



NATIONAL ACADEMY OF ENGINEERING

FOR IMMEDIATE RELEASE

National Academy of Engineering Elects

106 Members and 23 International Members

WASHINGTON — The National Academy of Engineering (NAE) has elected 106 new members and 23 international members, announced NAE President John L. Anderson today. This brings the total U.S. membership to 2,355 and the number of international members to 298.

Election to the National Academy of Engineering is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to "engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature" and to "the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education." Election of new NAE members is the culmination of a yearlong process. The ballot is set in December and the final vote for membership occurs during January.

Individuals in the newly elected class will be formally inducted during the NAE's annual meeting on Oct. 3, 2021. A list of the new members and international members follows, with their primary affiliations at the time of election and a brief statement of their principal engineering accomplishments.

New Members

Allgor, Russell, chief scientist, Worldwide Operations and Amazon Logistics, Amazon, Bellevue, Wash. For application of operations engineering to design and improve logistics and fulfillment systems for e-commerce.

Arkles, Barry, chairperson and CEO, Gelest Inc., Morrisville, Pa. For contributions to organosilicon materials and organometallic and biochemical reagents.

Arnold, James R., principal, Taproot Construction LLC, Fort Mill, S.C. For commercial application of processes for gold and silver recovery and implementation of advanced environmental controls.

Aunins, John G., senior advisor, Bioprocess and Manufacturing, Seres Therapeutics Inc., Cambridge, Mass. For advances in bioprocess engineering, the introduction of new vaccines and development of microbiome-based products.

Badesha, Santokh S., corporate fellow and manager of open innovation, Xerox Corp., Webster, N.Y. For developing materials enabling the broad use of laser printing and the creation of color laser printing.

Barnard, James L., global practice and technology leader, Black & Veatch, Kansas City, Mo. For the development and implementation of biological nutrient removal in water treatment.

Barroso, Luiz Andre, vice president, Core Systems, Google Inc., Mountain View, Calif. For contributions to the architecture, design, and performance of energy-efficient warehouse-scale computing.

Bellingham, James G., director, Consortium for Marine Robotics, Woods Hole Oceanographic Institute, Woods Hole, Mass. For design, development, and deployment of autonomous underwater vehicles to advance understanding of the ocean and its resources.

Bem, David, chief technology officer and vice president of science and technology, PPG Industries, Pittsburgh. For business leadership and a sustained record of materials discovery to commercialization.

Bowman, Christopher N., James and Catherine Patten Chair, Department of Chemical and Biological Engineering, University of Colorado, Boulder. For development of photopolymerization reactions for adaptable polymer networks and their innovative applications.

Brown, Julia J., senior vice president and chief technical officer, Universal Display Corp., Ewing, N.J. For contributions to materials and device technologies for phosphorescent light emitting diode displays, and their commercialization.

Burke, Christopher B., chief executive officer, Christopher B. Burke Engineering Ltd., Rosemont, Ill. For leadership in executing complex water resources projects and service to the engineering community.

Cabrera, Carlos A., executive chairman, Board of Directors, Genomatica Inc., Northbrook, Ill. For leadership in developing and commercializing widely adopted processes for fuels and intermediate chemicals.

Cendes, Zoltan J., adjunct professor, Electrical and Computer Engineering, Carnegie Mellon University, Naples, Fla. For contributions to theory, development, and commercialization of electromagnetics simulation software.

Ceria, Sebastian, chief executive officer, Qontigo, New York City. For application of optimization tools to advance integer programming and financial engineering.

Cheng, Lili, corporate vice president, Conversation AI, Microsoft Corp., Bellevue, Wash. For scientific and industrial leadership in user interface design, social computing, and computing education.

Colgate, J. Edward, Breed University Professor of Design, Mechanical Engineering, Northwestern University, Evanston, Ill. For development of haptic interface technologies, including surface haptics for touchscreens.

Collins, Lance R., Joseph Silbert Dean of Engineering, College of Engineering, Cornell University, Ithaca, N.Y. For contributions to understanding turbulent processes, leadership in engineering, and contributions to the diversity of the profession.

Corrigan, Catherine Ford, president and chief executive officer, Exponent Inc., Menlo Park, Calif. For elucidation of injury mechanisms and mitigation, and leadership in biomechanical engineering and scientific consulting.

Davis, Erroll Brown, Jr., PBS and Union Pacific (retired), Atlanta. For leadership in research and development of renewable resources integration with the grid, and public education.

