Robert Ascher -- archaeologist, anthropologist, ethnomathematician, experimental filmmaker -- was never a conventional scholar, although perhaps in some odd way he exemplified a subset of his generation in working around and against the mainstream, sometimes even as an iconoclast. Often provocative, always energetic and challenging, he was fundamentally a humanist scholar in every role he undertook.

Bob was born in New York and grew up in the Queens neighborhood of Far Rockaway. He received his B.A. from Queens College in 1954, and then entered the U.S. Army. In 1956, having completed his draft obligation, he married Marcia Alper Ascher and they both started graduate programs at UCLA. Bob received his M.A. there in 1959, and Ph.D. in 1960. That year they relocated to Ithaca, where Marcia joined the mathematics department at Ithaca College and Bob joined the anthropology department at Cornell as the first archaeologist in the department. He was promoted to full Professor in 1966, and became Emeritus Professor in 2002.
Bob made major contributions to anthropological and archaeological scholarship in several seemingly disparate areas. In the early 1960s he was part of the development of experimental archaeology, including imitative and replicative processes and also the kind of mental “thought experiments” that are creatively used to think about possibilities throughout the process of archaeological research. Also in that period he wrote on the use of analogy in archaeology and anthropology, exploring the kinds of parameters that might be used to control its use and avoid what he called the “Bongo-Bongo phenomenon” -- that is to say, the likelihood of finding in the ethnographic record at least one example of just about anything one might be seeking.

In 1964 Bob and Charles Hockett co-authored “The Human Revolution” (in *Current Anthropology*, reprinted many times since), where they explored what it means to be human, incorporating language into frameworks of biological evolution and cultural change in an effort to bring the subdisciplines together for a more holistic understanding of the human past. Hockett’s 1973 textbook *Man’s Place in Nature* was one outgrowth of the approach, but it proved inspirational for many scholars over the years as a way to think about different approaches in the field.

In 1969, working with Charles Fairbanks, Bob undertook the excavation of a slave cabin on Cumberland Island, in Georgia. They published a piece on this work in 1971 that presents the archaeological data and analysis in a framework with a “soundtrack” that frames and contextualizes the information. This is widely credited as one of the first national publications on slave cabin archaeology, an area of study which Fairbanks continued to develop as a major focus, and Bob considered this his most important archaeological work. Also in this period was published his widely cited “Tin Can Archaeology,” which argued for the importance of thinking archaeologically about more recent material culture -- a strand that has seen considerable development in recent years.

Marcia Ascher accompanied Bob in all of his archaeological research, and their working and thinking together on mathematics and anthropology led to many fruitful pursuits. Together, they
published in 1965 an article developing a methodology to scientifically differentiate stone tools from naturally occurring pieces. In the 1970s they turned to what became probably their most widely known subject: quipus, the knotted cords used for record-keeping by the Incas, where their special mix of mathematical and archaeological knowledges led to significant advances in understanding. This in turn led to a more generalized formulation of ethnomathematics in the 1980s, and they both continued with publications on the quipus and other aspects of ethnomathematics through the 1990s and into the 21st century. A website with the data for over 200 quipus is maintained at courses.cit.cornell.edu/quipu/.

In the 1980s and '90s Bob sought new ways to understand and convey cultural meanings. The technique he settled on after some experimentation was “direct animation,” drawing directly on film -- originally adopted as a way to avoid the very high costs of conventional filmmaking. His first film (“Cycle” 1986) drew on Australian aboriginal mythology; others drew on Jewish and Tlingit tales. These films are probably best appreciated by having good knowledge of the stories and their contexts, either from prior experience or contextualizing discussion at screening, and are subject to individual subjective interpretation more than conveying a particular meaning.

This corpus was well received in film circles, playing a number of festivals and garnering considerable interest and invitations to screenings and discussions, but was less widely acknowledged within the discipline of anthropology. There were some reviews in the professional journals, and some key figures in visual anthropology have continued to write on these films, but their abstract qualities did not engage with the mainstream in the discipline.

As time passed Bob became increasingly critical of academic culture and institutions, feeling that they generally failed to meet the goals and standards they claimed (in a 1984 piece published under the pseudonym of George Puck he vented these frustrations). He withdrew from many campus duties, but loved teaching and working
with students and his classes remained popular and are fondly remembered by students.

As one of his last activities on campus before retirement, Bob wrote and staged a theater piece, “The Adventures of Coyote” (2001), with readings of three poems involving the well-known Native American trickster character. This open-ended performance seems a fitting capstone for Bob's career. His last years were largely devoted to caring for Marcia through cancer and its treatments, but in the months between her death and his he had begun to return to some campus activities. As Bob himself wrote in an as-yet unpublished preface, “may the dance go on.”

Cover photo: Marcia Alper Ascher and Robert Ascher holding a quipu

Frederic W. Gleach, Chair; Bernd Lambert; Vilma Santiago-Irizarry
Professor emeritus Njoku Ekpe Awa died on July 21, 2013, after several years of illness. Professor Awa was literally a royal: born in Nigeria to a tribal village chief, he retained ties to his traditional community throughout his life. He was buried in Nigeria according to Nigerian customs.

After early education in Presbyterian schools in British colonial Nigeria (in what became the East Central State), and work as a sales manager, Professor Awa came to London for further work, earning a London University General Certificate of Education in 1963. He returned to Nigeria and began his career in education, serving as a coordinator and field representative for the University of Nigeria. At the same time, through correspondence he earned a London University external diploma in history in 1966. Moving to the United States with support from the U.S. Agency for International Development, Professor Awa received a B.A. in Communication Arts from Michigan State University in 1969, soon after his 30th birthday. Academia was now firmly established in Professor Awa’s
life; in the same year, he earned his M.A. jointly in Communication Arts and in Continuing and Adult Education. His thesis showed his commitment to the specific challenges of his native country, while simultaneously recognizing the universal links between communication, education, and democracy; it was titled “University Extra-Mural Education in Nigeria and Biafra, 1947-1967: The Impact of Communication and Adult Education on Nation Building.”

In 1970, Professor Awa moved to Cornell, where he would remain for the rest of his life. He earned a Ph.D. in Education in 1973. By then, he had already joined the department then named Communication Arts (since 1988, Communication) in the College of Agriculture and Life Sciences. His core teaching focused on interpersonal and small group communication, with a substantial presence in the department’s active oral communication program. But he also introduced courses on intercultural communication, and in 1976 during the national bicentennial he participated in a university-wide course on “America and the World Community.”

Professor Awa joined Cornell’s communication program just as it began its transition from being a service unit tied to production of agricultural extension materials to being a traditional research-oriented academic department. His research was both local and international: At one point, he was working both on a study addressing social participation in low-income, low-density populations in upstate New York, and on a study examining Ibo and Ibibio farmers’ adaptation to change after the Nigerian civil war of 1967-1970, when the state of Biafra briefly seceded. His work was published in the Journal of Extension, the Journal of African and Afro-American Affairs, Knowledge: Creation, Diffusion, Utilization (a journal later renamed Science Communication) and the Handbook of Intercultural Communication. He was an early proponent of participatory research methods, recognizing the value of indigenous knowledge in rural development. He particularly shed light on the underutilization of knowledge held by women, highlighting the effect of stereotypes.
Because of his interest in intercultural communication, Professor Awa became deeply involved in the Department of Communication’s international development activities, including, for 15 years, the Communication Planning and Strategy series that offered training for people from developing countries. He participated in programs that took him back to Africa many times – to Ethiopia, to Egypt, and often to his native Nigeria. At Cornell, he advised many master’s students in intercultural and development communication.

Professor Awa was also active across the university, serving as a faculty senator and as a member of the Faculty Senate executive committee, and on advisory committees to religious affairs programs.

Religion played its part throughout Professor Awa’s life. He was a member of the First Presbyterian Church of Ithaca, where he was an ordained Deacon and Elder. He taught Sunday School there and, continuing his international work, participated in the church’s International Hunger Program.

Family also played a central role in Professor Awa’s life. He married Ella Awa in 1970; she survives him. Together they raised three children: Njoku, Jr. (“Ogbo”), Adaku, and Apia, and he had two grandchildren. Among his enthusiasms was soccer; he is reported to have carried a soccer ball and shoes in the trunk of his car in case a soccer game appeared, and he informally helped coach the Cornell soccer team.

Illness led to Professor Awa’s early retirement in 1995.

A memorial service for Professor Emeritus Njoku E. Awa was held in Ithaca on July 27, 2013.

Bruce V. Lewenstein, Chair; Royal D. Colle; Clifford Scherer
Simon H. Bauer, Professor Emeritus of Chemistry, died in Davis, California, three months before his 102nd birthday.

Professor Bauer was born in Kaunas, Lithuania and emigrated to the United States with his parents in 1921; the family settled in Chicago. He earned his Ph.B. (1931) and Ph.D. (1935) at the University of Chicago, where he studied with T.R. Hogness, W.D. Harkins, and H.I. Schlesinger. He then spent two years as a postdoctoral fellow at the California Institute of Technology working with R.M. Badger and Linus Pauling. After a period as an instructor in fuel technology at The Pennsylvania State University (1937-1939), he was invited to join the Chemistry faculty at Cornell (1939), where he remained for the rest of his career of teaching and research. He was appointed Professor in 1950 and Emeritus in 1977.

He was a Guggenheim Fellow (1949), a National Science Foundation Senior Postdoctoral Fellow at the Canadian National Research Council and the Weizmann Institute (1962), and a National Academy of Sciences Interacademy Exchange Fellow, USSR (1966). In 1979 he received an Alexander von Humboldt Award and spent six months at the Max Planck Institute of Quantum
Optics in Garching-München. In the fall of 1983, he was appointed the first Foreign Adjunct Professor at the Institute of Molecular Science in Okazaki, Japan. He was a Visiting Professor at North Dakota State University (1974), the University of California at Irvine (1978), and the University of California at Riverside (1978). He had served as consultant to the Los Alamos National Laboratory, the Argonne National Laboratory, the Atlantic Richfield Company at the Harvey Technical Center (1945-1985), at Lockheed California, and at the Cornell Aeronautical Laboratory in Buffalo.

Professor Bauer was the author or co-author of nearly 400 publications. His Ph.D. dissertation included the construction and use of a mass spectrometer for chemical analysis, easily discriminating different isotopes. In addition, he published four short papers before receiving his degree and in one of these demonstrated that an oscillating electric field can effect mass separation. This proposal was the forerunner of today’s quadrupole mass spectrometer. In his work with Badger he helped develop the first use of photometric methods in the near-infrared, to measure the monomer-dimer equilibrium constant in gaseous acetic acid. Their early studies of hydrogen bonding are still referred to in the current literature as the “Badger-Bauer rule.”

Much of Professor Bauer’s early work at Cornell was on the determination of molecular structure by electron diffraction and spectroscopic techniques. Then, after many years of intensive work in that area, in the mid-1950s his interests turned also toward the study of the kinetics of fast reactions and of chemistry at high temperatures as followed in shock tubes and by other techniques, and in chemical lasers. He was the first to test the use of the “impact tube” for determining chemical relaxation times. He constructed a “spectrophone” to investigate vibrational relaxation in molecules. At about that same time he began his extensive work on the dissociation of diborane and the thermochemistry of the other boranes as well, and on the molecular interpretation of the measured thermochemistry of gas-phase association-dissociation reactions more generally.
During the 1960s, while continuing his molecular structure researches, he began his now famous program of using shock tubes for the study of reaction kinetics at high temperatures, and then the extension of those studies with the use of lasers. He and his co-workers published the first fully systematic treatment of the equilibrium compositions of the carbon-hydrogen system over a large temperature range. One of the most arresting applications of his shock-tube techniques was in the study of the nucleation of iron vapor at around 1600K. Another, exploiting rapid heating, rapid quenching, and the freezing in of intermediate compositions, was in the synthesis of amino acids by shock heating mixtures of gaseous water, ammonia, and ethane, in imitation of what might have occurred in the earth’s pre-biotic atmosphere: a shock-initiated variant of the famous Miller-Urey experiment.

Professor Bauer also had a strong interest in teaching. He, together with Frank Long, reorganized and modernized the teaching of undergraduate qualitative analytical chemistry on a physical chemical basis. They prepared notes for the students which later provided part of the basis for a well-known textbook by our colleagues Michell Sienko and Robert Plane.

Simon continued his active research and continued to publish papers until, at the age of 93, in January 2005, he left Cornell to move to Davis, California. One of the present authors (CFW) was Simon’s research collaborator in Simon’s last years at Cornell, where they studied the kinetics of vapor condensation and gas-phase pyrolysis by experiment, theory, and computer simulation. Even after Professor Bauer moved to California he remained active in reading, writing, and talking science. He wrote on the 19th century English scientists and inventors Humphry Davy and Michael Faraday. In the retirement community in Davis where he resided he lectured on “The Laws of Thermodynamics”, “The Impact of Molecular Theory”, and “Musings on the Existence of Extra-Terrestrial Life: a Chronology of Believers.” To celebrate his 100th birthday, the residents of the community asked him to give a lecture on his life; more than 100 people attended.
In October 2001 the Cornell Department of Chemistry hosted a symposium to celebrate Simon’s 90th birthday. It was recapitulated in October 2011 when Simon made the trip back to Cornell so that, on October 15th of that year, we could celebrate his 100th birthday with another scientific symposium. He was the star and lead-off speaker.

He was pre-deceased by his wife Miriam (“Mitzi”), whom he had married in 1938. He is survived by his three children, three grandchildren, and a great-grandchild. Simon Bauer was our teacher and our friend. We miss him.

Benjamin Widom, Chair; Harold A. Scheraga; Charles F. Wilcox
Sandra Lipsitz Bem, professor of psychology emerita and former director of women’s studies (now feminist, gender, and sexuality studies), integrated the political, personal, and professional throughout life. In 1965, a senior at Carnegie Institute of Technology (CIT), now Carnegie-Mellon University (CMU), Sandy met Daryl J. Bem, a new assistant professor. They married four months later, shortly before Sandy left for the University of Michigan. Two years later, now a Ph.D. in psychology, Sandy joined Daryl on the CMU faculty. Stanford hired them both in 1969.

In 1978, Cornell successfully recruited Sandy, by then widely recognized in gender psychology, as associate professor of psychology and director of women’s studies, and also hired Daryl as professor of psychology. *An Unconventional Family*, 1998, includes Sandy’s readable and frank account of their egalitarian marriage, about which they spoke to many groups and which was featured in the inaugural issue of *Ms.*
From the mid-1960s to the 1980s, the Bems were visible and vocal activists pushing for gender equality in households and at work. Both were expert witnesses in two notable sex discrimination cases. The first, filed by NOW against the *Pittsburgh Press* for segregating classified ads, was appealed to the Supreme Court, which ruled 5-4 in favor of NOW. The Bems were also critical witnesses in an FCC hearing that accused AT&T of discriminating against women. In a widely publicized settlement, AT&T agreed to modify its recruiting and hiring practices.

Because Sandy had such considerable public stature, people were sometimes surprised that she took up so little physical space. At 4 ft 9 inches, she could be mistaken for a preteen. But even as a child she already knew she was exceptionally smart, strong, and capable—and so did those around her, including mother Lillian, father Pete, and younger sister Bev as well as her much loved grandmothers. From 3 to 11 she was star pupil at Hillel Academy and later shone at Pittsburgh’s Taylor Allerdice High School. Yet Sandy was without pretension and arrogance, straightforward, open, and easy to talk to—sometimes unsettlingly frank and blunt but always clear and incisive and never self-important. She was far from the stereotype of a famous politically engaged intellectual and distinguished scholar, yet that is what she was—as well as a deeply loving mother, sister, spouse, and friend.

Sandra Bem made significant contributions to mainstream psychology, to feminist scholarship, and to their intersection in feminist psychology, but her work also resonated beyond the academy. Her early “Training the woman to know her place: The power of a nonconscious ideology” was published well before the word ‘sexism’ took hold. In it, Sandy denied that sex differences were mainly biological and that sexual inequality was inevitable. These were radical claims then and in many circles still are.

In the early 1970s she proposed that “masculinity” and “femininity” were not opposite ends of a continuum but could be conceptualized and measured independently. The Bem Sex Role Inventory (BSRI) did exactly that. Sandy’s research found “androgyny,” high BSRI scores on both “femininity” and “masculinity,” strongly correlated
with other measures of psychological well-being. The BSRI immediately spawned considerable research and continues in use today.

In spite of early career awards for androgyny research, Sandy moved on. In the late 1970s she proposed gender schema theory, a cognitive account of “sex typing.” Drawing from social, cognitive, and developmental psychologies, she proposed that gender schemas get incorporated (or not) into conceptual maps, shaping how people see themselves and the world. This work appeared in top psychology journals and in Signs, a major interdisciplinary feminist journal. With significant implications for gender development, it inspired many dissertations.

This shift in research emphasis coincided with full immersion in parenting Emily and Jeremy, both preschoolers when the Bems moved to Ithaca. Sandy and Daryl were fully committed to “raising gender-aschematic children”—kids not incorporating cultural ideals of “femininity” or “masculinity” in their sense of who they were or should be. But this was challenging in a “gender-schematic society,” which assumes that genitals determine not only someone’s potential role in baby-making but virtually everything else about them. Sandy’s Signs article argued for “inoculating” children against gender schemas and for postponing exposure to them. An Unconventional Family describes the Bems’ efforts, closing with Sandy’s interviews with Emily and Jeremy, then young adults; Daryl, no longer living in the household but still very much in the family, contributes an epilogue.

The Lenses of Gender, 1993, is a powerful multidisciplinary synthesis of Sandy’s and others’ work, arguing that androcentrism, gender polarization, and biological essentialism shape cultural discourses, social institutions, and the psyche itself. Viewing the world through these distorting gender lenses reproduces male dominance and power psychologically as well as systemically. Her earlier work questioned assumed links between bodily sex and psychological attributes. Lenses of Gender further decouples bodily sex and sexual desire, showing how heterosexism and compulsory heterosexuality are reproduced. She comments that her own
sexuality did "not mesh with the available cultural categories ... The sex-of-partner dimension implicit in the three categories of heterosexual, homosexual, and bisexual seems irrelevant to my own particular pattern of erotic attractions and sexual experiences."

Active debates on *Lenses of Gender* followed. *Psychological Inquiry* published a lively exchange: four psychologists write analyses and Sandy, with brilliance, clarity and wit, offered a response that makes great reading and brings her voice to life. The book won major awards on publication, but is, arguably, undervalued and neglected. In true Sandy fashion, it is written so clearly and accessibly that some theorists dismiss it as overly simple.

