>
<td>Morris Tenenbaum</td>
<td>Ronald F Probstein</td>
</tr>
<tr>
<td>Lewis M Branscomb</td>
<td></td>
<td></td>
<td>James R Rice</td>
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<tr>
<td>John E Breen</td>
<td></td>
<td></td>
<td>Herbert H Richardson</td>
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<tr>
<td>Frederick P Brooks, Jr.</td>
<td>我才没写</td>
<td></td>
<td>Irwin W Sandberg</td>
</tr>
<tr>
<td>Norman H Brooks</td>
<td>C. Judson King</td>
<td>Theodore Stern</td>
<td>Theodore Stern</td>
</tr>
<tr>
<td>J. Fred Bucy</td>
<td>Leonard Kleinrock</td>
<td>Kenneth Thompson</td>
<td>Kenneth Thompson</td>
</tr>
<tr>
<td>Anthony J DeMaria</td>
<td>Donald E Knuth</td>
<td>Andrew J Viterbi</td>
<td>James Wei</td>
</tr>
<tr>
<td>Joseph Feinstein</td>
<td>Herwig Kogelnik</td>
<td>James Wei</td>
<td>Jasper A Welch, Jr.</td>
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<tr>
<td></td>
<td>Henry Kressel</td>
<td></td>
<td>Lloyd R Welch</td>
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<tr>
<td></td>
<td>William R Lucas</td>
<td></td>
<td>Albert R Westwood</td>
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<tr>
<td></td>
<td>Robert W Lucky</td>
<td></td>
<td>Gerald L Wilson</td>
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<tr>
<td></td>
<td>Robert D Maurer</td>
<td></td>
<td>Takeo Yokobori</td>
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<tr>
<td></td>
<td>John S Mayo</td>
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<tr>
<td></td>
<td>Perry L McCarty</td>
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<td></td>
<td>Ross E McKinney</td>
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<td></td>
<td>Charles J McMahon, Jr.</td>
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<td></td>
<td>Johannes Moe</td>
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<tr>
<td></td>
<td>Carl L Monismith</td>
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</tr>
</tbody>
</table>

### 40 to 44 Years
Members whose names are in boldface type are celebrating their 40th year.

<table>
<thead>
<tr>
<th>Name</th>
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<th>Name</th>
<th>Name</th>
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<tbody>
<tr>
<td>Andreas Acrivos</td>
<td>Stephen E Harris</td>
<td>J. R. Anthony Pearson</td>
<td>Marc J Pelegrin</td>
</tr>
<tr>
<td>John G Anderson</td>
<td>Charles L Hosler, Jr.</td>
<td>Karl S Pister</td>
<td>John M Prausnitz</td>
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<td>Seymour Baron</td>
<td>Paul C Jennings</td>
<td>Ronald F Probstein</td>
<td>James R Rice</td>
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<tr>
<td>Lionel O Barthold</td>
<td>Bernard H Kear</td>
<td>James R Rice</td>
<td>Herbert H Richardson</td>
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<td>Wallace B Behnke</td>
<td>C. Judson King</td>
<td>Irwin W Sandberg</td>
<td>Theodore Stern</td>
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<tr>
<td>C. Gordon Bell</td>
<td>Leonard Kleinrock</td>
<td>Theodore Stern</td>
<td>Kenneth Thompson</td>
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<tr>
<td>William B Bridges</td>
<td>Donald E Knuth</td>
<td>Andrew J Viterbi</td>
<td>James Wei</td>
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<tr>
<td>Jose B Cruz, Jr.</td>
<td>Herwig Kogelnik</td>
<td>James Wei</td>
<td>Jasper A Welch, Jr.</td>
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<td>Robert C Dean, Jr.</td>
<td>Henry Kressel</td>
<td>Lloyd R Welch</td>
<td>Albert R Westwood</td>
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<tr>
<td>Daniel B DeBra</td>
<td>William R Lucas</td>
<td>Gerald L Wilson</td>
<td>Gerald L Wilson</td>
</tr>
<tr>
<td>Raymond F Decker</td>
<td>Robert W Lucky</td>
<td>Takeo Yokobori</td>
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<tr>
<td>Leo Esaki</td>
<td>Robert D Maurer</td>
<td></td>
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<tr>
<td>Thomas E Everhart</td>
<td>John S Mayo</td>
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<tr>
<td>Theodore V Galambos</td>
<td>Perry L McCarty</td>
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<tr>
<td>Robert G Gallager</td>
<td>Ross E McKinney</td>
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<tr>
<td>William J Galloway</td>
<td>Charles J McMahon, Jr.</td>
<td></td>
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<tr>
<td>Richard L Garvin</td>
<td>Johannes Moe</td>
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</tr>
<tr>
<td>Welko E Gasich</td>
<td>Carl L Monismith</td>
<td></td>
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</tr>
</tbody>
</table>
35 TO 39 YEARS
Members whose names are in boldface type are celebrating their 35th year.