Delfyett, Peter J., Jr., University Board of Trustee Chair Professor of Optics, ECE, and Physics, University of Central Florida, Orlando. For contributions to development and commercialization of low-noise, high-power ultrafast semiconductor lasers.

Dordick, Jonathan S., professor, Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, Troy, N.Y. For contributions to methods for rapidly screening drug efficacy and toxicity, and biocatalytic technologies for improving human health.

Doyle, Francis J., III, John A. and Elizabeth S. Armstrong Professor and dean, Paulson School of Engineering and Applied Sciences, Harvard University, Cambridge, Mass. For insights into natural biological control systems and innovative engineering of diabetes control devices.

Dryer, Frederick, Educational Foundation Distinguished Research Professor, Mechanical Engineering, University of South Carolina, Columbia. For contributions to understanding of combustion processes for propulsion and transportation applications and for fire safety.

Freeman, William T., principal scientist, Google Inc., Cambridge, Mass. For contributions to computer vision and image enhancement.

Garcia, Andres Jose, Regent's Professor, Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta. For contributions to molecular engineering of biomaterial surfaces and cell adhesion force technology to characterize stem and cancer cells.

Goldberg, Gary J., director, Board of Directors, BHP Group Limited, Castle Pines, Colo. For promoting safety, sustainability, inclusion, value, ethics, and responsibility in the mining industry.

Haas, Charles N., LD Betz Professor of Environmental Engineering and department head, Civil, Architectural, and Environmental Engineering, Drexel University, Philadelphia. For contributions to quantitative microbial risk assessment for drinking water quality and public health.

Hawker, Craig, director, California Nanosystems Institute, and director, Dow Materials Institute, Materials Engineering, University of California, Santa Barbara. For contributions to polymer chemistry through synthetic organic chemistry concepts and the advancement of molecular engineering principles.

Hazen, Wayne W. "Nick", president and CEO, Hazen Research Inc., Golden, Colo. For leadership in the commercial development of hydrometallurgical processes for recovering metals from ores.

Hill, Mary Catherine, professor, Department of Geology, University of Kansas, Lawrence. For contributions to development and application of methods for parameter estimation and sensitivity analysis in hydrologic models.

Hogan, William Walter, Raymond Plank Research Professor of Global Energy Policy, Harvard Kennedy School, Harvard University, Cambridge, Mass. For contributions to electricity industry restructuring, electricity market design, and energy policy modeling and analysis.

How, Jonathan Patrick, Richard Cockburn Maclaurin Professor, Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, Cambridge. For contributions to decision-making and control of intelligent autonomous aerospace vehicles.

Huang, Hao, technology chief, General Electric Aviation (retired), Dayton, Ohio. For contributions to advances in electric machines and power electronics technologies for aerospace electrical systems.

Hurter, Patricia Nell, chief executive officer and president, Lyndra Therapeutics, Watertown, Mass. For leadership in formulation technologies, amorphous dispersions, and continuous processing for hepatitis C and cystic fibrosis treatments.

Ilic, Marija D., senior research scientist, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, Cambridge. For contributions to electric power system analysis and control.

Ingber, Donald Elliott, director, Wyss Institute for Biologically Inspired Engineering; and professor, Paulson School of Engineering and Applied Sciences, Harvard University, Boston. For interdisciplinary contributions to mechanobiology and microsystems engineering, and leadership in biologically inspired engineering.

Jackson, Kathryn J., director, Energy and Technology Consulting, KeySource, Sewickley, Pa. For contributions to management of large-scale power system technology, and harmonization of engineering solutions with public policy.

Jones, Christopher Tyler, chief of operations, The Leadership Compass, Herndon, Va. For leadership of defense logistics, sustainment, training, and system readiness in support of U.S. national security.

Kafafi, Zakya H., adjunct professor and distinguished research fellow, Center for Photonics and Nanoelectronics, Lehigh University, Bethlehem, Pa. For contributions to materials technologies for organic optoelectronics.

Kaplan, David, Stern Family Professor in Engineering and Distinguished University Professor, Department of Biomedical Engineering, Tufts University, Medford, Mass. For contributions to silk-based materials for tissue engineering and regenerative medicine.

Kelly, Terri L., director, United Rentals, Wilmington, Del. For leadership in product development and commercialization by advancing management practices that foster innovation.

