Electrical and Computer Engineering
Packard Laboratory
19 Memorial Drive West
Bethlehem, PA 18015-3084
Tel: (610) 758-4070| Fax (610) 758-6279
engineering.lehigh.edu/ece

Bruce Fritchman Memorial Resolution at the Lehigh University Senate meeting, February 3, 2023

Bruce Fritchman was an extremely nice, caring and thoughtful colleague who made many very important and impactful contributions to Lehigh University through his leadership, teaching, advising, mentoring and research. Bruce earned four degrees from Lehigh. These included a BS, an MS, and a PhD in electrical engineering, along with a bachelor's degree in engineering physics. After his PhD, Bruce took a position at a renowned research laboratory in the Communication and Electronics Division of Philco-Ford Corporation. His area of focus included the application of coding and statistical detection techniques in communication channels having memory. He also managed a laboratory responsible for the development of advanced data transmission techniques.

Bruce joined Lehigh's faculty in 1969 and retired from Lehigh in 2008. He quickly rose from assistant professor to associate professor in 1972 and became a full professor in 1981. Bruce was always available to help Lehigh students, explaining difficult concepts and working problems with them. He taught important courses on information theory, communications, networking, signals and systems and digital signal processing. Bruce also authored many journal articles and was a consultant to several large corporations. Bruce made strong research contributions to the theory of communication channels with memory, one of which came to be known as the Fritchman model, an important model for communication channels with memory.

Bruce was chair of the ECE department during a critical period of growth. As department chairman, Bruce made many important contributions. Possibly the most impactful was that he enabled the hiring of many excellent faculty members, many of whom are still at Lehigh in important leadership positions. The faculty hired under his guidance are some of the best teachers and researchers in our department. Hiring outstanding faculty is the most important contribution a department chair can make. Bruce also did an excellent job mentoring all our young faculty, including the ones he hired. He worked very hard to help all the faculty to be as successful as possible in every endeavor. He was an outstanding chairman.

From 1986 to 1995, Bruce served as Lehigh's assistant vice president of computing and communication services. Using support from the Commonwealth of Pennsylvania and Bell of Pennsylvania, he helped develop the Pennsylvania Research and Economic Partnership network, a new high-speed data communications network implemented by a consortium of research institutions in the state. Bruce also helped arrange a multimillion-dollar joint venture between Lehigh and IBM to install new computers across the Lehigh campus. Bruce was credited with understanding the need to move away from the use of workstations coupled with larger mainframes and develop more sophisticated, high-speed network connections.

Bruce was a member of IEEE and its honor society, Eta Kappa Nu. He served as a reviewer for IEEE Transactions on Communications and IEEE Transactions on Information Theory, and was a former vice president of the Philadelphia section of the IEEE Information Theory Society.

During his many years at Lehigh University as a faculty member, Bruce demonstrated a wonderful balance between the pursuit of knowledge and learning, a commitment to teaching, and support of the many aspects of service within the department, the college, and the university. He advanced the field of communications with his research efforts and publications and thoughtfully passed his knowledge on to the students. His teaching included a wide variety of courses spanning the core and elective undergraduate curriculum as well as graduate studies. He served on every kind of committee and never failed to accept the opportunity to provide leadership. He demonstrated that leadership from his time as department chair, steering and guiding the faculty, to the top levels of the administration helping to guide University initiatives in computing. But perhaps his most important contribution was to show interest, compassion, and insight in his personal interactions with the faculty and staff. His unfailing support for the department, never at the expense of others, was a gift. Bruce was a truly outstanding example of the best that Lehigh has to offer, both as an alumnus and a professional.

The ECE Department at Lehigh University