Cornell and the Department of Economics mourn the loss of Jaroslav Vanek Professor Emeritus who passed away in Ithaca, New York on November 15, 2017. He was born in Prague.

Jaroslav Vanek is known for his contributions to the theory of international trade and the theory of labor-managed market economies. The Hecksher-Olin Model of international trade develops Ricardo’s idea of comparative advantage by explaining the pattern of trade between countries as the consequence of differing endowments of raw materials, labor, and other factors of production. The original model from the early 20th century focused on the exchange of finished products. Vanek reformulated the model to understand trade as the international exchange of the factors embodied in the traded commodities. This idea transformed the model into the workhorse of international trade theory that it has become today, so much so that on account of his 1968 publication the model is now often referred to as the Hecksher-Ohlin-Vanek Model.

Soon after he arrived at Cornell, Vanek created the first doctoral program on labor-managed economics, the Program on Participation and Labor Managed Systems (PPLMS). The idea of labor-managed economies has roots in the post-war Yugoslav economy. Vanek’s work on this socialist economic system had a huge influence on neoclassical economics in the 70s, including important work by Nobel Prize winner James Meade. His work, along with that of the Croatian economists Branko Horvat, greatly influenced World Bank recommendation on the creation of economic institutions in developing countries. PPLMS brought students from around the world to Cornell to study the Yugoslav and other comparative models of economic management. PPLMS also supported research through conferences and workshops. Former student Derek Jones reports that, “Such was [Vanek’s] influence that when I was at Cornell (1969-1972) it seemed that about one in two students had him on their dissertation committee.” “His classes were astonishingly international with students from the United Kingdom, Netherlands, Peru, Chile, FR Yugoslavia, Denmark, Germany…He was really a big draw”.

Vanek’s family left Czechoslovakia shortly after the Communist coup d’état in 1948, first for
Germany and then to Geneva and Paris. He earned a degree in Economics from the University of Geneva in 1954. Invited to Massachusetts Institute of Technology by Charles Kindleberger, he completed a Ph.D. degree in 1957. After working at Harvard University and the U.S. Department of State, he arrived in Ithaca in 1964. He and his wife, Wilda, of 60 years, immediately occupied a home on Triphammer Road, where he remained as renter and later owner for the rest of his life. Longtime Ithacans will remember the solar energy collectors deployed in the front yard, part of his and Wilda’s work with the S.T.E.V.E.N. Foundation, “Sustainable Technology and Energy for Vital Economic Needs”.

Vanek is survived by his wife, Wilda, children Joseph, Francis, Rosie, Steven, and Teresa and six grandchildren.

Written by Lawrence Blume
Dr. Morrill Vittum was born in Haverhill, Massachusetts and received a B.S. degree from the University of Massachusetts in 1939, a M.S. degree from the University of Connecticut in 1941 and a Ph.D. from Purdue University in 1944. Following a year in the U.S. Navy during W.W. II, in 1945 he moved to upstate New York and joined the Cornell University faculty. Dr. Vittum spent his career at the New York State Agricultural Experiment Station in Geneva. He spent 23 of his 37 years on the faculty there as the Head of Department of Seed and Vegetable Sciences. During those years he spent sabbatical leaves at the University of California, Oregon State University, and twice at USDA in Washington, D.C. He was also an international short-term consultant and advisor, and for short periods visited Turkey, Romania, and Yugoslavia.

In the early 1970s, he spent over two years at the University of the Philippines in Los Baños, south of Manila, coordinating cultural exchange programs (faculty and students) between that institution and Cornell University. In 1980 he was elected a Fellow of the American Society of Horticultural Science. For many years following his retirement, he served as Secretary and Treasurer of the New York State Seed Association, and was elected an honorary member of that organization in 2000. Dr. Vittum was recognized both nationally and internationally for his expertise in mineral nutrition of vegetable crops. His books Phosphorus Nutrition of Vegetable Crops and Sugar Beet (1980) and Band Application of Phosphatic Fertilizers in Vegetable Crops (1977) are frequently referenced today. In addition he published extensively on soil testing methodology and interpretation, and the interaction of plant nutrients.

Dr. Vittum was a pioneer in developing the technology on which the Growing Degree Day (GDD) method of determining the maturity of vegetable crops is based. This method of environmental monitoring is used extensively by vegetable processors to schedule planting and harvesting dates of green peas, snap beans and sweet corn.