Kelly, Thomas F., founder and CEO, Steam Instruments, Madison, Wis. For design and commercialization of the local electrode atom probe to yield 3D atomic-scale analysis of materials.

Kiremidjian, Anne S., professor, Department of Civil and Environmental Engineering, Stanford University, Stanford, Calif. For research and dissemination of probabilistic seismic hazard methods and mentoring.

Krajewski, Witold F., Rose and Joseph Summers Chair in Water Resources Engineering, Department of Civil and Environmental Engineering, University of Iowa, Iowa City. For advances in flood prediction and mitigation.

Krone, Roger A., chairman and chief executive officer, Leidos Inc., Reston, Va. For technical leadership in industry engineering and advances in aerospace and information technology programs.

Laroya, Rajiv, co-founder & CTO, Light, Far Hills, N.J. For contributions to adaptive multiuser orthogonal frequency division multiplexing for cellular voice and data systems.

Lavender, Shelley K., senior vice president, Strike, Surveillance, and Mobility, Boeing Defense, Space, and Security, Program Management, The Boeing Co., St. Louis. For contributions to technological advances of military aircraft platforms and systems.

Lee, B. Gentry, chief engineer for solar system exploration, Jet Propulsion Laboratory, California Institute of Technology, Pasadena. For contributions to 20 planetary exploration missions to Mars, Jupiter, asteroids, and comets.

Leon, Claire, director, Graduate Systems Engineering, Loyola Marymount University, Rancho Palos Verdes, Calif. For technical and engineering management of national security space systems.

Lockwood, Frances E., chief technology officer, Research & Development, Valvoline (retired), Lexington, Ky. For contributions and leadership in the development of sustainable lubricants in automotive and industrial applications.

Madni, Azad M., founder and CEO, Intelligent Systems Technology Inc., Los Angeles. For advances in low-cost simulation-based training using interdisciplinary model-based approaches.

Magwood, William D., IV, secretary general, Nuclear Energy Agency, Organization for Economic Co-operation and Development, Paris. For leadership and contributions to research programs that drive innovation in global nuclear energy enterprises.

Mahmassani, Hani S., William A. Patterson Distinguished Chair in Transportation, and director, Transportation Center, Civil and Environmental Engineering, Northwestern University, Evanston, Ill. For contributions to modeling of intelligent transportation networks and to interdisciplinary collaboration in transportation engineering.

Makower, Josh, general partner, New Enterprise Associates, Los Altos Hills, Calif. For inventing balloon sinuplasty, and for leading the commercialization of this and multiple other innovations.

Malley, James O., group director and senior principal, Structural Engineering, Degenkolb Engineers, San Francisco. For leadership in improving seismic design.

Martin-Vega, Louis A., professor and dean, College of Engineering, North Carolina State University, Raleigh. For support of engineering and engineering education through industry-academic collaboration and opportunities for underrepresented groups.

Martonosi, Margaret R., Hugh Trumbull Adams '35 Professor, Department of Computer Science, Princeton University, Princeton, N.J. For contributions to power-aware and power-efficient computer architectures and mobile systems.

McNutt, Marcia Kemper, president, National Academy of Sciences, Washington, D.C. For elucidation of lithosphere geomechanics and leadership in earth resources engineering.

Melroy, Pamela A., chief executive officer, Melroy & Hollett Technology Partners, Arlington, Va. For contributions to human space flight, space access, space situation awareness, and military aeronautics systems.

Merfeld, Danielle W., vice president and chief technology officer, GE Renewable Energy, General Electric Co., Charlotte, N.C. For leadership and development of products for large wind turbines and solar photovoltaic systems.

Miller, Julie B., senior fellow, Technology Office, Lockheed Martin, Sunnyvale, Calif. For contributions to

space electronic communication systems and system of system designs.

Mitra, Sumita B., founder and partner, Mitra Chemical Consulting LLC, St. Pete Beach, Fla. For designing and engineering nanomaterials that have revolutionized dental care worldwide.

Mountz, Michael C., principal, Kacchip LLC, Lincoln, Mass. For advancing industrial mobile robotic material handling systems for order fulfillment.

Navarro, Julio A., senior technical fellow, Boeing Research and Technology, The Boeing Co., Renton, Wash. For development and implementation of phased array sensors and communication systems for aerospace applications.

Olukotun, Oyekunle, professor of electrical engineering and computer science, Stanford University, Stanford, Calif. For contributions to on-chip multiprocessor architectures and advancement to commercial realization.