Sandy Bem was an exceptional administrator even though it was a hat she did not care to wear. When she arrived at Cornell, Sandy seemed too frank, literal (not “nuanced” enough) and curt—tactless—to be an effective administrator. And yet she managed to transform women’s studies from what had been a struggling and often amateur effort into a serious academic program with regular lines filled by people whose research focused on gender and who could give courses on substantive areas in Women’s Studies as defined in the 1980s. She was hired soon after AAUW announced its Silver Snail Award, ‘won’ by Cornell because faculty women were fewer in number and lower in rank here than at any other Ivy League school. Sandy seized the moment, and she soon had made several innovative hiring arrangements of young faculty. Her inspired maneuvering continued, building a strong faculty base for the women’s studies program.

Sandy also enriched the intellectual life of the program. Her favorite question—usually delivered after a seminar, in a flat voice, whether the speaker was local faculty or a visiting grand dame, was: “So, why is this important?” Answers in discipline-internal language were off base. Sandy wanted accessible language, not jargon. And she was willing to tell anyone that the paper just heard was boring and not especially insightful.

In her 50s Sandy again changed course, following a dream she’d had
as an undergraduate. Reducing her teaching to half-time she enrolled in 1997 in Rutgers’ clinical psychology Psy.D program, opening a part-time psychotherapy practice in 2000 while continuing half-time at Cornell until her 2010 retirement. Her therapeutic specialty was helping people with serious trauma. Both her Rutgers supervisor, to whom she became very close, and an Ithaca psychotherapist who was a dear friend for over 30 years, have mentioned how deeply Sandy cared about her clients and how successfully she applied her keen intelligence to clinical work. Her capacity for observation was central to her therapeutic practice, and she found it deeply satisfying.

Sandy peacefully ended her own life at her home in Ithaca on May 20, 2014, one month before her 70th birthday. After being diagnosed with Alzheimer’s Disease four years earlier, she announced her intention to end her life, while she could still do so without assistance, if and when the disease became too debilitating for a meaningful quality of life. For much of her final year, Emily and new grandson Felix, Emily’s child, shared Sandy’s home, and Sandy reveled in her new role as Bubbe. But in late spring, keen observer that she was, she realized the time had come. Her sister Bev, herself terminally ill, came from Oregon to join in a family gathering celebrating Sandy, including sharing many “Sandy stories” with her and with one another.

In death as in life, Sandy was clear-headed, courageous, and forging new paths. Her choice to exit on her own terms and to do so openly has sparked conversations over many dinner tables. NPR interviewed Daryl and Emily about Sandy’s decision in September 2014, and in spring 2015 Hospicare announced the Sandra Lipsitz Bem Lecture Series on Compassionate Care and End-of-Life Issues, supported by an endowment from Daryl. On May 17, 2015, the New York Times Magazine featured Robin Marantz Henig’s “The Last Day,” a compassionate piece on Sandy’s life and death. Sandy holding Felix in her beautiful garden smiled out from the cover. We miss her keenly but know she would be proud.

Sally McConnell-Ginet, Chair; Joan Jacobs Brumberg, committee member; Daryl J. Bem, husband; Carla Golden, Ithaca College
colleague; Editorial help from Joanne E. Fortune and Kathryn March, committee members; Karen Gilovich, close friend
Warren F. Brannon was born and grew up in America’s breadbasket where, on the family farm in North Loop, Nebraska, he gained practical experience raising a herd of Polled Herefords and feeding pigs. He also took responsibility for the care of the ewe flock at lambing time. After graduation from high school, he attended Kearny State Teachers College, but left to join the Army one year later, after the attack on Pearl Harbor. He spent his three-year duty primarily in the far western Aleutian Islands and India. Thereafter, he re-entered college at the University of Nebraska, receiving his B.S. degree in 1950. Warren then came to Cornell University as a graduate assistant where he specialized in beef cattle nutrition, earning his M.S. degree in 1951. Continuing his studies at Cornell, this time in the field of Animal Breeding and Genetics, he received the Ph.D. degree in 1953 and accepted a temporary assignment as acting assistant professor of livestock extension at Cornell. In 1954 he became an animal husbandman at the USDA Range Experiment Station at Burns, Oregon, where he conducted research on the genetics of rate and quality of weight gain as well as vitamin and trace mineral nutrition in range cattle.
Warren began his duties as an assistant professor of Animal Husbandry (now Animal Science) in the College of Agriculture and Life Sciences at Cornell University in 1956. His responsibilities were divided between adult and youth (4-H) extension. The adult effort was focused primarily on the sheep industry. One of his accomplishments involved the development of regional wool marketing cooperatives, which by 1979 handled about 60% of all wool produced in New York State. These “wool pools” served as a basis for coordinating the collection, sorting, grading and marketing of wool from the small individual flocks which typified the New York sheep industry. Warren conducted wool grading schools for growers as well as for the NYS Department of Agriculture and Markets. He also conducted annual shearing schools at several locations to accommodate growers who needed training. The production of market lambs that would better meet some of the niche market opportunities offered by New York City was also a continuing educational theme as he worked with producers, often through their cooperatives, to modify standards and increase efficiency. Warren practiced what he preached in his own personal research laboratory, a 200-acre sheep farm near Ithaca. His Dorset flock set a standard of excellence for other producers and demonstrated how to achieve three rather than two lamb crops every two years. He fostered the use of new practical approaches to housing and feeding market lambs, such as self-feeding complete feeds (mixtures of forage and grain) to growing lambs. He also introduced artificial insemination to the sheep industry as a method of hastening genetic improvement.

Professor Brannon devoted a large share of his time to youth projects involving livestock production and meat science. He worked extensively with county 4-H clubs, initiating and developing new ideas involving swine, sheep and beef cattle. He was interested not only in training young people how to identify, measure and manage important quantitative growth traits in their meat-producing animals, but in encouraging them to also think in terms of important end-product or carcass traits. It was important that they appreciate the fact that the most desirable carcass does not always come from the best-performing animal or even the one judged as a live animal.
to have the best conformation. Among other methods of demonstrating this, certain classes at the State Fair were designated for slaughter after having been placed as live animals, so that the carcasses could then be evaluated and ranked. Many contestants soon learned first-hand that the correlation was far from perfect.

As products of his extension program, Dr. Brannon wrote and published over 100 news articles on beef, sheep and swine production. He also prepared a large number of radio talk shows for use through New York State Extension media. During the last third of his career at Cornell, he published his extension bulletins and reports in the form of a monthly information letter, The Shepherds’ Voice. This newsletter was mailed to all New York county extension offices and to personnel in the sheep industry throughout New England, Pennsylvania, Maryland, Virginia and West Virginia.

Warren was a member of Phi Kappa Phi, Sigma Xi and the American Society of Animal Science. He was promoted to associate professor in 1962. He used sabbatical leaves at the University of Wisconsin (1962) and the University of West Virginia (1969) to good advantage in generating and exploring new ideas and updating materials for his program in parasitology, consumerism and youth development. He retired in 1979 and was granted emeritus status. After retirement he served on the NYS Beef Council and NYS Association of Meat Processors until 2011.

As an avocation, Warren served for some 20 years as a Dryden, NY school board member, overseeing the explosive growth of that system in the 1960s and 1970s. He also enjoyed playing trombone and singing in gospel quartets. Church worship, fellowship and administration as a faithful servant within the Seventh Day Baptist denomination were very important to him.

Warren and his wife, Marion, who were wed soon after his return from Army service, have four children (Nancy, Larry, Dennis and Kenneth), 13 grandchildren and 23 great grandchildren. Warren and Marion had been married for 65 years before her death in 2011.

W.R. Butler, Chair; M.L. Thonney; J.M. Elliot
Geoffrey V. Chester died in Ithaca after a brief illness. Born in Totley, Derbyshire, England in 1928, he was six years old when his family moved to Edinburgh, Scotland. There he attended Daniel Stewart's College and graduated in 1950 from Edinburgh University, where he studied with and admired Max Born. When people referred to Geoffrey as English, as they often did, he would correct them: “Scottish.”

He received his Ph.D. in physics in 1954 from Kings College, London. In his thesis he acknowledges C. A. Coulson and H. C. Longuet-Higgins. He then came to the United States for postdoctoral work with Lars Onsager at Yale University and with Joseph Mayer at the University of Chicago. From 1957 to 1964 he was a member of Rudolph Peierls' renowned Department of Mathematical Physics at the University of Birmingham, England.

Geoffrey joined the faculty at Cornell in 1964, where he played a major role in the construction and leadership of the Cornell condensed-matter theory group, which attracted extraordinary graduate students, postdoctoral fellows, and faculty visitors from all
over the world. He served as Director of Cornell’s Laboratory of Atomic and Solid State Physics from 1968 to 1974, Associate Dean of Cornell's College of Arts and Sciences from 1978 to 1986, and Dean from 1986 to 1991. He retired in 1995, but maintained a lively and insightful interest in all aspects of physics and life up to his final week.

In the field of low temperature physics Geoffrey Chester has long been known for two theoretical predictions:

In 1955 he predicted that “we should expect a phase separation of the isotopes” in mixtures of liquid helium-3 and helium-4. Atoms of the two helium isotopes differ only inside their tiny nuclei: the common isotope helium-4 has two protons and two neutrons, while the rare isotope helium-3 has two protons but only a single neutron. Both helium isotopes liquefy only at a few degrees above absolute zero. According to classical (pre-quantum) physics the only consequence of the difference in their atomic nuclei should be a slightly greater gravitationally induced compression of the heavier liquid. If equal quantities of the two isotopes are stirred together in the liquid state, classical physics requires them to remain completely mixed when the stirring stops. Quantum physics, however, predicts that the missing neutron leads to profound differences in the two helium liquids and, as Chester [1955] showed, under appropriate conditions the two liquids should actually separate from one another, just as oil and vinegar do. This phase separation was observed in the laboratory the following year. Today it is now exploited in commercially available “dilution refrigerators” to reach temperatures a thousandth of a degree above absolute zero.

And in 1970 he made a surprising theoretical discovery about the solid form of pure helium-4. The liquid form of helium-4 had been found in the late 1930s to exhibit some very strange “superfluid” behavior. Superfluids can flow frictionlessly through passages so constricted that they completely block the passage of an ordinary liquid. And when a vessel containing superfluid helium-4 is slowly rotated, the liquid refuses to participate fully in the motion; the motion of the walls is unable to communicate itself to the entire fluid enclosed by those walls. It was soon realized that superfluidity
was associated with a phenomenon predicted theoretically in the mid-1920s, named (after its discoverers) Bose-Einstein condensation. Chester [1970] points out that it is possible for helium-4 near absolute zero to undergo Bose-Einstein condensation, while, at the same time, taking on not the uniform spatial density characteristic of the liquid state, but the periodic spatial variation of the density characteristic of the orderly crystalline arrangement of atoms in solid helium-4. This work launched the theoretical and experimental study of “supersolids,” an endeavor that remains active and controversial to this day.

Starting in the late 1970s, Geoffrey was among the first physicists to use extensive computation as a crucial component of rigorous theoretical analysis, in the spirit of Richard Hamming’s injunction that “The purpose of computation is insight, not numbers.” This work, done in collaboration with postdocs and graduate students both at Cornell, and with the group associated with one of us (Kalos) at the Courant Institute at New York University, led both to scientific knowledge of the systems studied, and to important advances in computational methodology.

The group investigated dense collections of many individual particles, ranging from liquid and solid helium-4, to models of enormous atomic nuclei (“nuclear matter”). Quantum physics is essential in accounting for the behavior of such systems. But numerical computations of large quantum systems face a seemingly insuperable barrier. The numerical computations needed to make accurate quantitative predictions rapidly become inefficient as the number of particles increases. What saves the day are “Monte Carlo” computations. These deliberately inject randomness into the numerical procedure. Geoffrey and his collaborators developed and exploited significant advances in the application of Monte Carlo methods to quantum systems, finding a method for calculating directly from the known interactions among a few atoms, the properties of large numbers of helium-4 atoms in both the liquid and the solid state. The errors in these computations can be reliably estimated, and are small. They also studied large collections of neutrons, and of neutrons and protons, and their numerical results for Hans Bethe’s famous “Homework Problems” in models of
neutron and nuclear matter were widely influential. Geoffrey’s deep grasp of the underlying physics led to an understanding of what systems to study, and what questions to ask of the computations.

Instrumental in these successes were his love of physics, his integrity, and his warm encouragement of young people. His special gift was being able to picture the quantum phenomena before starting any calculations. His profound intuition was the key to the success of his theoretical constructions.

Several years before the advent of personal computers and text-editing programs, Geoffrey’s expertise in computational physics led him as Associate Dean, to introduce computers to humanists as surprisingly valuable aides in preparing manuscripts. As Dean he came to know the College of Arts and Sciences in every detail. His accomplishments included innovative and vigorous recruitment of women and minority faculty, and far-sighted long-term planning.

Geoffrey was a long-time assistant to, and collaborator with his wife, the ceramist Carolyn Chester. He built many of the wooden structures and frames for her ceramic sculptures, and introduced her to chemicals not ordinarily used in ceramics.

His family, friends, colleagues, and neighbors remember him as a modest, kind, and deeply ethical person, who possessed a ready and playful sense of humor and a tremendous curiosity about almost everything he came across. He had many interests and pursuits and enjoyed talking with anyone who shared them: bread-baking, wood-working, art-book collecting. He loved the western islands and highlands of Scotland, and delighted in the wild turkeys that paraded across the family’s backyard in Ithaca.

Geoffrey is survived by his wife, Carolyn; his children, Michael, Nicholas, and Sarah; and by his sister and brother-in-law, Dorothy and Gerald Grainger of Dunkeld, Scotland. He will be very much missed by them as well as by his friends, neighbors, and colleagues from his rich academic life.

Neil W. Ashcroft; Malvin H. Kalos; N. David Mermin
Donald Cullen, Professor Emeritus at the New York State School of Industrial and Labor Relations, was 89 when he died last year. Don’s undergraduate work at Hobart College was interrupted by service as a torpedo officer aboard a destroyer in the Pacific during World War II. After graduating from Hobart in 1947, he spent a year in graduate study in sociology at the University of Chicago before transferring to the School of Industrial and Labor Relations (ILR School) where he earned an M.S. in 1949 and a Ph.D. in 1953. During that time, Don was an Instructor in the School of Business at St. Bonaventure University. Don became an Assistant Professor at ILR in 1953, an Associate Professor in 1958, and a Full Professor in 1966. He became Professor Emeritus upon his retirement in 1990 after what ILR School Dean David Lipsky described as “many years of distinguished and dedicated service to the ILR School.”

Don’s textbook, The Labor Sector, was used in classrooms across the country and he was a nationally respected expert on collective bargaining in the construction industry. Among his scholarly articles, “The Interindustry Wage Structure,” which appeared in the prestigious American Economic Review, was described by an ILR
Faculty Review Committee in 1966 as “one of the most significant contributions to labor economics in the post-war period and one of the most frequently cited articles in the field.” Don’s publications concerning the Taft-Hartley Act and national emergency disputes and his monograph on National Emergency Strikes remain the standard works on the subject.

In addition to his research, Don shouldered more than his share of required course teaching. Although he taught a wide range of courses at the graduate and undergraduate levels, Don was a preeminent teacher of collective bargaining, considered then the capstone course in the ILR curriculum. His teaching was distinguished by his thorough preparation and organization of content, high academic standards, and a lively and humorous style that engaged and challenged his students.

Two members of this committee were undergraduate students in Don’s collective bargaining course. One remembers writing a 90-page paper on collective bargaining in the steel industry for his course. He also remembers that Don was “very fussy” about student papers and graded them meticulously on style as well as content. The other recalled keeping his notes from that class for many years until he became depressed reading Don’s critical comments on his answers to exam questions.

Don also taught extensively for union and management groups in the ILR School’s Extension Division. He was regarded as one of the best and most effective Extension program teachers.

The outstanding quality of Don’s research and teaching was matched by his many other accomplishments, all of which contributed positively to the reputation of the ILR School. He served for many years as a mediator, factfinder, and arbitrator in the public and private sectors. He was a member of the labor arbitration panels of the American Arbitration Association, the Federal Mediation and Conciliation Service, the New York State Public Employment Relations Board, and the New York State Mediation Board. (Don’s mediation skills, a colleague remembered, enabled him to raise a sensitive topic in an inoffensive way.) Don was also a
Senior Staff Economist for the President’s Council of Economic Advisers. In addition, for a period of over 36 years, Don served as Assistant Editor, Associate Editor, and Editor of the Industrial and Labor Relations Review.

One colleague who was Associate Editor during Don’s Editorship considers him “the best editor of a social science journal of all time:”

He [Don] frequently wrote 10 or 15 page letters to authors that included a line-by-line critique of their work, and he devoted endless hours to working with authors to improve the logic and clarity of their papers…He was always a gentleman and dealt with people in a polite and considerate fashion. But I am sure I am not the only one who felt at least a little bit annoyed when Don very politely pointed out the flaws in my thinking. The lessons Don taught me about logic, clear thinking and writing have served me well over my entire career.

Another member of this committee referred to Don as an extraordinary editor who essentially rewrote every paper that was published while he was Editor of the ILRR. Don’s treatment of this committee member’s own manuscripts had him “grinding [his] teeth wondering how he could dare to change” what he had written. He concluded, however, that his manuscripts were much better as the result of Don’s editorial work. Fittingly, Don would often cite the following lines from H.G. Wells:

No passion in the world,
No love or hate,
Is equal to the passion
To alter someone else’s draft.

Don’s dedication of so much time and energy to being Editor of the ILRR is responsible, in many ways, for the Review’s being recognized today as the leading journal in industrial relations. Another committee member, who was also Associate Editor during Don’s tenure, points out, as a measure of Don’s time commitment,
that Don had one Associate Editor and a Managing Editor whereas today there are two Editors, five Associate Editors, and a Book Review Editor.

Don loved the theater. His retirement gift from ILR included season tickets for him and his beloved wife Jacqueline to a theater in Rochester. He must have sensed the humor and the admiration of his colleagues when he was told that he had to use some form of identification at the theater because ILR had purchased the tickets at the senior citizen rate.

As a young professor at Cornell, Don was a member of a Trumansburg car pool that included four other distinguished ILR professors: Bob Ferguson, John McConnel, Duncan MacIntyre, and Bill Whyte. During these daily rides, Don and his colleagues developed a spirit of camaraderie that carried over not only to work but to the squash and tennis courts and to what Don referred to as ILR’s Old Men’s League in various sports, including softball. Don recalled getting due respect on the squash court after accidentally inflicting a three-stitch cut above MacIntyre’s eye. His car pool colleagues were quick to point out that, although Don’s brother Bob was a member of the football coaching staff at Cornell, the connection did not get Don or them free tickets. The experiences of the long-ago car pool is a reminder of the many dimensions of memories and of life and, in Don’s case, of the enormous and positive influence he had not only on the School of Industrial and Labor Relations but also on the lives of so many of his colleagues at Cornell.

