

October 31, 2017

Council Agenda Item 5.a
2018 Board Nominees

CAETS Council Meeting
Madrid
November 16, 2017

Election of Board Members for 2018

COUNCIL ACTION: The following persons have been nominated by their respective member academies for the positions noted. Brief bios follow. The Council is asked to elect these persons to their respective positions.

President-Elect	Tuula Teeri	IVA, Sweden
Member	Roger L. McCarthy	NAE, United States
Member	Lucas P. J. J. Noldus	AcTI.nl, Netherlands
Member	Stane Pejovnik	IAS, Slovenia
Member	István Králik	Hungary, HAE
Secretary/Treasurer	Ruth A. David	NAE, United States

Assuming the above individuals are elected, the Board membership for the period January 1, 2018 through December 31, 2018 will be:

President	Lucio Cáceres	ANIU, Uruguay
President-Elect	Tuula Teeri	IVA, Sweden
Past President	Elías Fereres	RAI, Spain
Secretary/Treasurer	Ruth A. David	NAE, United States
Member ¹	Vladimir Androcec	HATZ, Croatia
Member ¹	Frank Behrendt	acatech, Germany
Member ¹	Trueman Goba	SAAE, South Africa
Member ¹	Ulrich (Ueli) W. Suter	SATW, Switzerland
Member ²	Roger McCarthy	NAE, United States
Member ²	Lucas P. J. J. Noldus	AcTI.nl, Netherlands
Member ²	Stane Pejovnik	IAS, Slovenia
Member ²	István Králik	Hungary, HAE

¹Term is 2017 and 2018

²Term is 2018 and 2019

Professor Tuula Teeri, Ph.D.
President elect, The Royal Academy of Engineering Sciences (IVA)

Tuula Teeri has held a number of research and leadership positions at the VTT Technical Research Centre of Finland (1988-1998) and the KTH Royal Institute of Technology in Sweden (1996-2009), where she was appointed Deputy President in 2008. She was visiting scientist at Genentech Inc in San Francisco in 1993. During 2009-2017 she led Aalto University in Finland as its first President. In 2017 she was elected President of the Royal Swedish Academy of Engineering Sciences in Stockholm as of November 2017.

During her scientific career Tuula Teeri was a pioneer of forest industrial biotechnology and biomimetic materials with about 200 publications in her name. She has been Board member of a number of research organizations such as the Institute of Surface Chemistry and Institute of Future Studies in Stockholm, the Academic Advisory Panel of the Government of Singapore and the Academic Research Council of Singapore. Tuula Teeri is a member of the Royal Swedish Academy of Sciences, the Royal Swedish Academy of Engineering Sciences, Technology Academy Finland, and the Swedish Academy of Technology in Finland. She is a cofounder of SweTree Technologies. During 2010 – 2017 Tuula Teeri led the merger of the Helsinki School of Economics, the Helsinki University of Technology and the University of Arts and Design Helsinki into Aalto University. Under her leadership the international recognition of Aalto University has risen quickly: the unique profile at the intersection of art, science, business and technology, as well as student driven entrepreneurship, have attracted international interest unprecedented in the history of Finnish higher education. Aalto University has not only reached a new level of academic excellence, but also become a pioneer of the new kind of societally embedded research university that breaks the barriers between traditional disciplines as well as the borders between the university and the rest of the society in support of economic growth and greater societal wellbeing.

Board Member Nominee, NAE

Roger L. McCarthy, Ph.D., P.E.

Professional Profile

Dr. Roger L. McCarthy is the founder and owner of McCarthy Engineering. Dr. McCarthy serves on the Board of Shui on Land (SOL), Ltd., (瑞安房地产) which is publicly traded (stock code 0272) on the Hong Kong Exchange.

Dr. McCarthy specializes in the analysis of mechanical designs (and their associated risk), and the analysis of incidents, failures and accidents involving design issues related to mechanical, thermal, machine, architectural, and controls design, particularly as it involves the engineering of the man/machine interface, safety, and fire/explosion/burns/heat transfer design issues. He also analyzes associated issues related to product design and intellectual property issues related to design. He is extensively published in the area of vehicular design, vehicle component design (occupant restraint, transmissions, engines (gas and diesel), fuel tank, brakes, wheels, axles, etc.), risk analysis related to mechanical design, risk analysis of sports recreation and associated products, and the quantitative analysis of the reliability of complex systems. In his career studying the man/machine interface he has researched issues related to product information presentation, its measured effects on product user safety related behavior, on product warnings/instructions, and safety related advertising. His research has addressed child and pediatric safety design issues in sports recreation, playground design, toys, and child resistant closures amongst others. In the course of his human performance research he has directed the scientific testing of over 1,000 human subjects. Dr. McCarthy directed the development of Exponent's Land Warrior System for the US Army, and has directed the development of new robotic systems subsequently deployed in both Iraq and Afghanistan.