Ostendorf, Mari, professor, Department of Electrical and Computer Engineering, University of Washington, Seattle. For contributions to statistical and prosodic models for speech and natural language processing and for advances in conversational dialogue systems.

Palasis, Maria, president and CEO, Lyra Therapeutics, Watertown, Mass. For outstanding contributions to the design of medical devices and drug delivery systems.

Pang, Jong-Shi, Epstein Family Chair of Industrial and Systems Engineering, Epstein Department of Industrial and Systems Engineering, University of Southern California, Los Angeles. For the development of methods to advance the theory and applications of optimization and operations research.

Paniccia, Mario, CEO, Anello Photonics, Santa Clara, Calif. For contributions to integrated silicon photonic devices and their commercialization.

Paulino, Glaucio H., Raymond Allen Jones Chair and professor, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta. For contributions to topology optimization and its applications to medicine and engineering.

Pereira, Fernando C.N., vice president and engineering fellow, Google Inc., Palo Alto, Calif. For contributions to speech, natural language, and machine learning.

Perreault, David J., Joseph F. and Nancy P. Keithley Professor of Electrical Engineering, Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge. For contributions to power electronics technology and design techniques for very high frequency energy conversion.

Peters, Mark T., laboratory director, Idaho National Laboratory, and president, Battelle Energy Alliance LLC, Idaho Falls. For leadership and contributions in advancing U.S. nuclear energy capabilities and infrastructure.

Powell, Joseph B., chief scientist - chemical engineering, Chemicals and New Energies Technology, Shell International Exploration and Production Inc. (retired), Houston. For contributions to process developments in energy, chemicals, and biofuels technologies.

Pyrak-Nolte, Laura J., distinguished professor, Department of Physics and Astronomy, Purdue University, West Lafayette, Ind. For advances in understanding of the processes that link the mechanical, hydraulic, and seismic properties in discontinuities.

Radasky, William J., president and managing engineer, Metatech Corp., Goleta, Calif. For leadership in the development and application of electromagnetic transient disturbance and protection standards for national security and commercial systems.

Rappaport, Theodore S., David Lee/Ernst Weber Chaired Professor, Electrical and Computer Engineering, Tandon School of Engineering, New York University, Brooklyn. For contributions to the characterization of radio frequency propagation in millimeter wave bands for cellular communication networks.

Raskin, Lutgarde, Altarum/ERM Russell O'Neal Professor of Engineering, Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor. For application of genetic tools to improve anaerobic biological water treatment.

Roemer, Peter Bernard, GE Healthcare (retired), Tampa, Fla. For contributions to performance

improvement and widespread availability of MRI technology.

Rosario, Jeanne M., former vice president and general manager, Engineering Division, General Electric Aviation, Lexington, S.C. For leadership in advancing aircraft engine design, global engineering, and support for women in engineering.

Sabnani, Krishan K., Research VP Emeritus and Ambassador-at-Large, Bell Labs/Nokia (retired), Westfield, N.J. For contributions to software-defined routing and networks.

Sarabandi, Kamal, Rufus S. Teesdale Professor of Electrical Engineering, Electrical Engineering and Computer Science, University of Michigan, Ann Arbor. For contributions to the science and technology of radar remote sensing.

Sarkisian, Mark Peter, partner, Structural and Seismic Engineering, Skidmore Owings and Merrill LLP, San Francisco. For innovation in efficient and aesthetic design of tall buildings and structures.

Segalman, Rachel A., department chair and Edward Noble Kramer Professor, Department of Chemical Engineering, University of California, Santa Barbara. For contributions to semiconducting block polymers, polymeric ionic liquids, and hybrid thermoelectric materials.

Shepherd, J. Marshall, Georgia Athletic Association Distinguished Professor, and director, Atmospheric Sciences Program, Department of Geography, University of Georgia, Athens. For development of methods to understand the Earth's hydrometeorological and hydroclimate system, and for climate science public communication and outreach.

Simpson, John B., staff cardiologist, Cardiology, Sequoia Hospital, Woodside, Calif. For contributions to coronary angioplasty and atherectomy, and their widespread application.

Soboyejo, Winston Oluwole, senior vice president and provost, Worcester Polytechnic Institute, Northborough, Mass. For contributions to understanding dynamic behavior of materials and for leadership in STEM outreach in Africa.