*James Gross, Chair; John Burton; Ronald Ehrenberg; David Lipsky*
Norman Dondero was a scientist, teacher, artist and naturalist. He was born and grew up in Massachusetts. He graduated from the University of Massachusetts (B.S., 1941), the University of Connecticut (M.S., 1943), and Cornell University (Ph.D., 1952). From 1943 until 1946, he served in the United States Army. Part of that time was spent in the occupation of Japan. He made a great effort to learn Japanese and developed an interest in their art and culture. He maintained this interest throughout his life and particularly during his time at Kendal.

After the war, he returned to the University of Connecticut as an instructor in bacteriology. In 1948 he began graduate studies at Cornell, completing his Ph.D. in 1952. Upon receiving his degree, he was employed at Cornell as an Assistant Professor of Bacteriology in the Department of Dairy Industry. In 1954, he left Cornell to accept a position as Assistant Professor of Microbial Cytology at Rutgers University. He returned to Cornell in 1966 with the rank of Professor of Bacteriology in the Department of Dairy and Food Science. When the Department of Microbiology was created in 1977, he became a member of that Department. He was granted the status of Professor Emeritus upon his retirement on January 31, 1984.
Norman was a pioneer in the study of aquatic microbiology, particularly in the areas of wastewater treatment and water pollution microbiology. While at Rutgers he was the lead scientist in the effort to clean up the Raritan River. He maintained that research interest and applied those same techniques when he returned to Cornell with his classical studies of Taughannock Creek and the other tributaries to Cayuga Lake. He was a teacher and scholar with deep interests in the basic science of microbiology, particularly the natural history and diversity of microbes that contribute to wastewater treatment. He was best known for his work on the *Sphaerotilus/Leptothrix* group of bacteria involved in activated sludge bulking. He was also well appreciated by professional colleagues outside of his immediate area of research. In particular, he was recognized for organizing a cross-disciplinary research conference in 1963, a seminal event that stimulated collaborations between environmental engineers and microbiologists in the emerging field of environmental microbiology. Perhaps his most memorable trait was an unquenchable sense of scientific curiosity, tempered by skeptical thinking, which endured until the very end of his life.

Norm loved to fish. He made many trips to Ontario and Quebec where he would be out at dawn in his genuine birch bark canoe, usually with his limit of fish. He was also an avid cross country skier and a superlative cook – his beef with bourbon was to die for!

Norman was a devoted husband to Wilma Irene Mehlenbacker for 59 years, until she predeceased him in 2011. Together they participated often in Elder Hostel, traveling throughout the world. They were known for their support of The Finger Lakes Land Trust, The Nature Conservancy and other environmental conservation groups. They both were residents of Kendal at Ithaca in their final years.

David K. Bandler, Chair; James C. White; William C. Ghiorse; with input from Stephen H. Zinder and Barbara S. Eaglesham
On the crisp fall Ithaca day in 1950, when a handsome young man named Les Eastman arrived on the Ithaca campus following a tour in the post-World War II Navy, one could not have guessed the indelible mark this young man would leave over his sixty plus years on the campus.

Lester Fuess Eastman was a leading figure in the high frequency semiconductor device engineering and science community from its beginnings in the early 1960’s through to his retirement. When he came to the campus on the GI bill, a short distance from Waterville, NY, where his farming family lived, his interests in electrical engineering stemmed from his Navy days and his world was inhabited by the vacuum tubes, microwaves and radar that he had encountered. By the time he graduated with his Ph.D. in 1957, the first transistor radios had arrived. This was a watershed time in electronics, and Les was not only a fast study, he chose his territory with care.

Gallium Arsenide, a compound semiconductor, was his first choice in this new field. This required that he grow his own semiconductor materials. The Gunn effect, where electrons slowed down as the
force that was applied on them increased beyond a critical point, drew his attention. His and his students’ first papers in this earliest effort were landmarks in high power microwave generation from semiconductors. Shortly he moved on to lead the development of compound semiconductor transistors which continued through many generations. They now are key to everything wireless and handheld that we use in our daily life. By the time two of us arrived on the campus as students in the mid-late 1970’s, Les was again in the midst of another technical change: a change in the way he was growing his compound semiconductor materials. The new molecular beam epitaxy in ultra-high vacuum such as in outer space promised to make possible entirely artificial materials where intrinsic quantum effects could be employed to achieve new properties. The approach was expensive, even by today’s standards of research costs. Les led one of six multi-disciplinary faculty teams that prepared the proposal for the National Research and Resource Facility for Submicron Structures, an ancestor of today’s Cornell Nanoscale Facility. The success of this proposal put Cornell at the academic forefront for making very tiny devices. In the next decades Les’ group spawned a torrent of ideas and useful devices where the frequencies kept increasing, unusual effects were discovered, and promises of theory were reduced to practice. Atomic scale abruptness of MBE materials led to new directions in the transistors that are the backbone of communications today, multiple such abrupt junctions between different materials became critical to very efficient semiconductor lasers used with optical fibers. Nitrides made possible high power transistors, and they opened directions towards blue lasers and solid-state lighting, which are very contemporary topics.

His favorite pastimes were compound semiconductors, his students, family, and sailing, an order that cycled through in conversations. At technical meetings, Les would be in the front row encouraging students and other speakers, always courteous, always curious, and willing to share his insights. Favorite memories of Les’ students of their time at Cornell always included their presentations at the premiere conferences, frequently international ones, and the dinner gatherings with well-wishers at these conferences where many technical insights were exchanged in the international undertaking
that science and engineering is. For those from the U.S., this might have been their first trip to Paris or Vienna and for his international students it could be the first trip to San Francisco or Seattle. Many were the stories of language- and culture-induced misunderstandings or of Les being stopped by somebody on the streets in a foreign land shaking his hand and thanking him for a class or some direct or indirect influence. Les cared about his students deeply, helping them in every way he could. And those who came to his office on Saturday morning were the beneficiaries of extra insights since this was the only day when Les’ phone was not constantly ringing.

One breakthrough idea that Les was particularly proud of was ballistic motion, where electrons would travel device-sized dimensions without encountering obstacles that slowed them down. This is exactly counter to the theme of negative differential velocity with which Les had started his career. This motion of an electron encountering no or few scattering events is now a foundation of nanotechnology in electronics. But, there was a decade when it would be criticized. Les had immense self-belief, an uncanny ability in discovery, an incredible approach to encouraging, promoting and supporting his students, and the discipline to reduce ideas to practice. This made him a major actor and his group a favorite for aspiring graduate students. It was his intuitiveness, borne of insight from years of rigorous work, and his enthusiasm that kept the generations of students coming. He supervised over 100 Ph.D. theses. These students now pervade academe and industry throughout the world.

Les fostered many international links. Having spent an early sabbatical leave in Sweden, these links were deep with a constant flow back and forth of the best students from Sweden. But, so were they with the United Kingdom—a source of summer researchers, France, and Germany, which made him a senior Humboldt fellow in 1994. The vitality he contributed to electronics in the United States through his many students, the continuous change and sequence of breakthroughs in his work, and the role he played in industry and federal research brought him many of the major awards of the profession including membership in the National Academy of
Engineering. He is perhaps one of the very few after whom a technical conference is named.

Sailing was a love that Les developed in 1960 in Sweden and practiced on Cayuga Lake in the Skagerrak, a fixed keel, wooden folkboat from Scandinavia. Anybody with some experience, even just interest or curiosity, would be roped in with his partner, Dave Woodard, to maintain or crew it. His favorite company, however, was always his family, and he would describe the introduction of sailing to his granddaughter as if it had only happened the day before, when in reality, it was a generation before. Sailing was another manifestation of the peaceful and organized approach that was a constant of his life.

Les had met Anne, his future wife, on a blind date arranged by his sister. Anne, who started as a nurse, was his constant companion, and also the bread winner while he was a student. Once the children came, and Les’s travel consumed much time, she was in charge of the daily demands of raising a family. Anne and Les were inseparable. As the evening came, you could count on Les saying, “Well, it is 5:30. It’s quittin’ time.” It was time to be with Anne and family. Anne passed away soon after Les on December 16, 2013. Cornell and a legion of electrical engineers miss him---this incredible harmonious blend of sentiment, enthusiasm, promotion and intellectual rigor.

Sandip Tiwari, Chair; Michael G. Spencer; Joseph M. Ballantyne
Theodore Eisenberg was the Henry Allen Mark Professor of Law. Ted was a respected teacher, prolific scholar, and beloved colleague for over thirty years at the Law School. He taught subjects as diverse as bankruptcy, debtor-creditor law, constitutional law, civil rights, contracts, and federal income taxation. His scholarship was equally distinctive, including in bankruptcy, civil rights, the death penalty, and especially empirical legal studies, in which he was a leading figure here and abroad.

Ted followed a stellar path through school, earning a B.A. in 1969 from Swarthmore College (where he met his wife, Lisa) and a J.D. in 1972 from the University of Pennsylvania Law School (where he served on the law review). He next spent a year clerking for the U.S. Court of Appeals for the District of Columbia Circuit, and another as law clerk to the retired U.S. Supreme Court Chief Justice Earl Warren. As was then typical for an aspiring legal academic, he embarked on a stint of private practice, working for the celebrated firm of Debevoise & Plimpton in New York City from 1974 to 1977.

Ted then started his professorial career at UCLA School of Law. Enticed to Cornell Law School in 1981, he worked his way up the
ranks to become the Henry Allen Mark Professor, and also a proud Cornell University Adjunct Professor of Statistical Sciences. However, in reality Ted was a citizen of the academic world. He served repeatedly as a visiting professor here—at Harvard Law School (twice), Stanford Law School, and NYU School of Law—and at Fondazione Collegio Carlo Alberto in Turin, University of St. Gallen in Switzerland, Haifa University, and Tel-Aviv University. He was a superstar on the world stage, and so could have gone anywhere. But he loved Cornell and Ithaca.

Labeled the grandfather of empirical legal studies for his pioneering work in that methodology, Ted authored or co-authored more than 125 scholarly articles and edited or contributed to more than twenty books. A major achievement was his founding and nurturing of the Journal of Empirical Legal Studies, which under his editorial leadership has become one of the leading journals worldwide in law and social science. Ted regularly taught master classes and mini-courses around the world in empirical legal studies, including two weeks before his death at National Law University Delhi. Ted was a fellow of the American Academy of Arts and Sciences and the Royal Statistical Society, and served on more than 25 editorial boards and outside committees. After his untimely death, the Law and Society Association awarded Ted the Harry J. Kalven, Jr. Award for outstanding scholarship in law and society. An endowed Theodore Eisenberg Memorial Fund in Empirical Legal Studies has been established in his memory at Cornell Law School, and the National Law University Delhi has established the Theodore Eisenberg Centre for Empirical Legal Research.

Beyond Ted's brilliance and academic success, he was a wonderful human being. Most important, he was a loving and supportive husband, father, and grandfather. Despite all of his professional commitments, Ted's exceptional family always came first. Ted loved to chat about their activities, including their world-wide travel and professional accomplishments. Consistent with his love of family, Ted also took great joy in hearing about and supporting his colleagues' family endeavors.
Ted had a wonderful sense of humor and was never hesitant to laugh at himself. His colleagues marveled at how such an accomplished person could be so modest and self-effacing.

Ted also was a loyal friend whose support was valued and unconditional. While at the Debevoise law firm, he spent lots of time and effort helping others with legal and other issues. At Cornell, Ted had a wonderful and rare combination of high standards and generosity with colleagues. He was always happy to support his colleagues by enticing them into coauthored works, reading their manuscripts, discussing ideas for papers, and sharing his expertise in the processes of empirical research. Ted had more than 40 published co-authors around the world.

Ted was an inspiration to everyone who knew him and we at Cornell sorely miss him. But we are grateful that Ted was our colleague for over thirty years.

Robert A. Hillman, Chair; Kevin M. Clermont; Stewart J. Schwab
Charlotte Ann Jirousek, Associate Professor and Curator in the Department of Fiber Science & Apparel Design in the College of Human Ecology, died suddenly and tragically at the age of 75. Jirousek, who was born in Faribault, Minnesota, earned a B.A. in sociology from Hamline University (1960). She served in the Peace Corps in Turkey, and her lifelong passionate love of that country inspired much of her research and writing. She entered the University of Minnesota as a mature student and completed an M.A. in applied design (1982) and a Ph.D. in design, housing and apparel (1988) after working as a social worker, fiber artist, and becoming a leading member of the Minneapolis weaving and crafts community, as well as raising two daughters. She was an assistant professor and curator at the University of Alabama (1988-92) before joining the Cornell faculty in 1992. Her academic focus was the history of dress and textile technologies; the influence of Islamic dress and textiles on the evolution of European fashion; and the history of Ottoman textiles and trade. She was also the curator of the Cornell Costume and Textile Collection, which has more than 9,000 items of apparel dating back to the 18th century, as well as a substantial collection of ethnographic textiles and costume. She curated some 30 exhibitions over the years, ranging from “Textiles of the Andes and Color!” to “Street Fashion and Youth Culture.” As curator of
the Cornell Costume and Textile Collection, her expertise in textiles and art history, and her dedication to making the collection easily available to faculty and students, revealed the contents archived there as a treasure appreciated by students, by scholars from around the world, and by the public.

Charlotte was hired to enhance the department curriculum in visual literacy in dress and fashion. She taught courses in design foundations and the cultural and the historical aspects of textile and apparel design. She developed an open-access, comprehensive, interactive textbook to support her course, Art, Design and Visual Thinking, which introduced basic design concepts and the idea of visual language. She defined visual literacy for apparel designers as including “knowledge of dress and textiles from all times and places, but also including a basic understanding of how other design media and the fine arts contribute to the creative innovation of fashion designers.” Her Ph.D. research established that “even the most visually sensitive students needed—and wanted—depth and breadth in their knowledge of visual culture.”

Charlotte’s graduate course, Aesthetics and Meaning in World Dress, was a culmination of her approach to teaching. She adopted an interdisciplinary approach in this course which she explained as examining the “aesthetic and social/psychological relationships between body and clothing in the context of various cultures, including both the Euro-American context of fashion, and the dress/fashion of the rest of the world.” Students worked with garments in the costume collection and the course culminated in a gallery exhibition consisting of a collection of mini-exhibits that, with two or three artifacts each, demonstrated concepts chosen and researched by the students, all organized around a central theme.

Charlotte had a profound effect on students, mentoring many of them individually. As one former student stated, “Charlotte Jirousek changed my life, several times over, and always in positive ways. By believing in me, by criticizing me, by supporting me, by encouraging me, and most of all, by teaching me: how to think, how to act, how to make, how to write, how to be. I am a better person
thanks to her, and I am sure there are hundreds more who would say the same.”

Charlotte made many other contributions to education. She published Cornell’s first electronic book which she also had hoped to publish as a textbook. She was the first curator of a textiles and apparel collection to make a catalogue of all items available online. She organized and started the New York City study trip for FSAD students; she was a co-coordinator and originator of the India field trip for FSAD students; and shortly before her death she was part of a Cornell student/faculty service learning field trip to Ecuador to support income-generation projects among indigenous populations. She served as the Director of Graduate Studies and most recently as Director of Undergraduate Studies. In this latter role, as a member of the college Educational Policy Committee, she was a leader in significant curriculum changes in the college.

Her research centered on the historic interaction of East and West as expressed in textiles and dress, and on the disappearing textile traditions of Turkey due to industrialization. Charlotte defined her research as the study of the cultural context of dress and textiles. She wrote many articles and book chapters, but the culmination of her research was the book she had just finished in which she “re-examines the history of dress and fashion in the broader frame of reference of western relationships with the rest of the world, particularly the Mediterranean world, from the Crusades through the twentieth century.” Her intent was “to provide a coherent image of the ongoing relationship between West and Near East in the visual culture of dress, focusing primarily on the Ottoman era.” Her work was instrumental in recognizing the profound and largely unacknowledged interactions between the Ottoman Empire and western dress. Most recently, Charlotte had started a five-year term as editor of the highly regarded journal DRESS, the Journal of the Costume Society of America.

Professor Charlotte Jirousek was an internationally admired scholar and curator. She was a person who held her beliefs strongly and expressed them with clarity and conviction, but who also considered opposing points of view carefully, and would often return to a
conversation with a new perspective acknowledging areas of intersection with those opposing points of view. Charlotte had a special relationship with students, bringing the sense of discovery and excitement of her research travels into the classroom, inspiring them, supporting their ideas, helping them enhance their designs with a depth of understanding, and assisting their development as professionals. She modelled strength, honesty and approachability for all of us. She cared deeply about design education, and the Department of Fiber Science & Apparel Design. She is greatly missed by many.

Ann Lemley, Chair; Susan Ashdown; Charlotte Coffman
Edward D. Jones
May 8, 1920 – May 13, 2014

The Department of Plant Pathology and Plant-Microbe Biology lost a dear friend and trusted colleague with the passing of Edward David Jones at the age of 94 on May 13, 2014 in St. Paul, MN with his family at his side.

Ed was born on May 8, 1920 in Fish Creek, WI to second-generation Welsh parents. He graduated from Sparta High School and was a member of the 1937 Sparta High School basketball team that advanced to the WI State Championship Finals. Thus began a lifelong love of sports. After working for two years, Ed enrolled in the College of Agriculture at the University of Wisconsin in Madison until the start of World War II.

He enlisted in the U.S. Army Air Corps and was assigned to fly B-17 bombers as a pilot in the Eighth Air Force. He flew 33 missions. He attained the rank of 1st Lieutenant and was awarded the European Theatre Ribbon with 3 Bronze Stars, Air Medal with 3 Oakleaf Clusters and the Distinguished Flying Cross. After the war, he returned to the University of Wisconsin to complete his undergraduate education. As a sophomore at UW, Ed lettered in
both baseball and basketball. He played the position of forward on the 1941-42 Wisconsin Badgers NCAA Basketball Championship team. Prior to his death, he was the sole surviving member of the Badger’s only NCAA National Basketball Championship team. On February 6, 2013, Ed was named 1941 National Champion Honorary Captain at the 75th Anniversary celebration during March Madness at the Kohl Center in Madison.

Ed obtained both his M.S. (Agronomy) and Ph.D. (Plant Pathology) at UW, and in 1958 he joined the Cornell University faculty as an assistant professor with responsibilities for potatoes and cereals. He was instrumental in the development of the Uihlein Farm of Cornell University located at Lake Placid, NY. While at Cornell, he pioneered the development of disease-free foundation potato seed stocks by tissue culture. He dedicated more than 30 years to research and development protocols that have been widely replicated. He became the first Henry and Mildred Uihlein Professor of Plant Pathology, an endowed chair at Cornell University in 1987. He chronicled the history of the Uihlein Farm with a book published in 2001. A career-long member of the Potato Association of America (PAA), Ed chaired the Potato Certification Committee that developed the initial standards for the first National Seed Potato Grade. He served as president of the PAA in 1983-84 and was named an Honorary Life Member in 1986.