Dr. Vittum and his wife, Winifred, were world travelers and visited or lived in 49 states and more than 20 countries. After retirement, they participated in many Elderhostels, visited their son, David and his family, living in the Philippines, and visited their daughter, Patricia,
living in New Zealand. They always looked forward to returning to their home in Phelps, New York which hosted many guests, visiting scientists and students. The Vittum’s valued their roots in New England returned annually for a quiet vacation on the lake listening for the loons.

Dr. Vittum loved the outdoors and nature. During college, he was President of the Outing Club, and he spearheaded efforts to rebuild many hiking trails in the Amherst, Massachusetts area following the Hurricane of 1938. He was an active Boy Scout all his life (an Eagle Scout with three palm branches) and was National Scout of the Year in 1935 (an honor bestowed by the VFW on one scout in the USA each year). He was scoutmaster of Troop 46 in Phelps for many years. He and his wife were both extremely active members of the Presbyterian church in Phelps (later to become the United Church of Phelps), with special interest in the Presbytery’s Camp Whitman in Dresden, New York where for years he was a member of the property and endowment fund committees. The Vittum’s were enthusiastic members of Foster Parents Plan and sponsored children around the world for more than four decades, and were instrumental in moving the extended family of one of “their children” in the Philippines to the Rochester area. The Vittum’s were also host family for the first AFS student in Phelps.

Dr. Vittum is survived by his son, the Rev. David A. (Jean) of Phelps; son, Allan (Andrea) of Penfield; daughter, Dr. Patricia J. Vittum (Laurel Brocklesby), of Sunderland, Massachusetts; four grandchildren; and six great-grandchildren. Dr. Vittum leaves an incredible circle of friends around the world.

Hugh Price, Chairperson; Michael Dickson, Gary Harman

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Herbert Bernhardt Voelcker, Jr., the Charles Lake Professor of Mechanical Engineering, Emeritus died on January 23, 2020 in Ithaca at the age of 90.

Herb was born in Tonawanda, New York and considered himself a "river rat," sailing his own small sailboat (built with his father) on the Niagara River.

He graduated from the Massachusetts Institute of Technology in 1951 with a Bachelor of Science degree in Mechanical Engineering. While at MIT, he was both the stroke of the Lightweight Crew and the captain of the university's rifle team, as well as a member of the Beta Theta Pi fraternity.

Herb was also a Distinguished Military Graduate of the Reserve Officers Training Corps. Upon graduation, he received a commission in the regular U.S. Army Signal Corps. He served as a signal officer in the 82nd Airborne Division for two years. The Army then sent him back to MIT, where he earned a Master of Science degree in Electrical Engineering in 1954.

While in graduate school, Herb met Jean Hunter through an introduction by his sister. Herb and Jean's first date was on a cold, windy March 1954 day sailing a rather leaky Tech dinghy between the bridges on the Charles River, drenched and freezing. They married in December that year.

Starting in 1955, Herb discovered the joys of research after being posted to the U.S. Army's Signal Labs at Fort Monmouth, New Jersey. This set him on his future career as a research engineer and professor. During that time, he was also a member of the U.S. Army Rifle team, traveling to Melbourne, Australia, to compete in the 1956 Olympic Games.

Herb resigned his commission at the rank of Captain when he received a two-year Fulbright Fellowship in 1958, enabling him to study at the Imperial College of Science in London. The College granted him a Doctorate of Electrical Engineering in 1961, after which Herb and Jean returned to New York State.
He started teaching at the University of Rochester as an assistant professor of electrical engineering. In 1969, he was awarded the university's Edward Peck Curtis Award for Excellence in Undergraduate Teaching, a remarkable honor so early in his career. Later, while at Cornell, he continued as a rigorous teacher whose students valued his teaching and rated it very highly.

Herb is well known for founding the Production Automation Project in 1972, leading the research team that developed mathematical foundations and core algorithms for solid modeling—the enabling technology for modern mechanical computer-aided design.

In 1985, Herb became the head of a new directorate for advanced manufacturing technologies at the National Science Foundation in Washington, D.C. However, a reorganization less than a year after he arrived curtailed the goals of his unit, so the Voelckers spent only a single year in the nation's capital.