Sreenivasan, Sidgata (S.V.), Joe C. Walter Endowed Chair in Engineering, Walker Department of Mechanical Engineering, University of Texas, Austin. For research, innovation, and entrepreneurship in industrial deployment of nanoimprint lithography equipment.

Stebe, Kathleen J., Goodwin Prof of Applied Sciences and Engineering, Department of Chemical and Biomolecular Engineering, University of Pennsylvania, Philadelphia. For contributions to understanding of nonequilibrium processes at soft matter interfaces and its impact on new technologies.

Tai, Yu-Chong, Anna L. Rosen Professor of Electrical Engineering and Medical Engineering, Department of Medical Engineering, California Institute of Technology, Pasadena. For contributions to microelectromechanical system technologies and parylene-based biomedical microdevices.

Tang, Juming, Regents Professor and Distinguished Chair of Food Engineering, Department of Biological Systems Engineering, Washington State University, Pullman. For invention and commercialization of electromagnetic spectrum wave-based food processes.

Tester, Jefferson W., Croll Professor of Sustainable Energy Systems, School of Chemical and Biomolecular Engineering, Cornell University, Ithaca, N.Y. For leadership in development of novel renewable energy systems.

Thackeray, Michael Makepeace, distinguished fellow and senior scientist, Energy Storage Department, Chemical Science and Engineering Department, Argonne National Laboratory, Argonne, Ill. For invention of cathode materials that dominate in Li-ion batteries for electric vehicles and grid storage.

Thompson, Levi Theodore, Dean, College of Engineering, and Elizabeth Inez Kelley Professor, Department of Chemical and Biomolecular Engineering, University of Delaware, Newark. For advances in catalysis and energy storage, entrepreneurship, and academic leadership.

Tipton, Arthur J., founder and CEO, Vulcan Gray, Birmingham, Ala. For the development and commercialization of drug delivery systems, business leadership, and fostering STEM education of disadvantaged students.

Trivedi, Nikhil C., senior partner, Idekin International, Easton, Pa. For development of minerals processing technologies and mineral products for the paper, polymer, and building industries.

Tseng, Hongtei Eric, senior technical leader, Ford Research and Innovation Center, Ford Motor Co., Dearborn, Mich. For contributions to control systems for enhancing vehicle safety.

VanZandt, Vickie A., president, VanZandt Electric Transmission Consulting Inc., Battle Ground, Wash. For contributions to advanced transmission, protection, and wide area monitoring systems.

Vlasov, Yurii A., GEBI Founder Professor of Engineering, Departments of Electrical and Computer Engineering, University of Illinois, Urbana-Champaign. For contributions to development and commercialization of silicon photonics for optical data communications.

Wallis-Lage, Cindy L., executive director and president, Water Business, Black & Veatch, Kansas City, Mo. For applying innovative technology to complex large-scale water infrastructure systems.

Wiernicki, Christopher J., chairman, president, and CEO, ABS Group of Companies, Spring, Texas. For innovations in the design, engineering, and operation of ships and offshore structures.

Wilton, Donald R., professor emeritus, Department of Electrical and Computer Engineering, University of Houston, Houston. For contributions to computational electromagnetics of highly complex structures.

Yalla, Murty V., president, Management, Beckwith Electric Co. Inc., Largo, Fla. For contributions to digital protection and control devices for the grid.

Ying, Jackie Y., executive director, Institute of Bioengineering and Nanotechnology, Singapore. For contributions at the interface of nanostructured materials, nanomedicine, and diagnostic devices to improve human health.

Zaluzec, Matthew J., director and senior technical adviser (retired), Global Materials and Manufacturing Research, Ford Motor Co., The Villages, Fla. For innovation of lightweight materials and manufacturing technologies to improve automotive fuel economy and safety and reduce the carbon footprint.

New International Members

Aida, Takuzo, professor, Department of Chemistry and Biotechnology, University of Tokyo, Tokyo, Japan. For contributions to the engineering of smart and adaptive molecular materials using physical perturbation of multivalent interactions.

AlHashem, AbdulHameed, principal research scientist, Petroleum Research Center, Kuwait Institute for Scientific Research (KISR), Salmiya, Kuwait. For research in support of improved materials for the energy sector, and establishment of atmospheric corrosion maps for Kuwait.

Alves, Paula, CEO, iBET, Instituto de Biologia Experimental e Tecnologica, Oeiras, Portugal. For leadership in biomanufacturing, advanced biotherapeutics, and bridging the gap between academia and industry.

