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HD.23.05
October 10, 2022

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN SENATE
COMMITTEE ON HONORARY DEGREES
(Final; Action)

HD.23.05 Nomination for Honorary Degree Awards – Liay, Rosakis

The Senate Committee on Honorary Degrees is pleased to nominate the following individuals for an honorary degree award to be conferred at the May 2023 Commencement exercises:

- Louis Liay
- Ares Rosakis

Information relative to the background and achievements of these nominees is attached. Based on the criteria approved by the Senate, the Committee has selected these individuals for Senate consideration.

The Committee wishes to express its sincere appreciation to all who participated in the process, particularly those who spent considerable amounts of time and effort in preparing documentation for these nominees.

COMMITTEE ON HONORARY DEGREES
Prasanta Kalita, Chair
Stuti Agrawal
Paul Davidson
Krista Keller
Pollyanna Rhee
Celestina Savonius-Wroth
Josh Weiner
Laura Wilhelm-Barr, *ex officio*

Louis Liay
Former Executive Director
University of Illinois Alumni Association
1983 - 1998

EDUCATION:

B.A., Blackburn College, 1954

Ed.M., University of Illinois at Urbana-Champaign, 1962

Nominated by: James D. Anderson, Dean Edward William and Jane Marr Gutgsell Professor of Education, College of Education, University of Illinois at Urbana-Champaign

BASIS FOR NOMINATION:

Lou Liay is already an alumnus of the University of Illinois, yet his unique contributions to the field of alumni relations – particularly at Illinois – are worthy of elevated recognition. As the executive director of the University of Illinois Alumni Association (UIAA) from 1983 to 1998, Lou played a significant role in redefining the alumni relations profession in the U.S., working with Big Ten colleagues to professionalize every aspect of their alumni associations. During his tenure at UIAA, he turned the organization into a gold standard for other alumni associations.

EXCERPT FROM THE NOMINATION LETTER:

Lou exemplifies what it means to be an Illini, as he has been an ambassador for the University of Illinois since his days as a student until today. He is known by countless graduates for being the face of the Alumni Association. Lou continues to work with multiple constituent groups, building the Illinois brand and engaging with alumni both near and far. He exercises his passion for connecting with people and continues enriching Alumni Association programs with his unique brand of engagement.

EXCERPTS FROM THE LETTERS OF RECOMMENDATION:

Jennifer Dillavou, President, University of Illinois Alumni Association

“As the executive direction of UIAA from 1983 to 1998, Lou played a significant role in redefining the alumni relations profession in the United States, working with his Big Ten colleagues to professionalize every aspect of their alumni associations, including programming, communications, data management, and membership development.

During Lou’s 15-year tenure as executive director, he turned the UIAA into a gold standard against which all other alumni associations were measured. Under Lou’s leadership, the UIAA:

- Developed the largest dues-based alumni association membership model in the country;
- Built a dynamic and popular alumni clubs program;
- Transformed Illinois Alumni News from an alumni newspaper into a professional alumni magazine;
- Reimagined the structure and purpose of volunteer alumni boards;
- Invest in a more robust alumni records system;
- Created a one-year free membership promotion for new graduates, creating a great bridge to lifetime membership; and
- Championed the creation of a dedicated campus alumni center, which eventually resulted in the design and construction of the Alice Campbell Alumni Center in 2006.”

Stanley O. Ikenberry, President Emeritus and Professor, University of Illinois

“Less well known is Lou’s contribution to the University’s broader agenda. It was Lou who provided the enduring link with Arnold Beckman that led to the formation of the Beckman Institute for Advanced Science and Technology, lifting the campus to a fresh level of excellence. It was Lou Liay who unified the strategic aims of the Alumni Association with those of the University so we worked together rather than at cross purposes. It was Lou who found a way to give leadership experiences to undergraduate students by engaging them in the work of the Association. It was Lou who had the instinct to follow and honor our many graduates who went on to have breath-taking careers in literature and the arts, engineering and technology, basic science, and host of pursuits that changed the world in which we live; and their work in turn brought a sense of pride to those of us on campus and served as a source of inspiration to young lives still finding their way. To each, Lou Liay presented a friendly face and an honest warmth, a genuine glow that defined us and an Illinois Spirit that lingers today.