Returning once more to upstate New York, Herb was the first recipient of a new chair at Cornell in the Sibley School of Mechanical and Aerospace Engineering. With their two adult sons John and Edward (Ned), out on their own by then, Herb and Jean lived for more than three decades in Ithaca—their longest tenure in any one location.

At Cornell, Herb was one of the primary intellectual leaders in developing the School's curriculum in design and manufacturing. After formal retirement in 2000, Herb continued to teach one course each year through 2019 and had planned to do so again in early 2020.

His research during a 60-year career ranged over radio propagation, aural perception, and bandwidth compression in the 1950s; modulation theory and digital signal processing in the 1960s; computer science and solid modeling in the 1970s; machine tools and numerically-controlled programming systems in the 1980s; and parallel computation, dimensional tolerancing, and mechanical design during the 1990s. Following his 2000 retirement, his part-time technical work focused largely on assembly modeling and variation control in mechanical design and manufacturing. The National Science Foundation provided financial support to many of these efforts.

Among his professional honors, Herb was a Life Fellow of both the Institute for Electrical and Electronics Engineers (IEEE) and of the American Society of Mechanical Engineers (ASME). In 2007, along with engineering professor Aristide Requicha of the University of Southern California, one of his early Ph.D. students, he received the inaugural Prix Bezier, the senior prize of the International Solid Modeling Society, for fundamental contributions to solid modeling.

Two years later, he was named a '2009 Master of Manufacturing' by Manufacturing Engineering, the magazine of the Society of Manufacturing Engineers (SME). In 2014, he received a Lifetime Achievement Award for his work in industrial automation from ASME's Computers in Information in Engineering (CIE) Division.

During the 1990s, Herb and Jean returned to the water, piloting a succession of cruisers throughout the Northeast, the St. Lawrence Seaway, the Intercoastal Waterway, and other
recreational routes. They jointly designed the layout and interior of the Rover, a 37-foot craft built in Maine on the hull of a lobstering trawler, taking delivery in October 2002. The last boat Herb built, after a gap of more than half a century, was a wooden Nutshell Pram that served as the dinghy on the Rover.

*Modified obituary submitted by John Booker and Albert George*
Norman M. Vrana, Professor Emeritus of Electrical and Computer Engineering died peacefully at his home in Ithaca on November 9, 2013. He was born February 16, 1920 in Hudson Heights, NJ. As a teenager, Norman Vrana worked on construction of structures for the 1939 NY World’s Fair site and worked as a messenger on Wall Street prior to finding his interest in Electrical Engineering. In 1947, he earned the BEE degree in Electrical Communications and Electronics at New York University while also working at ADT Company in the areas of detection devices and systems, logic design of central station signal systems, and power supplies. He served with the US Navy from 1944-45 in the Radio Material School. In 1946, he returned to ADT Company to continue in his previous areas of expertise and remained with the company until 1949.

In 1949, Norman moved his young family to Ithaca to pursue a Cornell Master’s Degree in Electrical Engineering that he earned in
1951 with a specialization in Electrical Machinery and Control Systems. He was then hired into the School of Electrical Engineering as an Assistant Professor, thus launching a very distinguished teaching and project supervision career at Cornell.

His particular area of specialization and interest remained laboratory courses especially those with a strong combination of theoretical material and hands-on practice. In fact, he once summarized his philosophy: “I have been motivated by the desire to develop new courses that were educationally relevant in combining theory, applications, innovation, and practical design – no (engineering) student is fully educated unless at some point his/her efforts result in the experience of using that knowledge and creativity to produce something tangible.”

Professor Vrana’s teaching and professional design interests varied and evolved over time. Initially he taught standard E.E. courses in measurement and circuits; direct current (DC) and alternating current (AC) machines, control theory, and electrical systems. He also began an interest in computing equipment in the 1950s and in this area, he found his true love of technology and saw its potential positive influences on society. This interest became more intense and by the 1960s, he had graduated several Master’s students. His first sabbatical leave was spent designing analog computers for aircraft fire control. He returned to Cornell from that experience and developed an analog computation course that he taught for some years.

