Can an engineer help an art historian detect a forged van Gogh?

Professor Rick Johnson is trying to find out. Working with the Van Gogh Museum and the Kröller-Müller Museum in Denmark, Rick has coordinated a team of signal-processing specialists from leading universities to apply image-processing techniques to painting analysis.

The art connoisseur’s traditional approach to authentication relies on several clues, such as the visible examination of the artist’s brush strokes, or the number of threads in the canvas. Johnson recognized that extraction of such spatial information from a painting is a task that image processing is well suited for. While on sabbatic leave in the fall of 2005 as a Fulbright Research Scholar in Paris, Johnson made a pitch to the Van Gogh Museum to gain access to digital images for a workshop. The museum administrators were enthralled with the idea. They agreed to provide the data, and also gave Johnson a five-year appointment as an adjunct research fellow to facilitate the museum’s interaction with researchers interested in painting analysis.

A link is feasible because the conceptual approach to painting analysis by either an art historian or a mathematically grounded image processor follows the same pattern: assembly of the data, analysis, comparison of the outcome with that anticipated from a model, followed by a decision regarding classification. Six months before the workshop in May 2007, three separate teams of computer scientists, mathematicians, electrical engineers, and statisticians were assembled at each of Pennsylvania State, Maastricht, and Princeton (continued on page 3).
Dialog with the Director

Interview with Amit Lal

Amit Lal joined Cornell in 2002 as an assistant professor. He had been a student at Cal Tech and U.C.–Berkeley and a faculty member at the University of Wisconsin before being attracted to Cornell. He sat down with ECE Director Clif Pollock on July 27. Here is an abbreviated version of that conversation.

CP: Amit, thanks for taking time to talk to me. You’ve been at several great universities. How does Cornell compare to those schools?
AL: One strength of the U.S.A. is the belief in individual creativity. At Cornell people use this freedom far more than other places, because there are excellent laboratories across the campus that facilitate creative work. Also, living a less hassled life than in the big cities brings calm and allows more productive thinking.

CP: We are certainly not in a big city! What role should entrepreneurialism play in educating Cornell engineers?
AL: Today, start-up companies conduct innovative, focused work, and then larger companies acquire the start-ups. Faculty members and students will have to actively pursue commercialization to contribute to the economy, and to attract the best minds in the future.

CP: Will ECE students find big opportunity in start-ups?
AL: Most medical-imaging technologies function on ECE principles, such as signal processing. And there are a slew of electrical sensors that collect physical and chemical signals. The future will extend sensing to smaller units, such as cells and molecules, and that will require MEMS technology to create microscopic, integrated devices that enable such sensing affordably. MEMS technology originated from electrical engineering, although most other disciplines have adopted it.

CP: Let me ask about your experience with Cornell students. You frequently have undergraduate students in your lab. How has this worked?
AL: Cornell undergraduates somehow understand the value of research and learning through apprenticeship. I don’t think there has been one undergraduate that did not teach us something, as they learned from our group.

CP: What was the most outrageous thing that ever happened to you in a classroom?
AL: Well, let’s consider one of the good things, okay? While deriving the equations for a differential amplifier, I once asked students for a real-life example, and several students came up with the vibrations of a car due to the imbalance of the wheels. For the next few lectures we used this analogy to really get a good idea on how things work, and in fact this led to a research project on how to use micromechanical components to create non-electronic differential amplifiers.

CP: That’s a great example of how new technology, i.e., nanotechnology, is blending with traditional E.E. disciplines.
AL: Yes, nanotechnology is very interdisciplinary, allowing us to harness physical effects on chip. As the cost of each transistor keeps decreasing, the only way to keep profits up will be to add value through new physical effects. Nano is still developing its first products, but there are upcoming DNA chips that will open a window in our future using nanoscale effects on a chip.

CP: Finally, how do you think future ECE students should prepare for globalization?
AL: Businesses will always seek partnerships for mutual benefits. The best one can do is to gain the most out of the opportunities. I can say for sure that the right to be creative is not practiced anywhere as well as it is in the United States, and that is the key for our students—to leverage their creativity as a global bargaining chip.
use software that employs Fourier Trans-
forms, under development by research
teams elsewhere, to perform a thread
count. This project is described at people.ece.cornell.edu/johnson/tcproj.pdf. The il-
illustration above is an example of an X-ray
image from the van Gogh painting “The
Walk: Falling Leaves.” The canvas pattern
is plainly visible. This project is just one of
many such tasks within painting analysis
that are readily supported by basic tools
from signal processing.