Dr. McCarthy has personally investigated many of the major disasters of modern times, including the loss of the Amoco Cadiz, the collapse of the Kansas City Hyatt walkways, the grounding of the Exxon Valdez, the explosion and loss of the Piper Alpha oil platform in the North Sea, the diesel engine failures at Arkansas Nuclear One and the Shoreham Nuclear power plants, the fire and explosion on the semi-submersible Glomar Arctic II, and the bombing of the Murrah Federal Building in Oklahoma City amongst others. He served on the National Academy of Engineering - National Research Council Committee for the Analysis of Causes of the *Deepwater Horizon* Explosion, Fire, and Oil Spill to Identify Measures to Prevent Similar Accidents in the Future (2011) and recently served on the Transportation Research Board (TRB) Federal Railroad Administration Research and Development Program Committee. He is currently a member of Board on Army Science and Technology (BAST) and the Intelligence Science and Engineering Experts Group (ISTEG) of the National Academies. In 1996, Dr. McCarthy testified for multiple days in the second Menendez brothers' murder trial on the crime reconstruction he performed for the prosecution, which ended in their conviction.

Dr. McCarthy was formerly employed by Exponent, Inc., (NASDAQ symbol "EXPO"), headquartered in Menlo Park, California where, during his 30+-year tenure, he was variously CEO, Chairman and Chairman Emeritus. Dr. McCarthy was founder and Chairman of Exponent Science and Technology Consulting Co., Ltd. (Hangzhou) 毅博科技咨询(杭州)有限公司, a wholly owned subsidiary of Exponent, Inc., which expanded Exponent's services to China.

Dr. McCarthy joined Exponent, then Failure Analysis Associates, Inc., (FaAA) in 1978, and retired in 2009. When Dr. McCarthy retired from Exponent it employed more than 750 full-time

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staff, including more than 500 degreed professionals, of which 250 held doctorates in their fields, and maintained eighteen offices in the U.S. and three international offices. He became a Director and Vice-President in 1980, and President and Chief Executive Officer in 1982, a position he held until 1996, and Chairman of the Board in 1986, a position he held until 2005. In 1989, Dr. McCarthy reincorporated Failure Analysis Associates, Inc. in Delaware as The Failure Group, Inc. In 1990, Dr. McCarthy took The Failure Group, Inc. public on the NASDAQ exchange. Also in 1990, Dr. McCarthy formed Failure Analysis B.V. in the Netherlands to expand Exponent's operations to Europe. In 1998, The Failure Group, Inc. changed its name to Exponent, Inc.

Dr. McCarthy is a Registered Professional Mechanical Engineer in the State of California, #M20040; a Registered Professional Mechanical Engineer in the State of Arizona, #13684; and a registered Professional Mechanical Engineer in the State of Ohio, #70487. He was a commissioned officer in the U.S. Army Ordnance Corps, trained at Aberdeen Proving Ground, and was honorably discharged as a Captain in 1980.

Academic Credentials

Ph.D., Mechanical Engineering, Massachusetts Institute of Technology, 1977

Mech. E., Mechanical Engineering, Massachusetts Institute of Technology, 1975

S.M., Mechanical Engineering, Massachusetts Institute of Technology, 1973

Sigma Xi Honorary

B.S.E., Mechanical Engineering, University of Michigan (*summa cum laude*), 1972

Board Member Nominee, AcTI.nl

Curriculum vitae Lucas P.J.J. Noldus

Personal Information

Family name: Noldus

Given names: Lucas Paul Johan Joseph

Home address: Dorpsstraat 171, 6871 AJ Renkum, The Netherlands

Birth date: 24 November 1959

Birth place: Roosendaal en Nispen, The Netherlands

Citizenship: Dutch

Marital status: Married, four children



Employment

1989-present Managing Director, Noldus Information Technology BV, Wageningen, The Netherlands (www.noldus.com)

2016-present Research Associate, Consumer Sciences & Health group, FBR/AFSG, Wageningen University & Research, Wageningen, The Netherlands

2010-2016 Business Development Manager, TeleMetronics Biomedical BV, Wageningen, The Netherlands

2007-2014 Commercial Director, Delta Phenomics BV, Schaijk, The Netherlands

1986-1989 Research Fellow, Department of Entomology, Wageningen Agricultural University

1985 Research Associate, Insect Biology & Population Management Research Laboratory, USDA-ARS, University of Georgia, Tifton, Georgia, U.S.A.