As digital logic hardware systems grew in importance via the enabling technologies of discrete semiconductor electronics devices such as the Bipolar Junction Transistor, Professor Vrana began developing a course in Hybrid Computation. About the same time the College of Engineering developed the one-year professional master’s degree program to intentionally provide a higher level of education to those engineering students whose primary career goals was engineering design and development in industries throughout the US and around the world. Professor Vrana’s best discovery at
this time was to involve these Masters in Engineering students in the
design of equipment for the various laboratory courses he instituted
at Electrical Engineering.
Of special note, in 1973 he decided to devote his efforts to digital
hardware system design, which became a life-long interest. At this
early stage the equipment needed to provide a substantial hands-on
experience was either too expensive to adapt to a university setting
or did not even yet exist in suitable form. Combining his excellent
creative skills and management abilities, he began using project
students from the Masters of Engineering program within electrical
engineering to devise and construct the hardware systems that would
allow teaching the practical principles in this rapidly advancing
field. Masters in Engineering students were required to complete a
design project, and the synergy of engaging graduate students in the
design and synthesis of specialized digital equipment ideally suited
to educating students in this fledgling field, which has today become
arguably the largest and most expansive field of engineering product
development.

Within a very few years, students competed to be part of Professor
Vrana’s laboratory development program. By the middle 1970’s,
Professor Vrana was served by a very dedicated and highly creative
group of Electrical Engineering students who affectionately named
themselves VRA (Vrana Research Associates). Together with these
students and their successors Professor Vrana was able to create and
offer basic and advanced digital hardware courses. For example, he
created the first large-scale microprocessor course available to
undergraduates and graduate students alike in the late 70’s. Much of
the support for these courses came from very effective recruitment
of support from industry leaders such as Hewlett Packard.

Given that the array of specialty electronics then were not available
as they would become over the next decade. Professor Vrana and
his students had to develop the various components needed for a
modern processor. The vast number of individual chips required in
that era of small-scale integration, and the hundreds of feet of wiring
needed, required a container the size of a small suitcase. The
department technicians created the necessary wooden boxes that were given the name: The CompuBox. Within a few years 40-75 of these boxes were commonly seen being carried around campus by his students – quickly the boxes were officially dubbed VranaBoxes by the students.

Over his long and distinguished teaching career, Professor Vrana developed or taught some 15 different courses and assisted in many others as a recitation instructor. He also gave short courses at Cornell for staff and technicians and to local IBM locations in Owego and Endicott on analog and digital simulation. The later courses were offered using a video tape transmission system of continuing (distance) education. Of all his many accomplishments, his pioneering work with developing teaching equipment and methods for digital hardware systems was his greatest and most impactful contribution to the School of Electrical Engineering and its students. His courses still live on today implemented with the latest of technology available.

Bruce Land who has inherited the honor of carrying on with this superb teaching effort has said, “Norm Vrana was already established as the embedded expert when I started teaching in Electrical Engineering in 1983. Norm was the go-to person for information regarding computing systems, especially on making microcontrollers work in a student laboratory setting. Chris Pottle took over the teaching effort in computer systems from 1991-1996. In 1997 I took over the microprocessor course he had pioneered in the 70’s using TTL discrete logic, then using commercial processors in the 1980s. By the 1990s, teaching utilized flash-based controllers costing a few dollars each and the computing chip became just another electrical design component, as Professor Norm Vrana had envisioned years earlier.”

His consulting and professional engineering design experiences spanned a wide range of interests from the 1940s through the 1980s. He contributed his expertise and problem solving abilities at North American Aviation, NY Telephone Company, Hewlett Packard Company, Foxboro Company, the US Army’s Frankford Arsenal,
BRL, JP Hennessy Company, The Coates Company, and The Partlow Corporation. He also served as an External Faculty Member to the Sibley School of Mechanical Engineering from 1967-1971 advising on curriculum issues and helped further develop laboratory-based education in that program. He attained the rank of Full-Professor in 1974 and Professor Emeritus in 1990. Professor Vrana was also an avid and respected outdoorsman enjoying family camping and skiing trips to the Adirondacks, Maine, and Canada. He was active in the Ellis Hollow Community and helped develop the Ellis Hollow Ski Slope. He is best remembered by his students and colleagues alike as an innovative and creative engineering educator and an intensely dedicated member of the faculty of Cornell for over 40 years.

H.C. Torng, Bruce Land, John Belina