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Research Libraries Medical Center Athletics Events Calendar

Prospective Students Students Faculty & Staff Alumni Neighbors

About Columbia A–Z Index E-mail & Computing



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Egelston and Pupin Medals Honor Rudolf Kalman, Richard Zare

Rudolf Kalman and Richard N. Zare, renowned for their groundbreaking work in engineering and in science education, were honored on Nov. 16 by the Columbia Engineering School Alumni Association (CESAA) at its annual Awards Dinner in the Low Rotunda.

Kalman received the Egleston Medal for Distinguished Engineering Achievement. In making the presentation, CESAA President Ron Mangione described Kalman as "the creator of modern control and systems theory, which have become standard tools for engineers and mathematicians alike." Mangione said Kalman's discovery of the "Kalman filter" and modern algebraic techniques have revolutionized mathematics-based engineering.

"I'm thrilled with the award and to be back at Columbia on the 50 th anniversary of my first arriving here in the fall of 1955," Kalman said.

Zare received the Pupin Medal for Service to the Nation from Columbia President Lee C. Bollinger. Zare is the Marguerite Blake Wilbur Professor of Natural Science and chair of the chemistry department at Stanford University.

He was a member of Columbia's chemistry faculty from 1969 to 1977, where he began a program using laser-induced fluorescence to look at ultra-trace chemicals in complex mixtures. Bollinger said Zare is "someone who has influenced the research curricula and funding of science education throughout the United States, and who is recognized as a pioneer in the spirit of Pupin."

Zare said he was humbled by the honor. "There are many others that are qualified -- may I dare say more qualified -- than I am," he said.

Kalman is a member of the National Academy of Sciences, National Academy of Engineering, American Academy of Arts and Sciences. He is a foreign member of the Hungarian, French and Russian Academies of Science. He has received the IEEE Medal of Honor, IEEE Centennial Medal, Kyoto Prize in High Technology, Steele Prize of the American Mathematical Society and Bellman Prize of the American Automatic Control Council. Kalman received his Eng.Sc.D. from Columbia in 1957, and a B.S. and M.S. from M.I.T. in electrical engineering.

Zare has authored or co-authored more than 700 publications, written four books and holds 50 patents. He has received the National Medal of Science, the Welch Award in Chemistry, the Wolf Prize in Chemistry, and nine honorary doctorates, including D. Sc. from Columbia in 2000. He is a member of the National Academy of Sciences, the American Academy of Sciences, the American Philosophical Society, and a foreign member of The Royal Society, Chinese Academy of Sciences, and Royal Swedish Academy of Engineering Sciences.

The Egleston Medal, the Columbia Engineering School Alumni Association's highest honor, is named for Thomas Egleston, Jr. Egleston was the guiding force behind the Columbia School of Mines, established in 1864. The school is known today as the Fu Foundation School of Engineering and Applied Science. First awarded in 1939, the medal is presented annually in recognition of a graduate's work in the application of engineering principles to other professions or the public good, or the demonstration of exceptional professional leadership in engineering. **The Pupin Medal** was created by the Columbia Engineering School Alumni Association in 1958 to commemorate the centenary of the birth of Michael I. Pupin (1858-1935), physicist, inventor and professor of electro-mechanics at Columbia from 1901 to 1931. Pupin conducted pioneering research in electro-mechanics and telecommunications. Among his many inventions is the Pupin coil, which greatly lengthened the range of telephone communications. Recipients of the medal include Rear Admiral Hyman G. Rickover, William James McGill, I.I. Rabi and Chien-Shiung Wu. The award is presented periodically.

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