Bellussi, Giuseppe, senior vice president (retired), Development, Operations and Technology Division, Eni S.p.A, Piacenza, Italy. For development and commercialization of environmentally beneficial chemical processes.

Fratzl, Peter, director, Department of Biomaterials, Max Planck Institute of Colloids and Interfaces, Potsdam, Germany. For studies of structure and physical properties of biological materials and their application in materials science and medicine.

Fu, Xiaobing, professor and director, College of Life Sciences, The General Hospital of PLA, Beijing, China. For achievements in elucidating wound healing mechanisms and sweat gland regeneration, and national leadership in clinical management of trauma.

Garcia, Luis Enrique, Regent's Professor, Woodruff School of Mechanical Engineering, Universidad de los Andes, Colombia. For contributions to the earthquake-resistant design, construction, and building code development of concrete structures.

Guazzelli, Elisabeth, distinguished senior researcher, Matière et Systèmes Complexes, Centre National de la Recherche Scientifique (CNRS), France. For experiments and theory that enhance understanding of dispersed particulate systems.

Jain, Sudhir K., director, Indian Institute of Technology, Gandhinagar, Gujarat, India. For leadership in earthquake engineering in developing countries.

Joshi, Jyeshtharaj Bhalchandra, Emeritus Professor of Eminence, University Institute of Chemical Technology (UICT), Mumbai, India. For contributions in rational design of multiphase chemical process equipment and leadership in shaping the Indian chemical industry.

Kolar, Johann W., professor, Information Technology and Electrical Engineering, ETH Zurich (Swiss Federal Institute of Technology), Zurich, Switzerland. For contributions to power-electronic technologies, multiobjective design optimization, education, and technology transfer to industry.

Letaief, Khaled Ben, New Bright Professor, Electrical and Computer Engineering, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong. For contributions to adaptive resource allocation in multiuser orthogonal frequency-division multiplexing wireless systems and for academic leadership.

Maarek, Yoelle, vice president of research, Alexa Shopping, Amazon, Haifa, Israel. For contributions to online information retrieval and data management, and leadership in applied industrial research.

Pereira, Mario Veiga Ferraz, president and chief innovation officer, PSR Energy Consulting and Analytics, Rio de Janeiro, Brazil. For contributions to methodology and implementation of multi-stage stochastic optimization in hydroelectric scheduling, energy planning, and policy.

Sherwood Lollar, Barbara, professor, Earth Sciences, University of Toronto, Toronto, Canada. For contributions to understanding of the evolution of Earth's groundwater and atmosphere.

Suquet, Pierre, distinguished senior scientist, Laboratoire de mécanique et d'acoustique, Centre National de la Recherche Scientifique (CNRS), France. For contributions to the mechanics of nonlinear behavior of heterogeneous viscoplastic solids.

Toumazou, Christofer, Winston Wong Chair, Biomedical Circuits, Department of Electrical and Electronic Engineering, Imperial College London, London, United Kingdom. For innovations in electronics for medicine, including rapid diagnostics.

Valdivieso, Alejandro Lopez, profesor investigador, Area de Ingeniería de Minerales, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico. For contributions to the processing of complex sulfide ores and educational leadership.

Van den Brink, Marinus Aart, president and chief technology officer, ASML, Veldhoven, Netherlands. For driving advances in optical and extreme ultraviolet lithography that enable smaller, faster, and more energy-efficient semiconductor devices.

Van den hove, Luc, president and CEO, Interuniversity Microelectronics Center (IMEC), Leuven, Belgium. For leadership in major international industry-university collaborations for the semiconductor industry.

Xu, Yangsheng, president, The Chinese University of Hong Kong, Shenzhen, Guangdong, China. For contributions in space robotics and autonomous systems.

Zhai, Wanming, dean of faculty, Transportation Engineering, Southwest Jiaotong University, Chengdu, China. For contributions to the design and operation of high-speed rail transportation networks.

Zhou, Xiaoxin, honorary president, China Electric Power Research Institute (CEPRI), Beijing, China. For contributions to the development and implementation of power systems technology in China.

Founded in 1964, the U.S. National Academy of Engineering is a private, independent, nonprofit institution that provides engineering leadership in service to the nation. Its mission is to advance the well-being of the nation by promoting a vibrant engineering profession and by marshalling the expertise and insights of eminent engineers to provide independent advice to the federal government on matters involving engineering and technology.

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