1984 Research Associate, Department of Biology, Beijing Normal University, Beijing, China

Education

1989 Ph.D., Entomology, Wageningen Agricultural University, The Netherlands Thesis title: "Chemical Espionage by Parasitic Wasps"

1983 M.Sc., Biology, University of Leiden, The Netherlands

1980 B.Sc. (cum laude), Biology, University of Leiden, The Netherlands

1977 High school (cum laude), St. Oelbert Gymnasium, Oosterhout, The Netherlands

Boards and Committees

2017-present Foreign Affairs Officer, Netherlands Academy of Technology and Innovation (www.acti-nl.org)

2017-present Chairman, Board of Supervisors, Belmonte Arboretum Foundation

2016-present Member, Wageningen Ambassadors

2016-present Member, Roadmap Committee "Consumer & Supply Chain", Top Sector Agri&Food

2012-present Chairman, ICT for Brain, Body & Behavior Foundation (www.i3b.org)

2011-present Secretary, Man-Machine Interaction Platform

2009-present Member, Advisory Board, E-Semble BV

2007-present Member, Board of Supervisors, Restaurant of the Future Foundation

2014-2016 Board Member, International Council of Academies of Engineering and Technological Sciences (CAETS)

2010-2016 Vice President and Treasurer, Netherlands Academy of Technology and Innovation

Board Member Nominee, IAS

Professor Stane Pejovnik, Ph.D.
Short C.V.

Biographical data:

Prof. Dr. Stane Pejovnik was born in 1946, completed general secondary education at Gimnazija Celje in 1964, graduated, and obtained the master and the doctoral degree at the University of Ljubljana. He was elected full professorship at the University of Ljubljana in 1989. His first employment was at the Institute »Jozef Stefan«, Department for Ceramics. In 1982, at the age of 36, he became the Director of the National Institute of Chemistry, leading the institute, for 16 years, out of a profound crisis to the scientific institution of the international relevant scientific importance. In 1985 he founded the Electrochemical Laboratory of Materials Electrochemistry at the National Institute of Chemistry. He was a visiting professor in the USA (North Carolina State University) and in Austria (Technische Universitaet Graz). He held regular lessons at both universities. He was elected Dean of the UL Faculty of Chemistry and Chemical Technology and is now the rector of the University of Ljubljana. He is a popular teacher to his students, an excellent manager and a most agreeable person.

Scientific work - summary:

The name of Prof. Dr. Stane Pejovnik has been closely associated with science and engineering of materials for more than 30 years, within the national and international borders. Already in the early stage of his research, he used the most contemporary and modern experimental methods in sintering in the presence of liquid phase, clustered the results, processed them mathematically thus continually opening new areas or research.

His contribution to the theory of sintering in the presence of liquid phase undoubtedly classifies him as the leading researcher of sintering in Slovenia and among the most important ones around the globe. Already in this phase of his forming himself as a researcher, he started to research materials for energy. Together with prof. Kališnik he introduced the qualitative analysis of microstructure – stereology in Slovenia. He founded and led a research group for materials electrochemistry (at the National Institute for Chemistry), which is known in the global dimensions and referred to as the »Ljubljana school« for preparation and characterization of the nano-structured electrodes for the Li- ion batteries. His essential contribution is independently opening and pioneering a new research area and reaching a global confirmation.

His most important achievements are:

In his personal bibliography, Prof. Dr. Pejovnik compiles over 200 scientific (reviewed) publications, from which there are more than 100 articles in eminent international magazines with high SCI. He always geared his research work towards practical use, and he is a co-author of 6 patents. He is a co-editor of 6 books. The high quality of his research work is shown by approximately 2500 quotations and even more by the fact that his every contribution is quoted 16 times on average. This index indicates also, that he worked in small research groups. He was invited to give lectures all around the globe. He was and still is a member of international editorial boards of scientific newspapers, in international associations and academies. He held and still holds a number of duties in international organizations as a consequence of his reputation among the researchers in the world. He is a winner of many awards and prizes, like: the Boris Kidrič Fund award for inventions (1977), the Boris Kidrič Fund award for publications on sintering in the presence of liquid phase (1981), full member of the International Institute for Sintering Science in Belgrade (corresponding member 1982, full member 2006), Ambassador of the Republic of Slovenia in science (1994), member of the Slovenian Academy of Engineering (1996), and its President since 2014, full member of the International Academy of Engineering in Moscow (corresponding member in 1999, full member in 2009), full member of the World Academy of Art and Science (2005).

With these achievements Prof. Dr. Stane Pejovnik represents personification of significant and key contributions to the development of science and engineering of materials in Slovenia and in the world.