Dell K Allen
William A Anders
Norman R Augustine
Arden L Bement, Jr.
John G Bolinger
H. Kent Bowen
Klaus D Bowers
John F Cashen
Alfred Y Cho
Anil K Chopra
Philip M Condit
Richard A Conway
James W Dally
F. Paul de Mello
Morton M Denn
Robert H Dennard
James M Duncan
Charles A Eckert
Richard E Emmert
John V Evans
Edward A Feigenbaum
John W Fisher
G. David Forney, Jr.
Donald C Fraser
Richard J Goldstein
Hermann K Gummel
Robert S Hahn
Kent F Hansen
Robert D Hanson
Kenneth E Haughton
Alfred J Hendron, Jr.
Cyril Hilsum
David A Hodges
William G Howard, Jr.
John W Hutchinson
Anthony J Iorillo
Erich P Ippen
Irwin M Jacobs
Robert B Jansen
Trevor O Jones
Thomas Kailath
Albert S Kobayashi
James N Krebs
Butler W Lampson
Ronald M Latanision
Kaye D Lathrop
George Leitmann
Peter W Linke
Dan Luss
John W Lyons
John B MacChesney
Robert Malpas
Carver A Mead
Robert Mehrabian
Chiang C Mei
Richard C Messinger
Harold Mires
Joel Moses
Hyla S Napadensky
George L Nemhauser
Robin B Nicholson
William G Oldham
Morton B Panish
J. Randolph Paulling
Thomas K Perkins
George P Peterson
John W Poduska, Sr.
Michael Prats
Lawrence R Robiner
Raj Reddy
Eli Reshotko
Jerome G Rivard
Stanley T Rolfe
Ronald E Roserosweig
James F Roth
Chih-Tang Sah
John H Schmertzmann
William R Schowalter
Charles D Scott
John H Seinfeld
Eugene Sevin
Charles V Shank
Eugene D Shchukin
Merrill I Skolnik
John B Slaughter
George E Smith
Kenneth A Smith
Ponisseril Somasundaran
Dale F Stein
Chung L Tang
Nickolas J Themelis
Vern W Weekman, Jr.
Sheldon Weinig
Willis S White, Jr.
Sheila E Widnall
Edward L Wilson
Theodore Y Wu
Dante C Youla
Paul Zia
NAE ANNIVERSARY MEMBERS

30 TO 34 YEARS
Members whose names are in boldface type are celebrating their 30th year.

Richard C Alkire
Minoru S Araki
John A Armstrong
Michael F Ashby
Bishnu S Atal
David H Auston
Donald W Bahr
William F Ballhaus, Jr.
Robert G Bea
George A Bekey
Alexis T Bell
John A Betti
James R Biard
Joel S Birnbaum
Richard E Blahut
Kenneth A Blenkarn
Geoffrey Boothroyd
Donald A Brand
Roger W Brockett
Robert W Brodersen
Robert A Brown
Robert D Burnham
Robert L Byer
James D Callen
William J Carroll
Robert W Dutton
Robert J Eaton
James Economy
Charles Elachi
Gerard W Elverum
Charles Fairhurst
Odd M Faltinsen