During his life in New York, he was active in youth baseball, coaching numerous championship teams. He also acted as manager for several youth ice hockey travel teams. His positive influence served as a role model for many young athletes. Ed served as an off-ice hockey official at the 1980 Winter Olympic Games in Lake Placid and witnessed first-hand the Miracle on Ice.

Ed is survived by his wife of 66 years, Mrs. Barbara Jones; two daughters: Kathleen (Bill Smullen) and Jaclyn Jones; sons, E. Douglas (Tracy) Jones, Dr. David (Julie) Jones; thirteen grandchildren, two great-grandsons; sister-in-law, Sandra (John) Stanicek; nieces and nephews, and great nieces and nephews. He was predeceased by his only sibling, Catherine Jones. Ed remained committed to church activities all his life. Because of his support of
Welsh sacred music, he was named an Honorary Life Trustee of the Welsh Gymanfa Ganu (Hymn Festival) Association of Wisconsin.

Thomas A. Zitter; Keith L. Perry; William E. Fry
A central, strikingly revealing, characteristic of Michael Kammen's half-century-long scholarly career was the rapid growth of his national and international distinction, complete with the winning of a half-dozen of the nation's leading historical prizes and the presidency of the Organization of American Historians (1995-1996), while he simultaneously deepened his commitment to and affection for Cornell. Four months before his death, for example, he was invited to teach an intensive seminar in Buenos Aires about his interpretations of U.S. history to an elite group of young Argentinians. Then, on his return to Cornell, Michael temporarily left retirement to accept the History Department's invitation to teach and administer its Honors Seminar, which he had earlier done with distinction. He taught the seminar until mid-November 2013, when rapidly failing health forced him to resign. The exceptionally wide ranging scholarship delivered in numerous lectures and seminars abroad as well as in the United States, and the remarkable successes as a teacher and administrator at Cornell were two halves of his academic life, with Cornell (especially its students) enjoying much the larger half.

Born in Rochester, New York, Michael was raised in Washington,
DC. He graduated Phi Beta Kappa from The George Washington University in 1958. In 1964 Michael received his Ph.D. from Harvard University where he studied under Bernard Bailyn, a distinguished scholar of early American history. The next year he began his career at Cornell, a career marked in 1973 by his appointment to the Newton C. Farr Chair.

Michael's *vita* lists 27 books. It is a list that begins traditionally then evolves to studies analyzing subjects and approaches that throw strikingly new perspectives on American development. *A Rope of Sand: The Colonial Agents, British Politics, and the American Revolution* (1968), based on his Harvard dissertation, and *Empire and Interest: The American Colonies and the Politics of Mercantilism* (1970), became important contributions to an intense debate over the reasons for the controls the British Empire unsuccessfully attempted to impose on its rebellious New World settlers. But his interests and the range of his research quickly grew to be too large for even the British Empire. In 1971, an innovative text, *The Contrapuntal Civilization: Essays toward a New Understanding of the American Experience*, marked a major turn.

He began using his work in American colonial history to unlock fresh, telling perspectives on the nineteenth and twentieth centuries. In 1973, *People of Paradox: An Inquiry Concerning the Origins of American Civilization* (1972) won the Pulitzer Prize for history – and began its translation into thirty-three languages – for its analysis of the revealing paradoxes in American culture caused in significant part by their European origins being reshaped over several centuries in the New World's context. *A Machine That Would Go of Itself: The Constitution in American Culture* (1986) presented a unique approach to a much-studied subject by relating not the usual story of the making and political evolution of the Constitution, but how Americans over the following 200 years translated their own views, interpretations, and sometimes blatant biases about the document's clauses to create different contexts and meanings for the original, supposedly venerated Constitution. Michael provided not only this unique approach to understanding the Constitution's history, but offered major, indeed fundamental, challenges to his contemporaries in U.S. Courts and elsewhere who insisted on interpreting the
document with their doctrine of “original intent.”

The volume won the Frances Parkman Prize and the Henry Adams Prize, while becoming a foundation stone for the growing field of aptly named “memory studies.” Michael's contribution to defining the new field climaxed with *Mystic Chords of Memory: The Transformation of Tradition in American Culture* (1991), a book in which he began to apply works on American memory to the evolution of American art, a subject he had long enjoyably studied – not least through the original pieces his spouse, Carol, and he collected on their auto trips across the country. Michael next won the Popular Culture Association's Award for best biography of the year with *The Lively Arts: Gilbert Seldes and the Transformation of Cultural Criticism in the United States* (1996), a study that used Seldes to demonstrate how distinguished criticism not only helped transform certain arts in America, but could become a constructive center of debate that created wider interest in and perspectives on those arts.

Out of these studies exploring and defining the telling effects of Americans' memories (and also out of the Kammens' research on their auto trips) came the intriguing and highly readable *Digging up the Dead* (2010), in which Michael explored how the particular, and often peculiar, ideas and memories of some Americans led them to exhume famous compatriots (Jesse James, F. Scott Fitzgerald, and Frank Lloyd Wright, among others) and rebury them in places these authorities considered more appropriate.

In Michael's hands, memory could therefore exert considerable power on its subjects as well as revealing original, sometimes startling, insights into American character. In 1976, he was part of the year-long National Public Radio series that marked the Bicentennial by delineating the history of all 50 states and the District of Columbia. Michael was elected to the American Academy of Arts and Sciences in 1979. During 1980-1981, he became the first person to hold the new visiting professorship in American history at the Ecole des Hautes Etudes in Paris. In 2009, the American Historical Association honored his extraordinary career with its Award for Scholarly Distinction.
But these impressive accomplishments seemed secondary to his commitment to the Cornell campus, its undergraduates, and his Ph.D. candidates, a number of whom became distinguished scholars in a variety of historical fields. As History Department chair in the mid-1970s, he found funding to initiate seminars that explored historical subjects not taught in the usual undergraduate classes, while emphasizing research in primary documents and sophomore level writing instruction. Out of these seminars emerged original faculty-authored books, prizewinning undergraduate essays, and a precedent for other departments. As director of Cornell's Society for the Humanities, he had the difficult task of replacing the leadership of the founding generation, but successfully continued turning the society into a national center for interdisciplinary humanities scholarship.

Michael's devotion to Cornell was uniquely exhibited when he published What is the Good of History? (1973), a superbly edited collection of Carl Becker's letters. Becker, an iconic Cornell historian who died in 1945, had provided a widely accepted motto for Cornell (“freedom and responsibility”), while challenging and redefining basic tenets of the historical profession. He had done so with an unmatched writing style that provided attractive camouflage for his trenchant observations, including the phrase that Michael used for his collection's title. Michael told one of his graduate students that even after completing his Ph.D. at Cornell, both he, the doctoral candidate, and his mentor would still be continuing their search for an answer to Becker's question.

In 1991, Michael seemed to confirm this opinion when he wrote, “What people believe to be true about their past is usually more important . . . than truth itself.” That obviously did not mean, however, that historians should give up the Sisyphean labor of making the record more accurate while noting where personal biases had distorted it. Michael made landmark contributions to exploring, and explaining, that record by investigating some three hundred years of American origins and cultural evolution in his books. He also did so by providing historical perspectives on contemporary issues in his many articles and book reviews written for public

All of this came from a gregarious person who enthusiastically (and sometimes engagingly critically) enjoyed theater, music, and sports as well as history and art, and with Carol did so in Ithaca as well as far outside that community. Michael explored those interests with a bottomless curiosity and an obvious passion that helped lead to an ever widening circle of friends, while setting a rarefied intellectual standard for the many students in his classes and the readers of his books and articles. David Blight, president of the Society of American Historians, recalled that “Most of all, he was simply a prince of the profession who supported younger scholars of all kinds. . . . He was a beautiful, decent man of deep humanity.”

His accomplishments at Cornell and far beyond the campus were remarkable, but two close, long-time friends testified that “his devotion to his family trumped everything else.” His spouse, Carol Kammen, an internationally recognized scholar of local history whose publications include significant histories of Cornell and Ithaca, survives, as do their older son, Daniel, the Class of 1935 Distinguished Professor of Energy at the University of California-Berkeley; their younger son, Douglas, Assistant Professor of Southeast Asian Studies at the National University of Singapore; Michael's sister, Edith; and three grandchildren.

Michael's ashes are buried close to the graves of Moses Coit Tyler and Carl Becker. Their careers shaped much of Cornell's 150-year history, just as their work became distinguished parts of that era's historical scholarship.

*Walter LaFeber, Chair; Richard Polenberg; Joel Silbey*
Kenneth Adrian Raine Kennedy, professor emeritus of physical anthropology in the Department of Ecology and Evolutionary Biology died on April 23, 2014 in Ithaca after fifty years on the Cornell faculty. Professor Kennedy was an internationally known figure in the paleoanthropology and prehistory of South Asia who also made significant contributions to skeletal biology, forensic anthropology and the history of evolution and biological anthropology.

Professor Kennedy was born in Oakland, California in 1930. He entered the University of California at Berkeley in 1949 where he received bachelor’s (1953) and master’s degrees in anthropology (1954). In 1958, after a hiatus to discharge his military service obligation, he returned to Berkeley for a Ph.D. which he received in 1962. During his time at Berkeley which he remembered as “the golden age of paleoanthropology,” he was able to work with many
of the now legendary figures in twentieth century anthropology including Robert Lowie, John Heiser, Sherwood Washburn and others. It was at Berkeley as well that he established a life-long relationship with Theodore D. McCown, mentor, collaborator and friend with whom he co-edited *Climbing Man’s Family Tree: A Collection of Major Writings on Human Phylogeny* (1972).

Professor Kennedy’s Ph.D. dissertation research focused on fossil skeletal remains from Sri Lanka held by the British Museum. This work, undertaken in London, would seem at first glance to have been a somewhat solitary enterprise that might have foreshadowed an armchair career. It was actually the gateway to his energetic orchestration for decades to come of an ever widening set of collegial and mentoring relationships throughout the world and further to *in situ* field experiences in Sri Lanka, India and Pakistan.

As his student Angela Lieverse (Ph.D. 2005) wrote in connection with a special *festschrift* symposium held in his honor at the meetings of the American Anthropological Association in 2008, “the scope of Kennedy’s work has been nothing short of astonishing, ranging geographically from Sri Lanka in the southeast to Pakistan in the northwest and spanning extensive temporal periods from the Miocene (the anthropoid apes of the Siwalik hills) through the middle Holocene (Harappa, the Indus Valley Civilization).” A prolific publication record which included 200 articles and book chapters, 21 books and monographs and scores of books reviews cemented his place on the center stage of his field. He would become publicly remembered as “the father of human paleontology in South Asia” by his colleagues in India who held a special condolence meeting at Deccan College, Pune shortly after he died. Of his many works, he was best known for *God-Apes and Fossil Men: Paleoanthropology of South Asia* (2000) Ann Arbor, University of Michigan Press. This work, which surveys the prehistoric cultures of the South Asian region from multiple disciplinary perspectives, won the 2002 W.W. Howells Prize from the Biological Anthropology Section of the American Anthropological Association.
As a medical forensic expert, certified as a Diplomate of the American Board of Forensic Anthropologists, Professor Kennedy contributed significantly to the study and identification of skeletal remains throughout New York State. Perhaps the most famous of his on-campus applications of forensic science was his study of the skeletal remains of an Egyptian mummy that had been donated to Cornell in the 1880s, unwrapped and then exhibited on campus for many years, and eventually defleshed in the 1960s leaving the disarticulated bones (still held in the Anthropology Collections). The inscription on the sarcophagus identified this individual as a court scribe named Penpi, from the Third Intermediate period (c. 828-665 BCE). The exercise identified possible disease issues from the skeletal remains, and suggested a more Mediterranean genetic heritage on the basis of statistical assessment of measurements.

After completing his dissertation at Berkeley, Kenneth spent two years on a National Science Foundation fellowship at Deccan College, Pune with which he maintained a close association over the next fifty years. He was appointed as an assistant professor at Cornell in 1964. With brief interruptions for academic research leaves that took him to other institutions, especially to museum collections and to collaborative fieldwork sites in South Asia, he remained at Cornell for the rest of his professional career. His spring 2005 election to emeritus professor of Ecology and Evolutionary Biology, Anthropology, and Asian Studies was celebrated with tributes from students and colleagues who came from far and wide to attend a memorable reception at the Cornell Andrew Dickson White House.

Professor Kennedy’s outstanding experience as a student at Berkeley may well have shaped the unique and generous teaching and mentoring style that he brought to Cornell. His close colleague, Professor Michael Little of Binghamton University has called him a “warm and generous mentor who was committed to teaching, education and maintaining high standards for student’s work, work that he set by his own example.” Over the years, he taught a range of general and specialized courses in biological anthropology at both the graduate and undergraduate levels to thousands of students. Students who enrolled in his graduate seminars often recall the
hospitality extended to them by Kenneth and his wife Margaret. Many evening sessions were held at his house in Ellis Hollow where students would sit around his office fireplace sipping cider or sherry as they discussed the topic of the week. Then the evening would conclude with coffee and sweets – with cake baked specially by Mrs. Kennedy, as students were sent on their way.

Professor Kennedy supervised eleven doctoral dissertations in biological anthropology while at Cornell covering a wide range of topics, time periods and locales. These graduate students who eventually went on to establish careers of their own were given a sense of their place in the intellectual stream. They shared an ethos, imbued by Professor Kennedy, of a certain academic world view. It included a penchant for collaborative and multidisciplinary work, and an appreciation of the history of the field and a respect for the work of those scholars who had preceded them.

A review of Professor Kennedy’s professional life would not be complete without mention of his contributions to forensic anthropology which was often a subject of fascination to a general or popular audience. By examining a skeleton post-mortem, it was said that he could assess the physical stresses and perhaps even the occupation or habits of the person in life (in his case, violin playing) He served as an expert witness and analyst for law enforcement on forensic cases throughout the northeastern United States in the later stages of his career. In 1987, he was awarded the T. Dale Stewart Award by the American Academy of Forensic Scientists. This particular dimension of his work formed the basis of numerous, popular summer courses that he offered at Cornell’s Adult University to audiences of non-specialists between 1982 and 2000.

Professor Kennedy was married for 44 years to his second wife Margaret Carrick Fairlie Kennedy. In addition to her reputation as a baker of cakes, she was an accomplished filmmaker as well as a composer who shared his life-long love of music and his research interests in South Asia. She predeceased him by five months.

Bonnie Graham MacDougall; Jere D. Haas; Frederic W. Gleach
http://www.thehindu.com/news/national/karnataka/kenneth-
kennedy-father-of-human-palaeontology-in-south-asia-passes-away/article5983129.ece
Richard L. Liboff, Cornell professor emeritus of electrical and computer engineering for almost 35 years, died March 9 in New York City. He was 82.

Richard was born Dec. 30, 1931, in Brooklyn, New York, and educated at Brooklyn College (Bachelor of Arts, 1953). He earned his Ph.D. in physics at New York University in 1961, and began his academic career teaching physics there while working as a research associate at the Courant Institute of Mathematics. In 1964 the College of Engineering was beginning to hire promising young faculty in an effort to build up the research program, and Richard was identified for his expertise in applied mathematics and plasma physics. He was hired by the School of Electrical Engineering to help build a new curriculum and research agenda. The first few years of graduate students in plasma physics at Cornell all learned the basic theoretical intricacies of the field from this very gifted teacher.

Richard specialized in applied mathematics as applied to plasma physics, kinetic theory, electrodynamics and quantum mechanics.
He co-chaired the first International Symposium on Kinetic Equations here in 1969. He was the principal investigator on federal grants in theoretical plasma physics, a member of the American Physical Society and of Sigma Xi, the science fraternity. He was promoted to professor of electrical engineering and of applied and engineering physics in 1970.

He taught many courses in electrical engineering, including electromagnetics, plasma physics, kinetic theory, and quantum mechanics. He loved interacting with the students, both in and out of the classroom. One of his trademarks was to close the door to the classroom forcefully as he entered, signifying the beginning of class. One day the students removed the pins from the door, and as he slammed it, the door went flying and hit the floor with a loud bang! That cured him of his grand entrances. The graduate student equivalent of this flourish occurred often because Richard was always in the middle of a calculation if he was in his office with the door closed. Graduate students who knocked on the door learned quickly to “read” the tone-of-voice of the loud “come-in” in order to decide to ask to talk with him right then or the next day. Make the wrong choice and you could be in the middle of a complicated applied math problem with Richard for 2 hours instead of getting the one-word answer you needed to a simple question.

He also enjoyed playing chess. His office was near the front entrance of Phillips Hall, so he saw lots of people come and go. When he saw a new face he would enthusiastically ask “Do you play chess?!” Few people who entered Phillips Hall while Richard was active escaped this invitation. If he were a worthy opponent, that person could depend upon an invitation to his home for a meal and a few more games.

He always enjoyed continuous learning, regardless of the subject. With the arrival of students from abroad each year he would become acquainted and then ask them to teach him a phrase in their native tongue. He could say, “Do you speak...(fill in the blank)?” in over a dozen languages. He also loved to engage new faculty in conversation and learn what they were doing; his curiosity had no bounds.
We all knew him as a loveable character. He was constantly trying to master new subjects or new math, and when he ran into a problem he would seek help from one of his colleagues. His trademark technique with fellow faculty members was to burst into someone’s office, go straight to the blackboard and start outlining the mathematics of the problem. As he started to explain it, usually to a completely bewildered faculty member who had been otherwise engaged until his door flew open, Richard would suddenly discover the insight he was missing, exclaim “Ah, that’s the answer. You are a genius!” and then run back to his office. This whole process took perhaps 30 seconds, and it happened so often that many of us just sat back and watched the whole event passively, knowing that we would soon be praised and his problem would be resolved. He was one of those people who recognized that teaching is a great way to learn. His effort to explain the problem usually sharpened his reasoning to the point where the answer became clear. It is a method of learning that many of us emulate today.

Richard’s curiosity, and his desire to learn new things and then teach them to others made him extremely effective at writing textbooks. Among our faculty, Richard still holds two records, one for the most textbooks written, and the second for the most textbooks sold. The first of his five texts was Introduction to the Theory of Kinetic Equations (1969). He also wrote a text on electromagnetism, and two on kinetic theory. But by far his most important contribution was the certified best-seller Introductory Quantum Mechanics. This book, to date, has sold over 100,000 copies and been translated into at least 5 languages. It is likely that hundreds of thousands of students around the world have learned quantum mechanics from this textbook, which makes it one of the most influential quantum mechanics texts in the last 40 years. This book even made an appearance 10 minutes into the “Spider-Man 2” movie, where the nerdy star stumbles while rushing out of a classroom at Columbia and drops it so that the cover can be seen.