Why do American universities award honorary degrees? At the heart of it, honorary degrees recognize extraordinary lifetime achievement. Beyond acknowledging achievement, however, the award of an honorary degree enables the university to convey to the society the core values, the dreams and aspirations and the ideals for which it stands. We accord the honor to convey a sense of the breadth of excellence to which we aspire and the inclusive, embracing qualities to which we seek. Lou Liay has lived and given a life of distinguished compassionate service that goes right to the heart of what the Academy aspire to achieve.”

Jeffery W. Johnson, Talbot Endowed President and CEO, Iowa State University Alumni Association

“Many of my alumni-relations colleagues from around the country and I wanted to work for or with Lou Liay. Lou knew alumni relations like the back of his hands, but Lou also made us understand how important it was that we really know our constituents. And for Lou, that meant knowing not just alumni but also knowing the institution’s faculty, staff, students, friends, board of trustees, power brokers, families, the state’s citizens, etc. And above all, he modeled the importance of treating everyone as a higher education prospect. He also had the unique ability to make everyone he met feel seen, heard, and valued. In other words, Lou never met a stranger, and he never forgot meeting you either.”

Ares Rosakis
Theodore Von Karman Professor of
Aeronautics and Mechanical Engineering
Division of Engineering and Applied Science
California Institute of Technology

EDUCATION:

B.A., Engineering Science, Oxford University, 1978
M.A., Engineering Science, Oxford University, 1986
ScM., Solid Mechanics and Structures, Brown University, 1980
Ph.D., Solid Mechanics, Brown University, 1982

Nominated by: Alexander F. Vakakis, Donald Biggar Willett Professor of Engineering, Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign

BASIS FOR NOMINATION:

Ares Rosakis has an outstanding record in research, service, leadership, and mentorship. He has been recognized for his pioneering contributions in the areas of experimental fracture mechanics, aerospace engineering, material failure, and earthquake mechanics.

In addition to his involvement in various Caltech and international educational efforts at all levels, Rosakis also prides himself of the impact he has had on international academia and technology through his teaching of almost 40 generations of students at both the Undergraduate and Graduate levels. Many of his former students are now faculty members at distinguished universities, including UIUC. In particular, he is very proud of his 44 former Ph.D. students and mentored 17 postdocs who currently teach or do research worldwide. He has graduated 27 Ph.D. students and mentored 17 postdoctoral fellows. Fourteen of his former students (11 of them tenured) and eleven of his former postdoctoral fellows (6 of them tenured) now hold tenure-track faculty positions in universities around the world.

EXCERPT FROM THE NOMINATION LETTER:

Professor Rosakis's research career has focused on solid mechanics, dynamic mechanical properties, ballistic impact, hypervelocity impact of micrometeorites on spacecraft, dynamic fracture and fragmentation, adiabatic shear banding, mechanics of metallic glasses, mechanics of thin films, mechanics of geological materials, restoration of ancient stone monuments, earthquake fault mechanics, induced seismicity. His work has merited numerous national and international prestigious honors and awards. Just one of the many awards he has received, the 2018 Timoshenko Medal is the highest honor endowed by ASME in the field of applied mechanics.

Professor Rosakis was the first to show experimentally that dynamic cracks can propagate intersonically. This discovery was published in *Science* in 1999 and opened new fields in experimental fracture mechanics as well as seismology. He also invented a new full-field optical imaging technique called "Coherent Gradient Sensor" that led to pioneering investigations in the study of reliability of thin film structures and thin film problems. Work based on this technique as well as other imaging methodologies he pioneered has led to 13 U.S. patents.

HONORS/AWARDS (NOT INCLUSIVE):