Frank F Fang
Robert E Fischell
Edith M Flanigen
Alan B Fowler
Judson C French
Samuel H Fuller
Elsie M Garmire
Jerome B Gilbert
Alastair M Glass
W. Barney Gogarty
Marvin E Goldstein
Joseph W Goodman
Richard E Goodman
Bernard M Gordon
Arthur C Gossard
Paul R Gray
Donald P Greenberg
Keith E Gubbins
Donald L Hammond
Howard R Hart, Jr.
Juris Hartmanis
Michael Hatzakis
Siegfried S Hecker
Adam Heller
Robert J Hermann
Arthur H Heuer
Edward A Hiler
Narain G Hingorani
George J Hirasaki
Yu-Chi Ho
Lester A Hoel
John E Hopcroft
Izzat M Idriss
James F Jackson
Marvin E Jensen
James O Jirsa
Ellis L Johnson
Gunther J Joklik
Frank D Judge
Robert E Kahn
Melvin F Kammen
Frank E Karasz
Robert H Kingston
Bernard L Koff
David J Kuck
Leslie B Lamport
Louis J Lanzerotti
Gerald D Laubach
L. Gary Leal
Norman N Li
Barbara H Liskov
John D Little
Benjamin Y Liu
Daniel P Loucks
Albert Macovski
Thomas L Magnanti
Robert C Marini
Robert F Mast
James F Mathis
Shiro Matsuoka
Adolf D May
John C McDonald
Eugene R McGrath
James C McGroddy
David G Messerschmitt
Keith K Millheim
James W Mitchell
Sanjoy K Mitter
Joe H Mize
L. David Montague
C. D. (Dan) Mote, Jr.
Van C Mow
Earl M Murman
Albert Narath
Stuart O Nelson
Arun N Netravali
J. Nicholas Newman
William D Nix
Ronald P Nordgren
J. Tinsley Oden
Alan V Oppenheim
Frank L Parker
Ronald R Parker
Bradford W Parkinson
Donald R Paul
Val P Peline
Arno A Penzias
Donald E Petersen
R. Byron Pipes
Edwin P Przybyłowicz
Robert A Rapp
W. Harmon Ray
Ronald L Rivest
Enders A Robinson
Ignacio Rodriguez-Iturbe
Larry A Roesner
Ronald A Rohrer
Murray W Rosenthal
William B Rouse
Elbert L Rutan
Gavriel Salvendy
Alan Schriesheim
Norman R Scott
Laurence C Seifert
Frank S Seletsky
Don W Shaw
Michael L Shuler
Leonard M Silverman
Richard W Skaggs
Henry T Smith
Helmut E Sobieczky
James J Solberg
William J Spencer
Fred I Stallup
Charles V Stirling
Richard G Strauch
William D Strecker
Ben G Streetman
John H Sununu
Zehev Tadmor
Byron D Tapley
Robert E Tarjan
Robert L Taylor
David A Thompson
Barr F Thompson
Charles E Till
Neil E Todreas
Rao R Tummala
Jeffrey D Ullman
Raymond Viskanta
Petr Vajapek
Irv Waaland
Dianzuo Wang
Kuo K Wang
William Ward, III
Arthur W Westerberg
John A White, Jr.
Robert M White
Janusz S Wilczynski
Forman A Williams
James C Williams
Ward O Wiener
Eugene Wong
Jerry M Woodall
David A Woolf
Israel J Wygnański
Lucio A Wylie, Jr.
Henry T Yang
John A Young
Abe M Zarem
Jacob Ziv
NAE ANNIVERSARY MEMBERS