Having grown up in New York City, Richard was fascinated by the outdoors, and one of the first things he did upon moving to Ithaca was to buy a house with a yard. He proceeded to plant a lot of trees, which was charming when they were small, but over the years his
yard became an incredibly dense forest! He was always upbeat, and he and his wife Myra hosted many delightful faculty dinners at their house. He also hosted dinners with his graduate students -- especially the ones that played chess. He portrayed an innocence about the small town life in Ithaca, but in fact he was totally at home here. He enjoyed horseback riding, which he did frequently in the Finger Lakes region. He was a classic Ivy League professor, appearing occasionally absent-minded as he focused on his scholarship, especially when seen walking to his car at the end of a winter day wrapped in a scarf, heavy overcoat and warm hat, but always keenly aware of what he was doing. He loved learning new things, especially new physics, and he loved writing books. His best scholarship is still at work, teaching thousands of young minds the beauty of quantum mechanics. His legacy will live for a long time.

David Hammer and Clifford Pollock
On December 27, 2013, Professor Emeritus Simpson (Sam) Linke of Cornell University’s School of Electrical and Computer Engineering passed away in Ithaca at age 96.

Simpson (Sam) was born in Jellico, Tennessee on August 10, 1917. Intrigued by a chemistry set as a youngster, he chose chemical engineering as his career objective, when he entered the University of Tennessee in Knoxville. But after struggling through freshman chemistry in spite of great effort, and having worked as an electrician helper in the university’s Engineering Cooperative Program, he transferred study to electrical engineering and received the B.S.E.E. degree in 1941. He then spent four years during World War II in the U.S. Army Signal Corps as a Radar and Communications Officer, stationed in California and in Korea. In 1946, upon completion of his military service with the rank of captain, Sam enrolled in the School of Electrical Engineering at Cornell in the M.E.E. program. While a graduate student, he also served as an Instructor for service courses such as machine theory and electrical circuits. After receiving his degree in June 1949, he spent the summer at Brookhaven National Laboratory, where he
worked on advanced linear induction motors. That same year, Sam was appointed an Assistant Professor of Electrical Engineering. He was promoted to Associate Professor in 1953 and Full Professor in 1963. He earned the rank of Professor Emeritus in 1986 at his retirement after a long and distinguished Cornell career.

Sam devoted his career to the study and teaching of energy systems, but he also had a remarkably calm and thoughtful demeanor that, when combined with his jovial sense of humor, made him a trusted leader of programs. With the Office of Naval Research in the 1950s, he studied dielectric breakdown phenomena in high vacuum. About this same time, Sam became the Supervisor of the Cornell AC Power Network Calculator Facility, from which many contributions to the power industry in terms of electricity network loss-reduction and stability improvements were made. Sam spent his 1971-72 sabbatical in Washington, D. C. at the NSF (RANN Directorate). As Program Manager for Electronic Power Transmission and Control projects, he was responsible for funding some of the first electric-energy research sponsored by the U.S. government. In August 1973, he organized and chaired the Cornell International Symposium on the Hydrogen Economy. In the mid-1970s, Sam chaired the Cornell Workshop on the Major Issues of a National Energy Research and Development Program and published the summary report.

Sam was, in fact, a strong promoter of sustainable energy principles even before the field was given the now-familiar name. Sam worked in many aspects of energy from high-energy relativistic electron beams at the Laboratory of Plasma Studies (for which he served as Assistant Director and Acting Director from 1968 until 1975) to enhancing efficiency, stability, and safety of electric power transmission and distribution systems with the goal to improving design and operation of the electric power grid. In the early to mid-1970s, Sam pioneered in researching and promoting the ideas of Wind Power plus both Hydrogen and Superconducting Magnetic energy storage. From 1975 up to his retirement, he was principal investigator on an NSF research program on Fast Control of HVDC Transmission Links for Power System Stability Augmentation. He also consulted with Brookhaven National Laboratory on
transmission-line issues relating to site selection of large power station facilities. Other consulting and sabbatical experiences included Philadelphia Electric Co., Oak Ridge National Laboratory, the New Mexico Public Service Commission, and Entek Research, Inc. His sponsored research included contracts from NSF, General Electric, ONR, AEC, and the Department of Energy.

Sam was a major contributor to the evolution of power systems research and educational programs at Cornell. In the 1940s, the program consisted mostly of studying ac and dc machinery, motors and generators. In the early 1950s, Sam began to introduce the study of ac power networks and energy systems into the curriculum. He offered some of the first courses in power transmission lines and networks, including the still vexing topic of transient stability. His work with the Cornell Power Network Calculator allowed him to introduce these modern concepts into the education of power system engineers from Cornell. The work of the Network Calculator research team, including several new and dynamic faculty members specializing in power networks, introduced concepts of load-flow and transient-stability control. The Network Calculator was upgraded to a full computer-supported simulation system within the Kettering Power Systems Laboratory that allowed students to perform the same calculations and observations as would be seen on the job in an actual power system. In fact, the power systems of many countries in the world continue to benefit from work of engineers who were trained at Cornell by Professor Linke and the other new energy faculty of the 1960s and beyond.

Sam also notably served the engineering profession through his professional service activities throughout his long career. These included membership in professional honorary societies, such as: Life Senior Member of IEEE since 1983; Eta Kappa Nu; Society of Sigma Xi (President of CU Chapter, 1979-80), member of CIGRE from 1964-1988, and in 1988, he was elected as Attwood Associate of the U.S. National Committee.

Sam was well known as a meticulous and precise writer and he utilized this skill in many ways over his career. He often served to produce the proceedings of symposia and various technical reports.
In his retirement, he served as the coordinator of a number of accreditation reviews for the School by the Accreditation Board for Engineering and Technology. His precision in data collection and his manner of condensing and summarizing information so that it could easily be understood by others were phenomenal. He served for years as the faculty advisor (and uncredited editor) of the *Cornell Engineer* magazine. Sam was also the founding editor of ECE’s alumni publication *Connections*, overseeing its publication from 1992 to 2005.

Of special note was his involvement with the Centennial of the School of Electrical and Computer Engineering celebration and his histories of the School, updated and published several times over his career. The Centennial’s Herculean effort involved coordinating six seminars around the nation and producing six volumes on the “Future Directions in Electrical Engineering,” in which faculty researchers looked into their crystal balls and predicted the future in the various major areas of research of that era. Sam also took on the responsibility of having a 6-inch tall hologram made of an historic piece of communications equipment owned by the School of ECE and the College of Engineering: Samuel F. B. Morse’s original telegraph receiver. This is the instrument that received and delivered Morse’s famous message, “What hath God wrought!,” sent on May 24, 1844 from Washington, D. C. to Baltimore, and that opened this pioneering transmission line. Sam had to come up with a way to create the hologram without shipping the actual key out to Boston for the holographic process. The actual receiver was far too valuable a piece of communications history to chance any damage, loss, or theft. He came up with a way to make a visibly (almost) exact copy of the original and hence the hologram was made safely yet accurately.

No discussion of Sam’s life and career would be complete without a comment on his love of teaching and his selfless giving of his time and advice as a mentor and coach to many students over the years. Sam was the ultimate in generating well-prepared and delivered lectures. He was gifted in being able to foresee potential areas of difficulty with new material and provide means to assure mastery of concepts. Sam served for decades as a devoted and knowledgeable
faculty advisor to generations of Cornell undergraduates and Master of Engineering students. He sponsored many research and design projects for students who took his courses and wanted to pursue the material toward novel practical applications. For years after his retirement, Sam was one of the most sought-after professors during alumni reunion events. It seemed that many former students had a story about some way that Professor Linke had personally helped them over a tough period in their studies or gave them some excellent career advice that they believed helped them become successful beyond school in the real world.

One formal tribute that Sam received was from a former student, Mark Adamiak, who received the 2008 GE Edison Award for his work in developing GE products to ensure stable power grids around the world. That award included a component to support power systems education allocated at the winner’s discretion. Mark chose to donate half of his grant to Cornell to create a collection of premier lectures, the Sam Linke Lectures on Power Energy, to honor his special mentor, Professor Sam Linke.

In 1999, Sam joined CRVIS, and volunteered together with fellow Emeritus Professor Charles Wharton, who had developed an idea that students in elementary school are capable of understanding and appreciating science if simple and illustrative experiments could be brought down to the proper level. For several years, they happily spent time in a local elementary school teaching about the basics of science, math, and engineering by demonstrating the principles of science and engineering. Talking about this experience, Sam related that it was actually more challenging than presenting a high-level lecture on an advanced technical notion. In college, students are expected to take the time to do extra readings and study to understand their lectures each day. However, with the youngsters in elementary school, you need to get the point across simply, and with a sense of excitement, or you will lose the class’s attention. A wonderful experience for both students and teachers, it took two special faculty members working together to excel in communicating detailed ideas to younger students.
Sam is survived by his loving and devoted family, his wife of 67 years, Esther, and daughters Martha and Laura.

Sam Linke was the epitome of everything outstanding one would hope to find in a faculty member. He was a talented and creative researcher, an innovative and tireless teacher, and a supportive and encouraging mentor to students, staff, and fellow faculty members alike. His good humor, respectful manner with others, and his love for students and their love for him are deeply missed.

*Clifford Pollock and John Belina*
Civil and Environmental Engineering Professor Emeritus George Lyon died in 2010 at the age of 93. Born in Hancock County, Illinois, George grew up in the state’s farm country. After graduating from the University of Illinois in 1940, George pursued a master’s degree in engineering at the State University of Iowa where he specialized in hydraulics and fluid mechanics. Upon completing his studies, he worked for the U.S. Engineer Department Hydraulics Laboratory in Iowa City where he participated in the design and construction of a physical model for the MacArthur Lock at Sault Sainte Marie, Michigan. Next he served in the Army Corps of Engineers from 1943 to 1946, as a surveyor for the construction of piers, docks, pipelines and other structures in the South Pacific. Upon the end of his military service, he gained his Professional Engineer license from the state of Illinois.

After World War II, Professor Lyon began his next career – teaching – as an instructor at the University of Minnesota. In 1947, he joined the faculty of the School of Civil Engineering at Cornell as an assistant professor and in 1954 was promoted to associate professor. Early in his Cornell career he taught fluid mechanics, hydrology,
hydraulics, surveying, marine navigation, and transportation. But by
the mid-1950s, his teaching was exclusively in the areas of
surveying and photogrammetry, and he regularly was part of the
faculty supervising the annual five-week summer surveying course
at “Camp Cornell” on the shore of Cayuta Lake until the final and
86th offering of this course in 1963. In the last dozen years of his
time at Cornell until his retirement in 1984, he served as Assistant
Director of the School of Civil and Environmental Engineering,
assuming an important role in the coordination of academic
advising, curriculum development, and academic standards and
records. Professor Lyon’s dedication to students was recognized by
his being named to the Class of 1979 Faculty Honors Program as “a
professor who through … wisdom, counsel and friendship
exemplified the ideals of higher education and of Cornell.”

During his 37 years at the university, George was also active as an
engineering consultant, often in concert with faculty colleagues,
participating in site selection studies for the capital of Brazil and
taking part in reservoir, drainage, and flood-control studies. He also
developed photogrammetric methods and for 23 years provided
computations for the section on field astronomy of the Solar
Ephemeris, a book of tables for surveyors. A consulting
contribution to Cornell was his design of the water circulation
system of the rowing tanks for the Cornell crew team’s practice
facility in Teagle Hall.

In 1950, he married Betty Taylor, and they had three children. Betty
passed away in 1980 after a long illness. In 1999, George moved
from Ithaca to Michigan to live near his daughter Maud. He is
survived by his sister, Ruth Linner, his children, Kathryn Lyon
Graham, Maud Lyon, and Robert Lyon, a granddaughter, and a step-
grandson.

James J. Bisogni, Chair; John F. Abel; Wilfried H. Brutsaert;
James A. Liggett; William D. Philpot
Alan K. McAdams was an active Cornell University faculty member for fifty years, from 1960 until 2010. He joined the Graduate School of Business and Public Administration, now the Samuel Curtis Johnson Graduate school of Management, as an Assistant Professor of Managerial Economics and Finance and was elected Professor Emeritus effective July 1, 2010.

Alan was born in Houston, Texas but spent most of his early years in Newton, Massachusetts with his three brothers as friends and competitors. He is survived by one of his brothers, Kenneth George McAdams. The high point of his adult life was his 57 year marriage to Ann Wheaton Svensson, who survives him. Together they devoted themselves to raising their four sons – Alan, Jr., Jeffrey, Lee, and Kendall - to follow their own passions and interests. Alan is also survived by a much loved granddaughter (Miranda) and grandson (Gideon).

Alan graduated from Yale College in 1952, where he excelled in economics and on the Yale University track team as a sprinter. Alan used his speed in his early years at Cornell in student-faculty
football games. In later years, we all had more common sense (and fewer football injuries). After graduation from Yale, Alan immediately went on active duty in the U.S. Navy and spent four years as an officer on a destroyer, the USS Gatling. Most of his service was in the Mediterranean Sea, but his ship also saw duty in the Pacific region during the Korean War. Alan loved his experiences on the destroyer and told many good sea stories. After discharge from the Navy, he went to the Stanford University Graduate School of Business on the GI Bill, where he earned his MBA in 1958 and his Ph.D. in 1960.

Alan loved teaching, and he taught courses in such disparate areas as quantitative analysis for management, managerial economics, business-government relations, industrial policy and consulting. He stimulated his students to think deeply about complicated issues, and they respected him for that. James C. Morgan, long-time CEO of Applied Materials, frequently mentioned that it was in Alan’s elective economics course that he wrote a paper that developed the concepts he used to build Applied Materials. Mr. Morgan made a major gift to Cornell in 2003 in honor of Professor McAdams. In 1996 and 1998 Alan was awarded the Stephen and Margery Russell Distinguished Teaching Award, which is given by the five-year reunion class to the faculty member who most influenced them. Alan was the first person to receive this high honor twice.

Alan was an enthusiastic person who always had a cause about which he was passionate. His academic interests focused on industrial policy, anti-trust economics, and environmental issues. And for the past few decades, he worked tirelessly to expand fiber-optic service to Tompkins County and the world beyond. We all fondly remember animated discussions with him as he sought to persuade us of the importance of his causes. In these debates, Alan was an effective and determined, but friendly competitor. Retirement did not slow him down. It merely gave him more time to spend on his current interests. When he retired he said, “In retirement I follow my longtime strategy. I sit in my office and wait for the world and its challenges to walk in the door. And they still do.” Computer networks, smart grids and cross-laminated timber consumed his intellectual energy in his later years.
Alan was also actively involved in government, at both the local and federal levels. From September 1, 1971 to August 31, 1972, he was Senior Staff Economist for the President’s Council of Economic Advisors. From 1972 to 1982, he was Chief Economist, Expert Witness, and Consultant for the Anti-Trust Division of the U.S. Department of Justice, where he logged thousands of hours of service on the fabled IBM anti-trust case. He frequently testified before congressional committees. He briefed the chairs of both the Republican and Democratic Technology Caucuses (Ritter and Gephardt) multiple times. In addition to his government work, Alan was a passionate observer of the political scene, and he was a consistent supporter of the underdog.

He received fellowships from the Ford Foundation and Professional Achievement Awards from the IEEE-USA, which awarded him “Life Senior Member of the IEEE” status in 2011. Alan divided his professional energies among all levels of government, non-profit agencies, Cornell University administrative activities, while teaching a full load and publishing numerous monographs and articles.

Alan’s service to Cornell included many years on both the Faculty Council of Representatives (FCR) and the Faculty Senate. He served as chair of the Committee on the Professional and Economic Status of the Faculty and on the FCR Budget Committee and Financial Policies Committee. He was also a member of the Faculty Advisory Board on Information Technology. In addition to his teaching in Cornell’s Johnson School, Alan worked on projects with students from several schools and colleges across Cornell.

Alan was a proud member of the Cornell University community. He was inspired by Ezra Cornell’s motto – any person, any study - and what that implied for Cornell and for him.

L. Joseph Thomas, Chair; Harold Bierman, Jr.; Robert H. Frank
Arthur H. Nilson
August 27, 1926 – February 26, 2014

Arthur H. Nilson joined the Faculty of the School of Civil Engineering at Cornell in 1956, after six years of professional practice in Oregon, California, and Connecticut. He was a member of that faculty, in charge of undergraduate and graduate courses in the design of reinforced and prestressed concrete structures, until his retirement in 1991. He served as Chairman of the Department of Structural Engineering from 1978 to 1985.

Art came to Cornell as an enlistee in the naval officer-training program in the late stages of World War II. After completing two years of undergraduate work in an accelerated engineering program, he was discharged to continue in the NROTC program here, and later at Stanford University. After receiving his bachelor's degree from Stanford and commission in the Navy, he continued as a reserve officer, and served briefly on active duty. His early work in Oregon and California was of a general civil engineering nature, during which he was to sample several of the many aspects of that profession. Focusing then on structural engineering, he returned
east and took employment with an architectural engineering firm in New Haven, Connecticut. After three years, in his own words, he decided to go back to school “to learn more about what he was supposed to know everything about,” and came to Cornell to study with George Winter, the distinguished head of the structural engineering group. He supported himself and his family teaching undergraduate practice-oriented courses, and discovered to his great surprise that he enjoyed teaching as well as the research associated with his master’s degree program.

Art was offered an assistant professorship after completing his Cornell master’s degree in 1956, a direct hire without a Ph.D., unusual even at that time. He became a key member of a department that George Winter (1907-1982) built into one of the nation’s most distinguished structural engineering groups. Among other notable members were Richard Gallagher, Peter Gergely, William McGuire, Floyd Slate and Richard White (all of whom predeceased Art). In a memorial tribute to Bill McGuire, Art wrote in 2013:

I recall that early on, Bill and I were called in and sat down with George Winter. This was probably an intimidating event for both of us, because George was, to say the least, a dominant figure. After a brief discussion we agreed that Bill would do steel and I would do concrete, and our professional directions were set from that point on.

This group produced several influential textbooks, among which was Design of Concrete Structures, that was inherited from an earlier generation of Cornell civil engineering faculty – the first four editions (1923 to 1940) were authored by CE alumni and professors Leonard C. Urquhart ‘09 (1886-1960) and Charles E. O’Rourke ‘17 (1896-1947). Winter collaborated with Urquhart and O’Rourke on the 5th and 6th editions. Art co-authored the next three editions of the textbook with Professor Winter, and after George’s passing carried on the work singly through two more editions, greatly increasing the coverage and rigor of the book. He then joined with two of his former Cornell students, David Darwin and Charles Dolan, as co-authors for subsequent editions (the 15th edition is
scheduled for release in 2015). Nilson also authored the textbook *Design of Prestressed Concrete*. Both books became standard works, widely adopted in the U.S. and abroad and translated into several foreign languages, and still in print.

Art’s clear and precise teaching style attracted and influenced students from his earliest days on the Cornell faculty. He was famous for his meticulous chalkboard work. Several graduates have reported that their entry into a career of structural engineering was significantly motivated by their exposure to his teaching and advising, and the course notes of his lectures served as a resource for a number of young faculty members as they began their own teaching careers.