- 1985 U.S. Presidential Young Investigator Award, National Science Foundation
- 1989 Rudolf Kingslake Medal, International Society of Optical Engineering
- 1993 Hetenyi Award, Society of Experimental Mechanics
- 1995 Elected Fellow of the American Society of Mechanical Engineers
- 1996 B.L. Lazan Award, recognition of outstanding original technical contributions in the field of dynamic fracture, Society of Experimental Mechanics
- 2003 Frocht Award – Experimental Mechanics Educator of the Year, Society of Experimental Mechanics
- 2005 William M. Murray Medalist & Lecturer, highest recognition of the society and prestige lecture, Society for Experimental Mechanics
- 2007 Harting Award, Society of Experimental Mechanics
- 2008 Hetenyi Award, Society of Experimental Mechanics
- 2009 Elected Fellow of the Society of Experimental Mechanics
- 2009 Elected Fellow of the American Academy of Arts and Sciences
- 2010 A.C. Eringen Medal, Society of Engineering Science
- 2010 Robert Henry Thurston Award, American Society of Mechanical Engineers
- 2011 Elected Member of the National Academic of Engineering
- 2013 P.S. Theocaris Award, Society of Experimental Mechanics
- 2013 Elected member of the European Academy of Sciences and Arts
- 2013 Elected Foreign Fellow of the Indian National Academy of Engineering
- 2014 Elected member of the Academia Europaea (Academy of Europe)
- 2015 Sia Nemat-Nasser Medal, Society of Experimental Mechanics
- 2016 Theodore von Karman Medal, American Society of Civil Engineers
- 2016 Elected to the National Academy of Sciences
- 2017 Elected Fellow, American Geophysical Union
- 2017 Elected Fellow, American Association for the Advancement of Science
- 2018 Timoshenko Medal, American Society of Mechanical Engineers
- 2021 Zdenek P. Bazant Medal for Failure and Damage Prevention, American Society of Civil Engineers

EXCERPTS FROM THE LETTERS OF RECOMMENDATION:

Subra Suresh, President, Nanyang Technological University, Singapore

“For over 35 years, Rosakis has contribute to a wide spectrum of areas within engineering sciences, including the experimental, theoretical and numerical study of materials reliability, fracture mechanics, failure and damage prevention, and dynamic localization phenomena in both materials and structures. His earlier work concentrated on the study of dynamic fracture of metals and resulted in the first comprehensive formulation of dynamic crack initiation, crack growth and crack arrest criteria in solids of relevance to engineering practice (metals, metallic glasses, ceramics, polymers and composites). From the purely experimental instrumental point of view, Rosakis has invented a number of optical diagnostic techniques both in the visible and infra-red wavelength range and has successfully combined them with ultra high-speed photography (100 million frames/s) and high-speed infrared thermography (1 million frames/s) to study previously unexplored dynamic fracture and adiabatic strain localization problems. In parallel to his experimental efforts, Rosakis has developed an array of analytical and computational models for analyzing dynamic fracture and localization phenomena, which have resulted in fundamental advances towards understanding dynamic failure processes in solids.”

Zdenek P. Bazant, Professor and W.P. Murphy Professor of Civil and Mechanical Engineering and Materials Science, McCormick School of Engineering and Applied Science, Northwestern University

“Ares Rosakis’ work has always been highly interdisciplinary in nature and sits at the interface between Engineering, Technology and Science. It has focused on applying the principles of fundamental solid mechanics and material’s reliability to various disciplines within engineering (Aerospace, Mechanical and Civil Engineering) and related sciences such as Materials Science and Earthquake Seismology. As such his work has resulted in both scientific discoveries and practical developments that have helped invigorate the field of fracture and failure mechanics and have highlighted its importance in both science and modern engineering practice. His most recent interests focus on mitigation of natural disasters in seismically active areas of the world.”

Guruswami (Ravi) Ravichandran, John E. Goode, Jr. Professor of Aerospace and Mechanical Engineering, California Institute of Technology

“Ares invented a new full-field optical technique (the Coherent Gradient Sensor method or CGS) and applied it to the study of dynamic interfacial fracture of bonded solids with applications to composite materials and sandwich structures. Ares has made singular contributions to this field, including the scientific discovery of shear dominated transonic debonding in various layered systems. He has also applied CGS, and high-speed photograph to the study of impact and fragmentation of ceramics and brittle materials as well as the investigation of hypervelocity impact phenomena applied to the study of micrometeorite impact on space structures and the protection of space assets from space debris.

One of the most notable engineering mechanics applications of CGS is the application of this method to the study of the reliability of thin-film structures and thin-film problems. This has included *in-situ* wafer metrology and real-time monitoring of large, 300 mm, production wafers during processing. Ares was also instrumental in developing the fastest existing high speed, full-field, microprobe infrared thermal camera (1 million frames/second), which was applied to the real-time study of dynamically growing shear bands with implications for high-speed machining and penetration mechanics. Both these inventions have been granted a total of 13 U.S. patents.”