25 TO 29 YEARS
Members whose names are in boldface type are celebrating their 25th year.

Leonard M Adleman
Ronald J Adrian
John L Anderson
John C Angus
Hiroyuki Aoyama
Karl J Astrom
Satya N Atluri
Marc A Auslander
Khalid Aziz
Arthur B Baggeroer
B. Jayant Baliga
Peter M Banks
Craig R Barrett
Robert W Bartlett
Forest Baskett
Zdenek P Bazant
Leslie A Benmark
Barry W Boehm
F. Peter Boer
David B Bogy
Lillian C Borrone
Robert K Brayton
John D Bredehoeft
Peter R Bridenbaugh
Alec N Broers
Alan C Brown
Keith A Browning
Wilfried H Brutsaert
Thomas F Budinger
Jack E Buffington
Federico Capasso
Renzo L Caporali
James E Carnes
John J Cassidy
Francois J Castaing
Vinton G Cerf
Don B Chaffin
K. Mani Chandy
Wai-Fah Chen
Uma Chowdhry
David D Clark
Harvey E Cline
Joseph P Colaco
Richard W Conway
Thomas M Cook
Donald C Cox
Magnus G Craford
Jerome J Cuomo
David N Cutler
Lance A Davis
Stephen H Davis
Carl R de Boor
Nicholas M Donofrio
Stephen D Dorfman
Earl H Dowell
Elisabeth M Drake
E. Linn Draper, Jr.
Stephen W Drew
T. Dixon Duddar
George J Dvorak
Lewis S Edelheit
Fredric F Ehrich
Joel S Engel
Leroy (Mike) M Fingerson
Bruce A Finlayson
Fred N Finn
Essex E Finney, Jr.
George M Fisher
Marshall L Fisher
William L Fisher
Nancy D Fitzroy
Paul A Fleury
Samuel C Florman
Hans G Forsberg
L. B. Freund
William H Gates, III
C. William Gear
Thomas G Giallorenzi
Eduardo D Glandt
Martin E Glickman
Ronald E Goldsberry
Arthur L Goldstein
Susan L Graham
Sidney J Green
Edward M Greitzer
Charles T Haan
George I Haddad
Gene H Haertling
Kenneth N Han
Niels Hansen
Wesley L Harris
Henry J Hatch
John L Hennessy
John A Herbst
George J Hess
Jae Haeg
George M Hornberger
Barry M Horowitz
Stanley H Horowitz
Thomas J Hughes
Frank P Incropera
Akira Ishimaru
Iwao Iwasaki
Nikil S Jayant
David W Johnson, Jr.
Donald L Johnson
Anita K Jones
John L Junkans
Eugenia Kalnay
Paul G Kaminski
Richard M Karp
John G Kassakian
Susumu Kato
Donald B Keck
Ralph L Keeney
Alexander M Kilbanov
Petar V Kokotovic
Mark H Kryder
Gerald L Kulcinski
H. T Kung
Charles R Kurkjian
Richard T Lahey, Jr.
Bruce M Lake
James L Lammie
Robert S Langer
Robert C Laphier, III
Richard C Larson
S. Edward Law
George D Leal
W. John Lee
Sidney Leibovich
Johanna M Levelt Sengers
Matthys P Levy
Robert H Liebeck
Robert W MacCormack
Alexander MacLachlan
Thomas J Malone
Anna M Marabini
William F Marcuson, III
Karl E Martenstek
Stephen L Matson
William C Mauer
William J McCroskey
C. Denis Mee
Jarold A Meyer
Jerome H Milgram
Jan D Miller
Warren F Miller, Jr.
Linn F Molensauer
Francis C Moon
Manfred Morari
William B Morgan
Norbert R Morgensten
Richard S Muller
Venkatesh Narayananmurti
John Neerhout, Jr.
Shlomo P Neuman
Andrew R Neureuther
Deborah J Nightingale
Tak H Ning
Robert M Nowak
John H Nuckolls
James G O’Connor
Thomas D O’Rourke
Louis C Parrillo
M. Elisabeth Paté-Cornell
David A Patterson
Judea Pearl
Irene C Pedden
Alan W Perce
Stewart D Personick
Richard H Petersen
Arun G Phadke
Nelson L Pinto
James D Plummer
William F Powers
Richard B Priory
Robert A Pucel
Michael P Ramage
H. Donald Ratliff
25 TO 29 YEARS (continued)

Members whose names are in boldface type are celebrating their 25th year.

Elsa Reichmanis
John R Rice
Jose M Roesset
Carl H Rosner
Donald E Ross
John M Rowell
Paul E Rubbert
William B Russel
Jesse E Russell
John M Samuels, Jr.
Stanley I Sandler
Maxine L Savitz
Ronald W Schafer
Jorg Schlaich
Gabriel Schmergel
Ronald V Schmidt
Jerome S Schultz
Robert J Schultz
Lyle H Schwartz
Mischa Schwartz
Charles L Seitz
Robert J Serafin
Robert R Shannon
Hsieh W Shen
Thomas B Sheridan
Jeffrey J Sirola
Arnold H Silver
Larry L Smarr
George S Springer
Karl J Springer
Raymond S Stata
Charles R Steele
Richard J Stegemeier
Gunter Stein
Robert Stratton
Youzhu Suematsu
James M Symons
Simon M Sze
George J Tamargo
Man-Chung Tang
Richard A Tapia
Kathleen C Taylor
Lewis M Terman
Gary L Tooker
Shoichiro Toyoda
Alvin W Trivelpiece
R. Rhodes Trussell
Stephen W Tsai
Richard L Tucker
G. Keith Turnbull
Robert C Turnbull
Donald R Uhlmann
Fawwaz Ulaby
Gottfried Ungerboeck
Andries van Dam
Robert H Wagoner
Jack L Walker
Steven J Wallach
Kenneth Walters
C. Michael Walton
Jaw-Kai Wang
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Ward Whitt
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Savio L Woo
Edgar S Woolard, Jr.
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A. Thomas Young
William D Young
Ben T Zinn