After six years, with sabbatical support from Cornell and with generous fellowships from the Ford Foundation and the Danforth Foundation, Art was accepted at the University of California at Berkeley as a Ph.D. candidate. In one of his later years at Berkeley, he audited an advanced course in reinforced concrete structures, and it turned out that the book he had already co-authored was one of the required textbooks for the course. Art’s doctoral thesis included one of the very first applications of the then-emerging finite element method to reinforced concrete members and structures. He completed his degree in 1967 when he was 40 years of age.

Art was the first in his family to attend college, and was always proud of “making it all the way on his own” as he did. His father, who was obliged for financial reasons to drop out of high school before completing 9th grade, and who worked his way up to a responsible position in the construction industry, never failed to address his letters to his son by “Dr. Nilson.”

Art served on many professional committees of the American Concrete Institute (ACI) including the committees on building code, concrete slab construction, and structural deflections. He was a founding member and first chairman of the American Society of Civil Engineers (ASCE) Committee on Finite Element Analysis of Reinforced Concrete Structures. His pioneering research on high-performance concrete has been widely recognized. He was awarded
the ACI Wason Medal for materials research in 1974, the ACI Wason Medal for best technical paper in 1986 and 1987, and the ACI Structural Research Award in 1993. He was elected to the grade of Fellow in ACI as well as ASCE, and was made Honorary Member of ACI, the Institute’s highest award, in 2005.

Art held research appointments or lectureships at the University of Manchester and Salford University in England, and Technical University of Milan in Italy. He held registration as a professional engineer in several states.

Art for many years had a strong interest in residential architecture. He designed and had built four residences in NY State, Maine, and Massachusetts, the first of which was selected for publication in a national home magazine. His architectural tastes ran toward what he described as “conservative contemporary” and all featured studio ceilings, extensive use of glass, exposed beams and wide balconies.

After his retirement from Cornell in 1991 Art and his wife Linda moved to Maine, where they built a home on the coast. After 8 years and a few notably severe winters, they decided to relocate to Massachusetts and moved to Cape Cod, where they were able to settle in a uniquely attractive community, again near the water. Art reconstructed and expanded a house built ten years earlier. Drawing on skills acquired over the years with his previous houses, he did all the interior finish carpentry, including cabinetwork, as well as clearing and landscaping.

For his entire lifetime, Art was an enthusiastic sailor. He spent his early years on Long Island, New York while owning a number of small sailboats. In Ithaca, he was a member of the Yacht Club and was successful in racing, but his real love was coastal cruising. He and his wife Linda met on the beach in Massachusetts, and before long were sailing the New England coast together. They visited most of the best ports of call from Long Island Sound to Schoodic, Maine, sometimes living on board for a month or more at a time. He continued his interest in boating in his later years.
Art was deeply committed to music. In his teen years he played the saxophone and clarinet, and played professionally in a “swing” band in the 1940s. His interest in music continued in later life, but his listening trended more toward Beethoven than Benny Goodman, although he had a large collection of music of the 30s and 40s. With Linda’s encouragement, for a brief period, he resumed play with his clarinet, and enjoyed playing Bach duets with a faculty friend. When very young he became interest in photography, working first with a simple box camera, then through a succession of 35 mm film cameras and digital cameras to photograph subjects of interest as he travelled in the US and abroad.

Art is survived by his wife, Linda, four children by his previous wife, Lee, including a son Russell and three daughters: Sheryl Sedgwick, Carol Hansen, and Kim Kabbes, as well as four grandchildren: Chris and Caroline Sedgwick, Storm Nilson, and Eve D’Vincent.

This memorial is largely based on a draft that Art, in his characteristically methodical fashion, produced himself in the months before his death.

John F. Abel, Chair; David Darwin; Kenneth C. Hover; Arnim H. Meyburg
Thomas T. Poleman

November 28, 1928 – June 20, 2014

Thomas T. Poleman was appointed to a new position on the economics of agricultural development on May 1, 1963, and he retired as a professor emeritus October 5, 1999. Tom received his Ph.D. in 1960 from the Food Research Institute at Stanford University and also an M.A. from Stanford and bachelors and masters degrees from the University of Missouri. After completing his doctorate, he spent an additional year at Stanford and two years as a senior economic analyst with the CIA. The Food Research Institute was similar to a department of agricultural economics, with a small but distinguished faculty, that specialized in development economics and in commodity market analysis. Thus, Tom’s training was appropriate for the position in the Department of Agricultural Economics at Cornell. (This Department is now the Dyson School of Applied Economics and Management, and development and international economics is one of the four pillars of this unit.)

An important portion of his work centered on the world food problem. Poleman was skeptical of the characterization of hunger in the world; he thought the breadth of the problem was exaggerated.
and that the characterization of the problem was wrong. Certainly over the span of his career, food production in the world grew at a faster rate than did the world’s population, and the issue was importantly about the location and distribution of food and incomes.

His views are illustrated by the titles of some of his papers: World Food: A Perspective (Science 1975), World Food: Myth and Reality (World Development 1977) and A Reappraisal of the Extent of World Hunger (Food Policy 1981). Tom provided critical evaluations of the methodologies underlying the estimates of the extent of world hunger, e.g., Global Hunger: The Methodologies Underlying the Official Estimates, a department working paper (#97-14). He also wrote about the “cures” for hunger, as in World Hunger: Extent, Causes, and Cures, a departmental research bulletin (#82-17). As a consequence of these views, his policy recommendations emphasized programs targeted to particular populations that he viewed as truly hungry.

Poleman’s other research was on diverse topics driven in part by projects that were of interest to the graduate students that he supervised. Unquestionably one of Tom’s major contributions was the supervision of graduate students’ research. This included not only Ph.D., but also M.S. and M.P.S. students. The total number of graduate students that he advised over his career is unknown to us, but one record shows that he supervised the work of 28 students in a 10-year span ending in the early 1990s. The diversity of topics is illustrated by the titles of Ph.D. dissertations such as “The Marketing of Sweet Potatoes in Rwanda: Commercializing a Perishable Crop Under Difficult Circumstances” and “The Impact of Agricultural Prices on Rural Development and Wages in India.”

Professor Poleman could be a tough supervisor, but many of his students appreciated his in-depth guidance and were very loyal to him. One example from a student doing a non-thesis research project: “He was a difficult task master … and sparks often flew. But in the end, the final product was of better quality than the draft material I had submitted … It eventually became [a staff paper and] it helped me get my very first job … in Abidjan, Ivory Coast, West Africa.”
Tom came from a research tradition that emphasized in-depth reviews of literature, a detailed understanding of the construction of secondary data used in the research (or collecting original data), and reporting results in monograph-type publications. Thus, a large portion of his writing, including co-authorships with students, was placed in departmental bulletins, working papers, and staff papers as well as in books. These modes of publication became increasingly inconsistent with the practice of the economics profession, which emphasizes publication in refereed journals. This perhaps explains, at least in part, why Tom’s work was not as influential as he hoped that it would be. Nonetheless, a book like *The New Economics of India’s Green Revolution*, written in collaboration with his Ph.D. student Rita Sharma and published by Cornell University Press (1993), was something of which he could be justly proud. Moreover, students benefitted from his insistence on careful scholarship and writing.

Poleman was interested in the welfare of his department as well as his students, but he could be impatient with administrators. Department chairs and the deans typically wanted more information about the intended uses of the funds that Tom requested for his graduate students or for his travel, while he thought that the justifications for these funds were more-or-less self-evident. Of course, students appreciated his “going to bat” for their funding, and he certainly left a legacy of graduate student alumni who have made important contributions to the welfare of the world’s population.

Tom is survived by his wife, Charlotte; four children, Carol Becker, Clare Stephenson, Walter Poleman and Tom Poleman and their spouses; 12 grandchildren; and one great-granddaughter.

*W. G. Tomek; B.F. Stanton; T. D. Mount*
Dr. John Sherbon was a wonderful mentor to many of us. He represented a healthy balance of academic life and personal life. John started out in Idaho and brought with him a Westerner’s understanding of the world. He did his undergraduate work at Washington State and graduated in 1959. He spent the next year in Denmark as a Fulbright Scholar, using the first month to learn enough Danish to capitalize on the opportunity to learn about cheese-making. Upon his return to the United States, John went straight to the University of Minnesota where he completed his M.S. and Ph.D. degrees. Minnesota is also where he met and married his beloved wife Ruth, who was originally from South Dakota. They would go on to share 56 years of a loving partnership through the joys and challenges that life would bring. They came to Cornell shortly after John completed his Ph.D., as he succeeded the respected food scientist, B.L. Harrington. The outgoing and incoming faculty taught the food analysis course together for one year, after which John taught the course for many years, eventually splitting it into two courses: one for sophomores and another, more
advanced version, for graduate students. At heart, John was an analytical chemist who took seriously the issues involved in doing careful scientific work and equally careful management of data. Later in his career, John’s research focus was on ice cream. Throughout his career, John consulted on dairy issues around the world and was energized by his sabbatical leave in New Zealand and work on milk fat fractionation. He often demonstrated for his classes that removal of the highest melting fractions of milk fat made excellent candles on the way to producing a more spreadable butter.

John was a gifted and dedicated teacher who emphasized critical thinking about problems and the importance of following instructions, especially when expensive laboratory equipment was involved. For example, in one experiment, John gave students a powdered salt/sugar mixture for analysis of its salt content. Unfortunately for the students, he hadn’t mixed the sample. So if you only took a top sample, you got close to 100% salt or sugar, depending on which one went in first. This was a lesson about sampling that students never forgot.

On another occasion, John gave a fairly long quiz with the instruction: “Read the entire exam first before starting to work.” Only one student left the exam early. He had followed instructions. The third question from the bottom said: “If you have come to this point, put a check mark here and hand in your paper.” John really knew how to get students’ attention.

John was one of the most welcoming faculty members of the department. He and Ruth often invited students and their families for dinner, especially for holidays when some of them could not get home. Ruth was a great cook and we all looked forward to these opportunities. When they traveled west each summer to visit family, they offered their home and boat to a young couple. For some, it was an opportunity to learn how to run a household for the first time. We also learned that a collie can get sunburned and that the vet school would tattoo its nose to protect it from the sun. The household generally had dogs, cats, rabbits or other pets around.
Much of John’s interaction with students occurred outside of the classroom. He always had — or made — time to speak with undergraduates and graduates alike. He got to know students (and faculty) so well that he could predict their grades in courses taught by other faculty.

John and Ruth dedicated themselves to their two children, Barbara and Bill, sparing no effort in supporting their academic, social, musical, or athletic activities. John was actively involved in the early formation of a girls’ hockey league and its development. John coached the early morning girl’s hockey and would arrive to teach his 8 o’clock class after hockey practice. The first thing he did was post the Ithaca Shooting Stars hockey scores from the weekend on the blackboard. Many of his students at that time called him “coach.” He really was, and John had a knack for getting the best out of his students. In later years, John and Ruth took great pride and delight in their two granddaughters, Chelsea and Leah (daughters of Barbara and Mike Wood).

John was a man of many talents. In addition to being a scientist, he was facile with technology of all types. He could fix anything. The teaching assistants in John’s instrumentation course got first hand training in trouble shooting problems and keeping lab equipment running well. An accomplished musician, he played the trumpet throughout his life, adding to others’ pleasure by participating in special musical events. John took up duck-decoy-carving and created beautiful pieces that he shared with friends. An athlete in his formative years, John kept himself in excellent shape throughout his life. In their retirement, he and Ruth enjoyed extensive travel, including many outdoor adventures that required hiking, biking or boating. They appreciated nature and bird-watching in particular.

Most of all, John was a mensch. He and Ruth were very active members of St. Paul’s Lutheran Church in Collegetown and John was a long-time member of the Lansing Lions. If there was work to be done or someone in need, John was there to help. He will be sorely missed.

Joe M. Regenstein, Chair; David M. Barbano; John W. Brady
Professor John E. H. Sherry taught his first course in “Laws of Innkeeping” at the Cornell Hotel School in the fall semester, 1972. Born in New York City, he grew up in Morningside Heights, near Columbia University, received his B.A. degree from Yale University, his L.L.M. from New York University, and his J.D. from Columbia University, where he was a classmate of Cornellian and U.S. Supreme Court associate justice, Ruth Bader Ginsburg. His father, John H. Sherry, a prominent New York hotel attorney, who famously commuted from New York to Ithaca by train, taught law at the Hotel School for over forty years.

John and his father are testimony to the family’s commitment to the law and to education. Together they taught law and educated the future leaders of the hospitality industry for nearly sixty years. They taught many, many generations of Cornell alumni. And, they remain unique in the history of the School -- the only father-son combination of faculty members to teach at the School.
The Hospitality Industry -- hotels in particular -- have some very special issues in regard to the law of business. Hotels historically have the right of Innkeeper’s Lien, whereby a hotel can seize the luggage of a guest who tries to skip out on the bill, keep it, and sell it to satisfy the unpaid rent. In modern times, the universal use of national credit cards, and the fact that most hotels insist on a credit card upon check-in, has relegated the use of the Innkeeper’s Lien law to history. However, it allows interesting, and sometimes humorous classroom discussion. John used such incidences to keep the mood light and fun.

On a more serious side, hotels are faced with some very strict rules having to do with the guest experience, and safety in particular. John was well-versed in these issues, and particularly those instances where the hotel’s liability might be increased. This type of knowledge is highly important to the student who might make a career in Lodging.

John loved the Cornell and Hotel School community. He proudly served on many university committees, often representing the Hotel School. He regularly attended, and was a longtime season ticket holder, to both Cornell football and hockey. He enjoyed any university event that served Cornell BBQ chicken! Within the Hotel School, he supported both "Quantities" classes by regularly dining in the old Rathskeller and the Statler dining room as well as the newer facilities. He attended many Hotel Ezra Cornell (HEC) weekends, and, between John, his father and his daughter, his family has an extensive and much cherished collection of HEC china.

His colleagues at the School sought him out for his expertise and guidance about legal issues and many remember him as “counselor.”

He developed and taught the course “Business and Hospitality Law” in the Hotel School as well as courses in international law at Cornell Law School.

John traveled extensively throughout his career, including sabbatical leaves to China and Israel. He is remembered by his family and colleagues for his scholarly intellect, profound commitment to his
students, his work ethic and his sense of humor punctuated by a deep bass laugh. To this day, his daughter meets Hotel School alumni who share wonderful recollections of their experiences in his classes or how he helped them individually.

He served in the Korean War with the 17th Field Artillery Battalion and in the Army Reserve through the early 1960s, when he was called again to active duty during the Cuban missile crisis, ending his service with the rank of captain.

The family’s belief in the importance of education continued. A son and daughter graduated from Cornell University -- John E. Sherry, earned a B.A. from the College of Arts & Sciences in ’84, and Suzanne Sherry Lee, received a B.S. from the School of Hotel Administration in ’89. A second son graduated from SUNY Albany -- Douglas M. Sherry, earned a B.A. in History in ’88. Inspired by their father, both John and Douglas went on to graduate school. Douglas is a Ph.D. and is now carrying on the family tradition as a college professor. John is an medical doctor, practicing in VA.

A member of the Cornell hotelie family, now gone but not forgotten.

_A. Neal Geller, Richard H. Penner, Michael H. Redlin_
Floyd Owen Slate

July 26, 1920 – August 18, 2008

Professor Emeritus Floyd Slate died in Florida at the age of 88. He was a professor of materials in the Department of Engineering Mechanics and Materials (the precursor of the Department of Theoretical and Applied Mechanics) and subsequently of the Department of Structural Engineering in the School of Civil and Environmental Engineering from 1949 until his retirement in 1987. Born in Indiana and raised on a farm in that great state, Slate was no stranger to hard work. He attended Purdue University where he majored in chemistry, receiving a B.S. in 1941, a M.S. in 1942 and a Ph.D. in 1944. From 1946-49 he was an Assistant Professor at Purdue, where he worked on the Joint Highway Research Project as Chief Chemist, and on the Manhattan Project as Chemical Supervisor.

He joined Cornell University in 1949 as an Associate Professor, received full professor status in 1973, specialized in engineering materials – particularly concrete and masonry – and studied the relationship between internal structure and engineering properties. His passion and deep expertise in all things related to concrete
materials began with his Ph.D. dissertation at Purdue, where his background in chemistry was called upon to advance the development of a new type of paint for marking highway pavements. In what became his characteristic method for tackling a new problem, he threw himself into the study of Portland concrete to fully understand the substrate to which his new, extended-durability paints were to adhere. As is absolutely true in the case of Professor Floyd Slate, “the rest is history.” His background in the well-organized literature of pure chemistry, combined with his in-depth exploration of the concrete literature led to a life-long passion for that literature and a firm requirement that each of his graduate students match their time in the laboratory with equal time in the Cornell library, where, Floyd was fond of saying, that within the extensive collections at Cornell, “A scholar can follow a footnote home.”

Alumni fondly and enthusiastically recall the courses he taught: Engineering Materials, Differential Equations for Engineering, Strength of Materials, Structure and Properties of Materials, and Advanced Plain Concrete (concentrating on the material itself), to name a few. His materials courses were always accompanied by a weekly hands-on laboratory component, most frequently under the watchful and dedicated supervision of Stanley Olsefski, professional lab technician extraordinaire and Floyd’s co-author and long-time friend.

Among the innovative and interdisciplinary courses not previously offered on campus, Slate co-developed “Low-Cost Housing” with Professor Henry Richardson of Cornell’s College of Architecture. The course provided a forum in which Floyd could engage students across campus and share knowledge and insight gained in his extensive international travel to study indigenous construction methods, materials, and cultures. Within a comfortable setting of his enumerable stories and broad collection of slides and photos, students took on individual projects to explore a country or region and to suggest new ideas for improving the human condition. While encouraging creativity, Slate was quick to point out that advances in the technology or economy of building materials or systems must be compatible with the culture and traditions of any particular society.
for such innovation to be successful, and his lectures always included photos of well-intentioned technologies that led to social failures. His breadth of knowledge on the topic enabled him to compile the publication, "Low-Cost Housing for Developing Countries, an Annotated Bibliography 1950 – 1972."

Professor Slate supervised many graduate students who majored in structural and transportation engineering, but he may be best known in the field of concrete for his landmark, break-through work on identifying and proving the existence of hair’s-width “microcracks” within the concrete matrix, and correlating these cracks with the macro behavior of reinforced and unreinforced concrete under multi-axial loading. The existence of such cracks had been postulated, but it was only when Slate and Olsefski recovered and refurbished a used X-Ray machine from the Cornell School of Veterinary Medicine, and pioneered techniques for using it to study thin slices of concrete, that the cracks were positively identified and mapped. Slate and his co-authors then went on to describe the effects of these cracks on the most basic of concrete behaviors: the shape of the stress-strain curve, and that was only the beginning of a long-list of award-winning papers. Slate’s successors extended X-Radiography to Neutron Radiography, and sustained what has become the Cornell hallmark of connecting micro- to macro-behavior.