Board Member Nominee, HAE

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Curriculum Vitae: (Mr) KRÁLIK István
Born: December 30, 1948 in Budapest/Hungary
Nationality: Hungarian
Languages: Hungarian, English, German
Domicile: 1137 Budapest, Szt. István park 10 – Hungary
Telephone: +36 20 9444090
Email: kralikistvan@videxim.hu

Graduated at Technical University of Budapest (BME) in 1973 as Mechanical Engineer. Postgraduated as Welding Engineer in 1975 (similar to Ph.D) and finished special courses in Material testing by X-Ray radiography and Ultrasonic material testing for different metals in 1976.

1973-1978 employed by Hungarian State Energetical and Energy-Safety Authority at Material Testing Laboratory as site engineer. Working at government financed petrochemical project-investments in Northern Hungary as field supervisor for welding and testing works with close cooperation of the supplier companies (Badger Ltd from UK, Lurgi-Italy and Linde AG –Germany).

In 1978 joined the Japanese Mitsubishi Corporation (Mitsubishi Shoji Kaisha) Budapest Office as engineer-businessman, responsible for heavy industry investment projects in Hungary supplied by Japanese companies.

As trading activities successfully introduced to the Hungarian market the audio and video products of Japanese Matsushita Electric Company under brandnames: National, Panasonic, Technics.

Utilising the experiences in trade with Far-East, in 1994 set up the private owned Videxim Trading Company Ltd with headquarter in Zürich/Switzerland.

Its main target was to develop and provide connections between East and West and within these activities distributed wide range of audio products from Hong Kong and China to the East-European countries: Hungary, Romania and Slovakia. Also created the companies' own brand name: Homelectric for household appliances which were sold through the same trading channels.

In 2014 reorganised the activities of the company, opening to IT field (uninterruptible power supply systems), rechargeable batteries for industry use, toys, sporting goods, souvenir and gift articles and for controlling these multifunctional activities the Videxim Holding Company Ltd. was set up with headquarter in Hong Kong.

Presently I am responsible for controlling its technical, economical, commercial, and financial advisory services.

Based on the experiences with the Far-East businesses I am founding member and for 2 terms Chairman of the Hungary-Hong Kong Business Association, member of the Swiss-Hong Kong Business Association and member of the Federation of Hong Kong Business Associations Worldwide.

I am proud to be elected member of the Hungarian Academy of Engineering (MMA) in 2001, where acting as Member of the Board since 2014.

I was delegated by the MMA to the CAETS Annual Meetings to Beijing 2014, New Delhi (2015) and London (2016).

Secretary/Treasurer Nominee, NAE

DR. RUTH A. DAVID



Foreign Secretary
National Academy of Engineering

President and Chief Executive Officer, Retired
Analytic Services Inc.

B. S. Electrical Engineering, Wichita State University
M. S. Electrical Engineering, Stanford University
Ph.D. Electrical Engineering, Stanford University

Dr. David was elected Foreign Secretary of the National Academy of Engineering and assumed that position on 1 July 2015.

From October 1998 to April 2015, Dr. David served as president and chief executive officer of Analytic Services Inc., an independent, not-for-profit, public service institute that provides research and analytic support on national and transnational issues.

From September 1995 to September 1998, Dr. David was Deputy Director for Science and Technology (DDS&T) at the Central Intelligence Agency. During her tenure as DDS&T she helped conceptualize a new nonprofit corporation that could speed CIA's adoption of commercially viable technologies—In-Q-Tel was subsequently established to fulfill this role. Upon her departure, Dr. David was awarded the CIA's Distinguished Intelligence Medal, the CIA Director's Award, the Director of NSA Distinguished Service Medal, the National Reconnaissance Officer's Award for Distinguished Service, and the Defense Intelligence Director's Award.

Previously, Dr. David served in several leadership positions at the Sandia National Laboratories, where she began her professional career in 1975.

Dr. David was elected to the National Academy of Engineering (NAE) in 2002 and served as a Councilor from 2007 through 2013. She is a lifetime National Associate of the National Research Council (NRC) and has contributed to numerous studies. She also is a member of the National Science Board and the Defense Science Board and serves on several university advisory committees.

She was a member of both the Tau Beta Pi Engineering Honor Society and the Eta Kappa Nu Electrical Engineering Honor Society, and in 2010 was inducted into the Women in Technology International Hall of Fame. She is a former adjunct professor at the University of New Mexico and has technical experience in digital and microprocessor-based system design, digital signal analysis, adaptive signal analysis, and system integration.

Dr. David frequently provides lectures, briefings, and articles on the many facets of homeland security, as well as other national security and technology-related issues. She is the coauthor of three books on Signal Processing Algorithms and has authored or coauthored numerous papers and book chapters.