On these pivotal projects and papers Floyd worked closely with many of his CEE colleagues such as George Winter and Arthur Nilson. He also interacted with colleagues at other Universities, particularly in the Mideast and South Pacific. He was a member of the American Institute of Chemists (AIC), American Concrete Institute (ACI), American Society of Testing Materials (ASTM), and American Society of Civil Engineers (ASCE), and served on several professional committees. He won the ACI Wason Medal for Materials Research for the "best original research work in fields of cement and concrete" a remarkable three times, in 1957, 1965 and 1974. In 1983, he was the recipient of the ACI Arthur R. Anderson Award for “outstanding contributions to the advancement of knowledge of concrete as a construction material.” And in 1986, he won the Wason Medal for most meritorious paper published by the ACI. His work also contributed to Cornell’s structural engineering
laboratory earning ACI’s Charles S. Whitney Medal in 1988 for contributions to the field. In 1992, Floyd was elected to ACI Honorary Membership. Within Cornell CEE he won the award "for outstanding and consistent contributions to bettering faculty-student relations" and received top teaching recognition from Tau Beta Pi. Always looking for innovative solutions to practical problems, Floyd Slate was sought-after as a consultant to governments and industry and traveled to many foreign countries lecturing and consulting on concrete, masonry, corrosion, and indigenous, culturally compatible, affordable housing.

A key to Professor Slate’s success was that he liked nothing better than to be in his lab, and in that lab he absolutely insisted on painstakingly careful experimental technique. He had carried this passion from his Purdue training, where Floyd’s first Ph.D. student, Professor William Dolch (who went on to great renown in concrete research) recalled, “Professor Slate personally showed me exactly the right way to fold filter paper.” In the concrete, masonry, and timber labs at Cornell he enforced strict compliance with ASTM test methods, even to manually controlling rate of loading with older-generation hydraulic test machines not built to make such control easy. He equally applied the notions of scrupulous care and attention to detail in his early pre-computer, pre-finite-element analysis of stress and strain via numerical methods and the graphic “Point Matching” technique, working with Professor Harry Donald Conway and involving hundreds of tedious yet critical calculations. And when the analytical or experimental work was done, Slate required that his students “write it up in such manner that the reader could exactly duplicate the work in every detail.”

So complete was his mastery of concrete materials, and so keen was his interest in learning more that in only a few years he came to prominence as an invited speaker in the most influential national and international conferences and venues, where his published conference proceedings are every bit the landmark contributions of his work in more readily available journals. His personal friends and associates in the field constituted a virtual “Who’s Who” of concrete research, which has paid huge dividends to Floyd’s
subsequent students as an entree to that community by virtue of association with Professor Slate.

While Floyd Slate’s many outstanding and pivotal technical contributions can be readily verified and appreciated again and again in his beloved “Literature,” it may be on the non-technical side of his Cornell career that he made his most profound contributions. While always an award-winning teacher, he was also a mentor, equally willing to discuss career directions, teaching styles and policies, and advice for balancing career, family, and personal time. Further, his international travel gave Floyd a deep knowledge of languages, customs, traditions, and cultures. Dinner at Floyd and Midge’s house was always an international affair, with cuisine and guests representing many lands. After-dinner discussion was never about concrete (that was for the office), but always about insights from differing world cultures. Never-favoring any custom or belief system over another, Floyd embraced them all, searching to discover meaning and inspiration in words and their origins, rituals and their significance, and people and their hearts and minds. To become one of Professor Slate’s graduate students was to become a member of an international community, temporarily represented in Ithaca but sharing ideas and languages from faraway places. For Floyd each day was a celebration of Cornell’s international nature, mission, and opportunity.

Floyd Slate not only loved Cornell deeply and appreciated its countless technical, cultural, and social opportunities, but he loved the Finger Lakes region and counted it among the most beautiful and peaceful environments in the world (and he would know, having visited most of the world). Early one cool, crisp fall morning he called several colleagues that he knew to be photographers to alert them that the sky that day had an unprecedented clarity and shade of blue, and that he recommended that the schedule for the day be adjusted to take advantage of the illumination, which he knew would not last long. Likewise one recalls another day when Floyd received a letter informing him that one of his past students had just received a prestigious academic award at his home university in the Middle East. Floyd’s uninhibited joy in his student’s success knew no
bounds as he fairly danced around his office saying that it was “A great day for Cornell.”

Professor Slate is survived by his children, two daughters and one son. His beloved wife, Margaret – known to many as "Midge," predeceased him on August 16, 2004.

Kenneth C. Hover, Chair; John F. Abel
Roger M. Spanswick

June 24, 1939 – February 12, 2014

Roger was born in England, in a thatched cottage in Barford St. Michael and St John, a double churched village between Oxford and Banbury. He grew up next to the tallest spire in Oxfordshire, in nearby Bloxham, where his grandfather, a self-taught historian, was the local butcher. After concentrating on math and science at Banbury Grammar School, he graduated from Birmingham University with an honors degree in physics. He went on to the University of Edinburgh where he earned a one year Diploma in Biophysics under the mentorship of Jack Dainty. Elwyn Williams supervised Roger’s Ph.D. work, including his early research on ion transport, using the large internodal cells of *Nitella translucens*, which were harvested from a mountaintop pond in Perthshire. Roger continued his studies of characean cells as a Nuffield Foundation Postdoctoral Fellow with Enid MacRobbie in the Botany School of Cambridge University. Roger made major and pioneering contributions to the understanding of basic ion transport processes in plant membranes. Central to Roger’s work was the integration of
reductionist theoretical and experimental techniques with a systems perspective in order to understand the physical processes that make life in general, and plant life in particular, possible.

In his late teens, Roger became a Humanist, the principles of which, as explained by Bertrand Russell in “Why I Am Not a Christian”, he followed for the rest of his life. Roger focused his endeavors on science and denied the supernatural. Although he tolerated the religious beliefs of others, he had no personal use for religious principles. He believed we were capable of striving to make the world a better place for all individuals, no matter their culture or creed. We did not need religion for this behavior, just a belief that we should do unto others as we would have them do to us.

Roger was first and foremost a scientist. He found the best organism to answer a fundamental question, developed a sound experimental design, built or modified apparatus to perform the experiment, and developed or used a sound theoretical framework to plan and analyze the experiment. Thus he developed the technical and analytical skills necessary to make the best use of the experimental method; questioning and re-questioning the accuracy and precision of the results; employing his encyclopedic knowledge of the literature related to the question to be answered; and honestly, fairly, and clearly communicating the results to others.

On arriving at Cornell University as an Assistant Professor in 1967, Roger joined the Section of Genetics, Development and Physiology in the Division of Biological Sciences. He was one of a new group of plant physiologists recruited along with Rod Clayton, Andre Jagendorf and Peter Davies. The Section eventually became Plant Biology, and later, the Department of Plant Biology. Roger became an Associate Professor in 1973 and a Full Professor in 1979. In 2001, he moved to the Department of Biological and Environmental Engineering, where he enjoyed colleagues who shared and appreciated his scientific philosophy and expertise. As a teacher, in *Transport of Solutes in Plants*, and *Transport of Water in Plants*, he inspired students with that expertise, his vast general knowledge, personal stories and historical anecdotes. He carried those attributes
in to the development of a new course in *Metabolic Engineering*; Roger the innovator was absolutely in his element.

In 1972 Roger published a groundbreaking paper in which he presented evidence for the existence of an ATP-dependent electrogenic proton pump in the membrane of characean cells. This H⁺-ATPase was distinctly different than the ATP-dependent Na⁺/K⁺ exchange pump found in animal cells so disproving the then-prevalent assumption that plants cells were like animal cells. He showed the H⁺-ATPase generated voltage across the membrane of plant cells was greater than that produced by the Na⁺/K⁺-ATPase of animal cells. Roger published a review on Electrogenic Ion Pumps in the Annual Review of Plant Physiology in 1981 that put an end to any idea that, in terms of electrophysiology, plants were just slow animals.

Roger began to direct his intellectually diverse group of graduate students and postdocs with two goals in mind: expanding our understanding of transport in plants, and developing the human potential of each individual member of the research team. He considered each one of his students, whether undergraduate or postdoc as an individual with much to offer. Thus a library dormouse was as special as a laboratory rat. Each merely had to pass on information gleaned, and Roger was delighted. The research was focused on understanding the physicochemical basis of transport and an understanding of the integrated complexity of transport. Roger steered his research team down the reductionist path by working with purified H⁺-ATPase, and discovered that there were distinctly different proton-pumping ATPases in the plasma membrane and vacuolar membrane. They also found that the electrochemical proton gradient established by the H⁺-ATPase was able to drive transport of sugars, amino acids and other ions through co-transport of a proton with the other substrate. Following the complexity path, members of Roger’s lab also elucidated how sugars were transported from the maternal tissues of the plant into the embryos of the developing seeds, how ammonium and nitrate were transported into the roots, and how insectivorous plants generated a neuron-like action potential that allowed them to capture their prey.
Roger worked for a second time at the Botany school in Cambridge as a Senior Visiting Fellow in 1973-74, and in 1981-82, was awarded a Guggenheim Memorial Fellowship to study at the University of California, Davis. He received the accolade of Highly Cited Scientist from the Institute for Scientific Information, and was elected a Fellow of the American Association for the Advancement of Science. Roger was cited twice by Merrill Presidential Scholars as the Professor at Cornell who had most affected their undergraduate career.

Roger married Helen Walker in Edinburgh in 1963. They had two sons, Andrew and Robert, as well as three grandchildren. Roger and Helen looked on his graduate students, postdocs and colleagues as extended family and had great pride in their accomplishments. In 1996, Roger was diagnosed with prostate cancer, was treated and seemed cured. In 2008, he developed multiple myeloma. Always optimistic, he considered the treatment of his cancer as another experiment; he actually enjoyed the science behind his treatments, was grateful for the medical care he received, and never gave up hope that each new procedure would give him more time to work. He was rewarded with five more productive years, but the disease finally took him from us on February 12, 2014. Friends, colleagues and family celebrated Roger’s life with a memorable symposium at Cornell in June of that year. Our loss of Roger’s intellect is great. Yet he will continue to affect the lives of those of us who knew him well. We loved him and he loved the entire world.

Larry P. Walker, Chair; David Warren Keifer; Randy O. Wayne; Peter Davies; with assistance from Enid MacRobbie
Professor Emeritus Stuart W. Stein of the Department of City and Regional Planning died June 24, 2014, age 84. In his 31 years as a faculty member (ending in 1993) and more than 50 years as an Ithaca resident, he had a remarkable impact on Cornell, our local community, and his many students. His death brought forth an outpouring of appreciation from the University and the broader community that surrounds it.

Stu enjoyed 59 wonderful years of marriage with Sandy, his best friend. He leaves her along with their four children and spouses/partners: Tom (Hale Aylanc), Peter (Jill), Catherine/Katie (Frithjof Hungnes), and Jenny (James LaVeck). He also leaves seven grandchildren, Avi, Rachel, Tova, Chloe and little Stuart Stein, and Maya and Matthias Stein Hungnes, in addition to many nieces and nephews, cousins.

Stu was born in Brooklyn, New York, to Tillie and Herman Stein, with older siblings Anita and Danny, all now deceased. The family
resided in Queens, where Herman, a Polish immigrant, owned a lumberyard. Enduring several lengthy hospitalizations in his youth, Stu developed an abiding compassion for those facing uphill struggles. Upon graduating from Brooklyn Tech High School, he entered the Massachusetts Institute of Technology (MIT), becoming the first in his family to attend college. There he completed his undergraduate degree in Architecture in 1952 and his Master of City Planning degree in 1954.

Stu quickly gained respect and reputation as an urban planner. Employed by the Rhode Island Development Commission for three years, in 1957 he joined with Lachlan Blair to create Blair & Stein Associates in Providence, RI (which eventually added offices in several other cities, including Washington, DC). Their work attracted national attention with the publication of *College Hill: A Demonstration Study of Historic Area Renewal* (1959), a plan for an historic area adjoining Brown University in Providence.

At a time when historic buildings were typically razed and replaced with new ones, the College Hill plan called for their retention and rehabilitation, with sensitive in-filling where new buildings were needed. It became a model for preservation efforts in many places. This effort reflected what became a recurring theme in Stu’s work, a willingness to innovate in ways that excited and united communities, rather than fomenting conflict and fear of change.

Blair & Stein worked for towns and cities in Rhode Island and further afield: e.g., preparing downtown plans for Binghamton, NY and Fort Wayne, IN. They also worked in places of great natural beauty, such as the Cape Cod National Seashore. As the firm grew, Stu developed a knack for empowering others to be their best. Increasingly, he saw his calling as teaching and cultivating young professionals interested in serving the common good.

In the early 1960’s Burnham Kelly, Stu’s former MIT professor and then Dean of Cornell’s College of Architecture (now the College of Architecture, Art, and Planning), was attempting to balance design theory in the Department of Architecture with social science-based planning in City and Regional Planning. Dean Kelly realized Stu’s
dual background in architecture and planning, along with his practice-oriented design capabilities, made him an ideal candidate for a new faculty position, and Stu accepted a joint appointment in the two departments.

By 1969, Stu’s appointment was wholly in City and Regional Planning. Focusing largely on physical planning, his courses dealt with a wide array of subjects, including urban design, plan-making, site planning, survey methods, historic preservation, issues regarding urban renewal, housing, urban transportation, the needs of minority groups, and urban planning in developing countries.

Of particular significance, his community workshop courses, offered over many years, formed the core of Stu’s accomplishments as an educator. Under his guidance, planning students applied themselves in helping to solve community and neighborhood issues in the Ithaca area and more broadly throughout the Finger Lakes Region. Students benefitted from Stu’s unique combination of creativity and ethical idealism while learning to master the best professional practices in the planning arena. He became a master of connecting students with local groups and communities which needed assistance, and connecting those planning efforts to emerging initiatives at state and federal levels.

Stu’s effectiveness led to several leadership positions at the University. For a number of years in the 1970’s there were two planning departments in Sibley Hall, and Stu chaired the Department of Urban Planning and Development. After the departments recombined, he became the first Director of City and Regional Planning’s new Urban and Regional Studies undergraduate major; and during two different periods he was Associate Dean in the College.

From his first years at Cornell, Stu involved himself in local public affairs. In 1963 the City asked for his help with re-invigorating Ithaca’s decaying downtown. In collaboration with three other faculty members, he helped develop a plan to convert a section of State Street from an automobile thoroughfare to an expansive and
welcoming pedestrian mall, leading eventually to creation of one of Ithaca’s defining features, the Ithaca Commons.

After serving on Ithaca’s Board of Zoning Appeals, in 1971 he was elected to its Common Council for one year. With these efforts he began a series of expanding official public roles that for roughly two decades paralleled his academic duties. Over time he chaired the City’s Planning Board and held seats on its Urban Renewal Agency, Board of Public Works, and Downtown Mall Steering Committee.

Eventually Stu undertook far wider public responsibilities at the county level. He completed five four-year terms as an elected member of the Tompkins County Board of Representatives (1982-2002). Serving as the Board’s Chairman from 1993 to 1996, Stu was recognized for his unique ability to bring together often contentious Democratic and Republican contingents. He fostered bipartisanship by understanding seemingly incompatible positions and forging from them a creative synthesis differing parties could accept. Highlights of his years on the Board included a broad initiative to invigorate the arts and tourism, creation of the first economic development strategy for the county, and consolidation and expansion of the county’s public transit system.

Stemming from his role as a county legislator, Stu also gave years of service to the Ithaca-Tompkins County Transportation Council, the Tompkins County Industrial Development Agency, the Board of Directors of the Finger Lakes Association, the Tompkins County Strategic Tourism Planning Board (which he helped found and for which he served as chair), and the Tompkins-Tioga Electric and Gas Alliance. On his retirement from the county legislature, he became a co-founder of the Municipal Electric and Gas Alliance Inc. (MEGA), a non-profit, community-based energy cost savings program that is benefitting more than 100 communities and more than 30 counties state-wide.

Stu’s public service extended far beyond Tompkins County. He was appointed a member of the New York State Board for Historic Preservation in 1977 and served as the Board’s Chairman from 1979–1995. Other significant positions included the NYS
Committee on Registers (dealing with the National Register of Historic Places, 1977-95); the Commission for the Restoration of the New York State Capitol (1980-92, and 1995-2001); the NYS Parks Council (1979-95); the NYS Urban Cultural Parks Advisory Board (1986-95), and, at the federal level, lengthy service on the Erie Canalway National Heritage Corridor Commission.

Stu earned numerous honors, including:

--- his election as a Fellow of the American Institute of Certified Planners in 2000;

--- the Finger Lakes Association’s George F. Train Memorial Tourism Award in 2001 and the Tompkins County’s Tourism Partner Award in 2013;

--- the Certificate of Merit from the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation, in 1995;

--- the Tompkins County Community Action Award in 2001 recognizing his years of effort in fighting poverty in Tompkins County; and

--- the Community Arts Partnership’s “Friend of the Arts” award recognizing his significant contributions to the growth of arts and culture in Tompkins County, an award received just five days before his death.

One of Stu’s proudest moments as a legislator flowed from his efforts in helping amend Tompkins County's Fair Practices Act to prohibit discrimination based on sexual orientation. At the time, this was very controversial, and Stu’s impassioned statement of support helped the measure pass by just one vote. The local LGBT community honored him for his moral courage and influential role in achieving this important legal and cultural milestone.

Stuart Stein was a professor in the very best sense of the word – teaching, yes, but far more importantly imparting to decades of students an understanding of how to make good things happen in a
difficult, messy world. He combined his role as a teacher with major contributions as a public servant, making his community and many other communities better places to live and work. Cornell is proud of his many accomplishments and contributions, and his abiding humanity.

Richard S. Booth; Pierre Clavel; John W. Reps
S. Cushing Strout
April 19, 1923 – November 21, 2013

Cushing Strout taught at Cornell for over thirty years until his retirement in 1989. In the fall of 1943, he left Williams College to serve in the army as an enlisted man in the 87th Infantry Division of the Third Army. He survived the Battle of the Bulge, an experience that generated many stories he would retell to friends and family.

After graduating from Williams College in 1947, he received a 1952 Ph.D. from Harvard in American studies, and then taught at Williams College, Yale University and the California Institute of Technology, before he came to Cornell, first as a visiting professor in 1962 and then as member of the tenured faculty in the English Department.

A member of the faculty since 1964, he held the Ernest I. White Chair of American Studies and Humane Letters from 1975 until his retirement. He wrote many scholarly essays and books on American intellectual and literary history, including *The Pragmatic Revolt in American History: Carl L. Becker and Charles A. Beard* (1958), a pioneering study on Becker and Beard’s economic readings of

“Cush” was a keen minded and engaging conversationalist; a principled, wide ranging scholar; a supportive colleague; and a stimulating teacher and a valued friend.

Cushing wrote five books, edited five others, and published scores of articles and reviews on the philosophy of history, the American image of Europe, the interplay of American religion and politics, and many other aspects of American literature and history. He was also co-editor with David Grossvogel of a book on the political crisis at Cornell in 1969.

Respected as one of the luminaries of the Cornell Faculty and, throughout the world and as a significant figure in the field of American studies, Professor Strout achieved distinction in many ways. He was a Fulbright Fellow at the Center for American Studies in Rome, a resident scholar at the Rockefeller Study and Conference Center in Bellagio, Italy, and a Senior Fellow at the National Humanities Center in North Carolina.

A brilliant, innovative, and important scholar in American Literature and American Studies, Cushing was a paradigm of personal and intellectual integrity. He was admired by his peers for his knowledge, curiosity, brilliance, articulateness, and fervent belief in both reason and the life of the mind. Young scholars regarded him as a generous mentor from whom they could always get sound advice.

Cushing often acknowledged many teachers who had been important to his intellectual development. These include William (Bill) Miller who taught American History and Literature at Williams College; Perry Miller at Harvard; R.G. Collingwood, the Oxford philosopher who stimulated his interest in the philosophy of history; and in later years Erik Erikson who pioneered in the application of Ego Psychology to the humanities.

As a scholar, Cushing was a man of remarkable erudition. His range
of reading, understanding, and recalling seemed to span any topic remotely related to the sprawling and burgeoning discipline of American Studies.

He was equally well informed and passionate about magic. Not only was he able to perform multiple tricks, but he also knew the history of each one, and the best way to perform it according to books written by professional magicians. Ever the scholar even while pursuing his hobbies, he published a book on close-up card magic in 2005.

Similarly, Cushing was not content to be a gifted and enthusiastic tennis player. He knew the history of the game and studied the strokes and tactics of those who dominated the sport in different eras.

He was enthusiastic about movies and his memory was remarkable. He could recall where and when and with whom he had seen films no matter how long in the past. He loved detective fiction, but he was not fond of the most recent film adaptations on PBS of Sherlock Holmes. His last published work was a review of a book about Sherlock Holmes in the Summer 2013 Sewanee Review.

To those who came to know him in a scholastic setting, Cushing was the paradigmatic academic: knowledgeable, clever, and above all, as objective as possible and open-minded. In any discussion, his arguments were always crafted by reason, based on thoughtful sifting of information, and rarely colored by emotion. On rare occasions, however his close friends became aware of deeply-felt and passionate emotions.

In academic arguments, he fought like a fencing master and gave no quarter but he always relied on his belief in logic, knowledge, and truth. To the entire world outside of academia, he was always gracious and never domineering, a gentle person, and a gentleman.

Jean and Cushing raised three sons: Nathaniel, Benjamin and Nicholas. Cushing loved his dogs and his family summers in Maine. He thought of himself first and foremost as a family man, father of
three sons and wife of Jean with whom he shared more than sixty-five years of marriage. Their first date, by Jean’s bemused recollection, was “a romantic moonlit night” sitting on a rocky shore where they discussed the problem of free will and determinism. Thus began a conversation that continued through 65 years of marriage. His beloved Jean remained steadily at his side until the end.

He was also a loyal and valued friend. Even in his final months, which were so hard, he responded to those who visited him with graciousness and good humor. Throughout the progression of his illnesses, he welcomed visitors, greeting them with a characteristic grin and soon launching into a discussion of the books he was reading or the reviews he was writing.

Cushing’s life was celebrated at a touching memorial service March 2, 2014 at Kendal Auditorium, which hundreds attended. Friends and family spoke eloquently about this man who was a wonderful parent, teacher, scholar, colleague, and human being.

Daniel R. Schwarz, Chair; Howard Feinstein; Peter D. McClelland
Bob (Robert D.) Sweet died January 30, 2014, at his residence in Jacksonville, N.Y. Bob and Virginia, his wife of 62 years, had resided on Slaterville Road for most of their 70 years in Ithaca. Bob touched the lives of many folks in the community. He was well known for telling stories and having a sense of humor. His stories often began with his passion—sharing a lifetime of experiences growing vegetables in New York. Bob credited his lifelong learning and thoughtful approach to issues to his parents who operated a small vegetable farm in northern Ohio.

As a member of the Kiwanis Club of Ithaca for over 50 years, Bob participated in fundraising projects to support Kiwanis community projects. Bob’s long tenure with the club provided a sense of local history as well as an incentive to keep current with local club goals and projects. Bob remained an active member of the St. Paul’s Methodist Church congregation from the mid-thirties until he died. Throughout his life he was an avid reader and spent much time visiting the Trumansburg and Ithaca Public Libraries. His daily
reading of the Ithaca Journal kept him informed about community issues. Bob was loved by his daughters, Charlotte and Christina, his grandchildren and his great-grandchildren. He left his family and friends a treasure trove of memories.

Bob completed his B.S. degree in education at Ohio University with the intention of teaching vocational agriculture in Ohio. No jobs were available in 1936 and his advisor suggested that he pursue an M.S. degree at Cornell University, where he was offered an assistantship involving lettuce breeding. He completed his degree in 1938 and began work on his Ph.D. in vegetable crops, plant breeding, and plant physiology, completing the degree in 1941.

He joined the faculty as the Extension Specialist for commercial vegetable crops in 1940 prior to completing the Ph.D. He knew that vegetable growers were desperate for hand-laborers to hoe or hand weed crops such as carrots and onions and that is why he began a career that focused on weeds. Bob began as a Vegetable Crops Instructor in 1940 and subsequently was promoted to Assistant Professor in 1943, Associate Professor in 1946 and Professor in 1950. He served as Chairman of the Department of Vegetable Crops from 1975 to 1982.

When Bob began his studies at Cornell, it was not uncommon for growers to feel compelled to pay for up to 200 hours per acre for hand weeding. The advent of World War II severely decreased the availability of hand-laborers. Bob attended a weed conference in California in the early 40’s and learned that carrot growers there were using what was called ‘stove oil’ to kill weeds successfully in carrots. The ‘stove oil’ left a particularly bad taste and smell on the carrots so that they could not be sold. To deal with this Bob worked with H.L. Yowell of Standard Oil of New Jersey to conduct field trials with Stoddard Solvent, which was found to be safe and effective. By 1946, Stoddard Solvent was used by nearly all of New York’s carrot growers. Thus, Bob was one of the creators of the first successful chemical weed control technique for vegetable crops in the northeastern United States.
Bob had a long and distinguished career as a weed scientist in vegetable crop production beginning with his first appointment as Instructor in the Vegetable Crops Department in 1940. He was a pioneer investigator in the use of chemicals to replace tillage to control weeds in row crop vegetables. Among his many contributions in the field of research was his discovery of synergistic responses among herbicidal chemicals and the development of combinations that increased their effectiveness at greatly reduced rates. The research that he conducted with atrazine, fruit oil, and 2-4D in sweet corn dramatically reduced atrazine rates and was rapidly and widely adopted by the industry.

Bob and his graduate students studied the growing habits of many weed species, developing their life cycle patterns with special attention to points or events that made them especially vulnerable to control by chemical or biological means. His studies on yellow nutsedge (*Cyperus esculentus* L.) were classical.

Bob was an early proponent of the IPM (Integrated Pest Management) concept, especially biological control methods. Among his accomplishments in the area was the identification of potato cultivars that were especially competitive with many weed species including quackgrass, nutsedge, pigweed, lambsquarters and ragweed. Additionally, his research in IPM led to the concept of using living mulches, e.g. white clover or similar legumes for both sweet corn weed control and nutrition. Grass mulches were also identified for improving soil health.

Bob was a popular and skilled advisor to undergraduates as well as graduate students. His door was always open to them and he was generous with his time and sage in his council. He took very much of a team approach with his graduate students. They would all help one another with planning, planting, and harvesting field experiments. Technicians would be included in these discussions and were an important part of the team. Bob was astute in hiring good helpers, and he treated them so fairly and respectfully that they were extremely loyal to him. Thus they grew in their job skills to the point where they helped break in new graduate students. Because of his reputation, Bob’s graduate students seldom
had a problem finding good employment when they completed their degrees, and they tended to maintain strong, affectionate relationships with him long after they left Cornell. Attesting to his long career in research, 26 Masters theses and 19 Doctoral dissertations were awarded under his direction, and many prominent researchers in the field of weed research were his students. He has been author or co-author of some 80 scientific publications as well as numerous popular articles.

Bob was one of the founding members of the regional Northeastern Weed Science Society (NEWSS) and a true legend in the field of Weed Science. He served as the first Secretary/Treasurer of the NEWSS and was the second President of the society from 1949 to 1950. He received the Award of Merit from the society in 1975 and became a Fellow of the society in 1979. His name became so synonymous with NEWSS service and student education that the NEWSS graduate student award was named for him. Bob was also very active in WSSA (Weed Science Society of America) as he was the first Business Manager of the national society and served as the first editor of the journal Weeds. He was named a Fellow of the WSSA in 1974. Bob was the NEWSS Representative to the Board of the Council for Agricultural Science and Technology (CAST) from 1978 and was a continuing Board Member of CAST until 2009. CAST is a nonprofit organization composed of scientific societies and many individual, student, company, nonprofit, and associate society members. CAST provides timely, objective, science-based information without motive or agenda to inform agricultural decision makers at all levels.

To all who knew him, Bob will be remembered as a great scientist, teacher, and friend. He was intelligent, engaging, kind, respectful, and thoughtful of others. He was not afraid to champion causes and did so with great passion and respect. He was, in short, a true gentleman and pioneer in the field of Weed Science and he will be missed by all who knew him.

Robin R. Bellinder; Elmer E. Ewing; Russell R. Hahn
Ari van Tienhoven

April 22, 1922 – January 31, 2014

Professor Ari van Tienhoven was born in The Hague, Netherlands. During his college years, which coincided with World War II, he was part of the student resistance movement in the Netherlands. This ultimately led to him being hidden in the home of a Frisian farmer. He developed enormous gratitude and love for this family for the sacrifice and risk they took on his behalf. True to Ari’s loyal nature, he maintained a lifelong friendship with them and their extended family.

While a student in Wageningen, his knowledge of Dutch, German, French and English enabled him to volunteer as a guide for visitors. As a result, he was invited to visit the University of Illinois and eventually, he left the Netherlands and came to the United States in 1947 to begin a graduate program at the University of Illinois. His beloved Ans joined him in Illinois sometime after and they were married in March, 1950. Under the guidance of Dr. Andrew Nalbandov, he began his research career focusing on poultry physiology and completed his Ph.D. in 1953. He spent two years as an Assistant Professor at Mississippi State College and then joined
the faculty in the Department of Poultry Science at Cornell in 1955. He enjoyed teaching and was well liked by students.

“Dr. van” (as his students called him) believed that his most important contribution was through his teaching. For many years he taught Reproductive Physiology of Vertebrates. He stated that “teaching was the real joy of my professional life….some of the reasons for this love are that I have an evangelistic (but agnostic!) tendency but also that I love the subject matter, which is easy because it deals with sex!” He also taught courses in avian physiology and animal reproduction. His teaching was recognized with the Edgerton Career Teaching Award (selected by his peers) as well as the Professor of Merit Award (selected by students).

Dr. van incorporated unconventional teaching methods and evaluation strategies before it was fashionable. While his oral exams struck terror in many students, he believed it was a useful technique for evaluating students. He was the quintessential professor—always asking questions and setting high standards for class work and research. He was outspoken on matters of student concern and many students came to him for advice. He was never too busy to help students and colleagues solve their problems. When faculty members rejoiced in the quiet of summer in Ithaca, they were quickly reminded by Ari that the students made it all possible. He retired promptly at the age of 65 but retirement really only meant that he was no longer on the payroll. After retirement, he initiated 2 new courses; he developed a very timely course on AIDS and Society and subsequently, an additional course on Ethics and Animal Science, which continues to the present.

Ari generally had a hands-off approach to graduate student training. His graduate students had enormous freedom. He always challenged them although his basic requirement was to work hard and not manipulate data. As long as this was done, one had his complete support and loyalty.

Ari was very good at designing physiological experiments that could confirm or deny proposed mechanisms for reproductive phenomena. He helped explore the possible reasons for why birds are the only
vertebrate group that does not have any live-bearing species. He also published on several areas in poultry physiology including ovulation, thermoregulation and animal welfare. He published the first stereotaxic atlas of the brain of a bird and his studies of the thyroid effect on reproduction were landmarks in the field. He was made a Fellow in the Poultry Science Association as well as a Fellow in American Association for the Advancement of Science. His desire to learn as much as possible about chicken physiology and anatomy found him attending a wide range of talks on campus. Part of one sabbatical leave was spent as a visiting professor in the Department of Anatomy at the Veterinary College where he was able to increase the teaching time devoted to bird anatomy. His ability to read the literature in several languages was a great help to many colleagues and led to his being chosen by Professor Asdell to revise his book on mammalian reproduction. In addition to this book, he also published two editions of a reproductive physiology textbook.

At Cornell, he thought of himself as a very good “politician” in that he was often successful in getting things done. He loved the freedom at Cornell and the history of cross-college interactions. He believed that anything was possible at Cornell and often commented that when he asked a colleague for help, he always received it. His loyalty to people and causes he supported was unwavering. He was a man of principle in all of his dealings and made his intentions clear. He was well known and appreciated for the many tough years that he served on the Ithaca School Board. At the conclusion of his term as President, the School Board praised Ari’s “complete, eminently fair treatment of all issues to come before this Board.” In 2001, Ari received the Tompkins Community Action award to acknowledge his contributions “given unselfishly over the past 35 years.”

In his last lecture, Ari defined himself as somewhat of an “idealistic pragmatist, not a philosopher or a contemplator, but a politician in the best sense of the word, who defines politics as the art of the possible.” Ari made many things possible. His many anonymous gifts—to the parent struggling to pay a school fee or the custodian determined to complete a degree—were spontaneous and had a
direct impact on the recipient. Often his donations honored others, including former students, public figures, mentors, and colleagues. Ari established awards and endowments in Mann Library to honor his wife, individual staff members, and student and staff employees of the library.

Soon after Ari officially retired in 1987, he remarked to a friend, “Cornell can do quite well without me, but I really cannot do without Cornell.” Ari never left Cornell. In addition to his office in Morrison Hall, he established himself in Mann Library, a place he considered his home away from home. Every morning in the Library, he read his daily Dutch newspapers online, scanned a broad range of science journals on the shelves, and sent copies of articles to friends or colleagues that he thought would interest them. Ari wrote that “Cornell has been unbelievably good to me and the words Freedom with Responsibility have not been a slogan but have been and are a credo.”

In the final lecture of his Reproductive Physiology class, Human Reproduction and Society: a two way street. A Sermon,” Ari spoke as both an animal physiologist and a citizen. He considered the relationship between human reproduction and society. Ari was struck by the unique qualities of the Declaration of Independence, noting that he knew of “no Declaration or Constitution that includes such a statement about the right to the pursuit of happiness.” He challenged his students to be thoughtful citizens:

“My career and much of my life is nearly over and it is to you, ‘my’ students that I have to look at the future which I may partly see and partly have to take on trust. I hope that my course and this sermon have given you the impetus to do your own thinking but at the same time that they have given you the idea that there are other solutions and other beliefs to be respected. If you can remember that during your next 50-60 years then I have fulfilled my task.”

Ari was devoted to Ans, his wife, friend and help-mate; she predeceased him in 2005. He was proud of his three children, Richard, Arianne, Andrew and their families, who survive him.

Patricia A. Johnson, Chair; Howard Evans; Janet McCue
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. Torn, Bruce Land, John Belina_
The Finite Element Method (FEM), to which Lars Wahlbin, in the Department of Mathematics, devoted his professional career, is a powerful tool for approximating solutions to partial differential equations. It is used by engineers and scientists throughout the world to help solve problems of practical importance. But why does it work? How does it work? How can it be tweaked to work even better? These were the kinds of questions that interested Lars, and allowed him to use the subtle insights of mathematical analysis to make lasting and significant contributions to practical questions.

In essence, the FEM takes an infinite dimensional problem that is basically intractable and replaces it with a sequence of finite dimensional problems that can be solved by well-known methods implemented on a computer program. But how well do the solutions to the new easy problems approximate the solution to the original problem? To answer this question one needs error estimates, theoretical bounds on the size of the difference between the solutions of these two problems. These error estimates come in many different styles and flavors. Wahlbin is noted for two types in
particular, called “maximum norm estimates” and “interior estimates.” Another striking feature of the FEM is a phenomenon called “superconvergence.” While the approximations converge to the true solution at a rather ho-hum rate throughout the whole space where the problem is posed, there are some special points in space where the rate of convergence is much snappier. Wahlbin made major contributions to understanding this phenomenon and how it can be used, and indeed he wrote the definitive book on the subject, “Superconvergence in the FEM.” He also wrote a second book, “Local error estimates in the FEM” that has been very influential in the field.

When he arrived at Cornell in 1974, Lars joined a group of three mathematicians, the others being Jim Bramble and Al Schatz, who specialized in the FEM, and they made Cornell’s Mathematics Department one of the world’s leading centers in the area. Lars supervised the Ph.D. theses of thirteen students. From 2003 to 2012, Lars was a co-organizer of the “Finite Element Circus,” a regular twice yearly conference (at rotating northeast locations) on the theory and applications of the FEM. His graduate students fondly remember the wonderful camaraderie during car trips to the Circus with Lars and Al Schatz. As one of them reported, the discussion topics included the latest scientific developments in our area, “but we also heard about Lars’ prowess as a handball goalie, his time serving in the Swedish military during the Cold War, and many other experiences that I might not have expected of an Ivy League Professor”.

Lars was an editor for the prestigious journal “Mathematics of Computation” for many years, and served as its Managing Editor from 1996 to 2002, a kind of thankless task that “somebody has to do,” and which Lars did with grace and skill and boundless energy. It is even reported that when some referee candidates failed to deliver timely reports on submitted papers, Lars would step in and do the refereeing work himself. This is consistent with his defining character trait that was observed by everyone who interacted with him: his selfless determination to give everyone the support they need to succeed. Another illustration of this was his service to the mathematics department as Director of Undergraduate Studies (July
1, 2007 – June 30, 2013), where he showed great patience and consideration helping students deal with their most pressing problems. But above all there was his wonderful sense of humor, and his contagious laughter.

Lars Wahlbin was born in Linkoping, Sweden, one of a pair of identical twins, and educated at Chalmers University of Technology in Gotheborg where he received his Ph.D. under the direction of Vidar Thomee in 1971. He was a fellow at the University of Chicago 1972 – 1974 and then came to Cornell where he remained for the rest of his career. He is survived by his wife Anita, whom he married while still an undergraduate student; his son Stefan and daughter-in-law Kathy; and two grandchildren.

Robert S. Strichartz, Chair; John Guckenheimer, Timothy Healey, Al Schatz