An interview with Johnson about the
workshop, aired on the National Public
Radio show “Science Friday” on May 18,
2007, can be found at www.sciencefriday.
A repeat of this May 18 workshop will be
held at the Museum of Modern Art in New
York City on November 9, 2007. The initial
workshop was so promising that another
workshop—the Second International
Workshop on Image Processing for Art-
ist Identification—will be held at the Van
Gogh Museum in May, 2008.

Johnson expects that acquiring a deeper
understanding of a particular application,
such as painting analysis, will eventually
reveal issues previously unappreciated as
benefiting from the use of computer-based
signal-processing tools. Professor John-
son plans to introduce a course in spring
2009 that combines lectures on the paint-
ings of Vincent van Gogh with the digital
processing of images of these paintings in
support of their analysis.
Hands-on design, coupled with sound, fundamental knowledge, has always been a mainstay of the ECE program at Cornell. Nowhere do these two ideas come together more effectively than in large-scale system design projects. Two current projects, one mature and one nascent, demonstrate the range of activities available today.

CUAUV (Cornell University Autonomous Underwater Vehicle) is a mature project, having successfully participated in five competitions since its inception under the leadership of Professor Kevin Kornegay. Each year, a national-level AUV Competition is sponsored by the Association for Unmanned Vehicle Systems International (AUVSI), with different goals each year, inevitably involving obstacle navigation, passage through narrow underwater gates, and often detecting or retrieving objects—all of this to be accomplished under autonomous control. This year’s competition ran July 11–15 at the TRANSDEC facility in San Diego, and our team placed fourth in the overall competition among 27 highly qualified teams. The team had to plan, design, and build the entire system, which included mechanical structures, power and electronic systems, software and artificial-intelligence algorithms, and propulsion devices. The team has developed strong systems skills over the years, enabling the
various functional elements of their vehicle to be specified fully, designed and tested independently, and integrated into a finely honed navigating vehicle.

Planning the work and scheduling the various design elements is the role of the team leader and the subteam leaders. This year’s team leader was Ian Wang. (He is featured in a brief bio on page 6.) Next year’s responsibilities fall on the shoulders of Sam Fladung, an ECE senior. The team searches out those who best demonstrate a passion for the effort, and bring skills from electrical and computer engineering, mechanical engineering, computer science, and business. More information on our relative standing in this year’s competition, including a link to a descriptive design paper written by the team, can be found at www.auvsi.org/competitions/2007/07finalstandings.cfm.

A second, and new, team is in initial planning stages for the Automotive X-Prize, with the goal of developing a 100 mpg-equivalent vehicle. The X-Prize Foundation models its challenge after the famous Orteig Prize, won by Charles Lindbergh. The philosophy of the Orteig Prize was to stimulate achievement of a goal to benefit humanity. The X-Prize continues this spirit, placing emphasis on technical creativity and innovation, as well as on entrepreneurial realities.

The multi-year effort involves collaboration between the College of Engineering, the Johnson Graduate School of Management, and the College of Architecture, Art, and Planning. An important aspect of this effort is that the business plan will be co-developed during the technical design stages in full partnership with the technical teams. Current thinking is that the vehicle will be an innovative, hybrid-electrical design that utilizes the latest battery development, regeneration capabilities to harness otherwise lost energy, an efficient power train, and state-of-the-art control and monitoring systems.

The AXP team, as they are known, faces the challenge of recruiting dedicated contributors to the conception and design of the first prototype. Their ambitious schedule includes initial planning and vehicle prototype construction this fall, with entry into the competitive races in 2009. The first hurdle has already been overcome. Cornell’s AXP team has been selected as one of the 30 or so official contenders for the prize.

The founding faculty members include Professors John Callister and Al George, both from the Sibley School of Mechanical and Aerospace Engineering. The participating ECE faculty members will be selected early this fall. The team’s web site—www.cornellaxp.com/—will provide periodic updates on their activities over the next several years.

Students almost universally find participation in design teams to be an exceptional learning experience that complements classroom instruction in basic theories and the fundamentals. Our ever-increasing set of exciting design experiences helps prepare graduates for the challenges they will face in their professional careers.
New Associate Director

Terrence Fine

Arguably, one of the toughest jobs in the college is serving as the associate director for the School of Electrical and Computer Engineering. The associate director manages our course and curricular issues, and acts as the ultimate advisor for our students. Since ECE has one of the largest faculties at Cornell, coupled with some of the largest enrollments among undergraduate, M.Eng., and Ph.D. student populations at Cornell, and has labs and courses that frequently need updating as technology advances, the associate director is a busy person. Charlie Seyler (right) has been doing a great job as associate director for five of the last six years, and in July turned the reins over to Terrence Fine (left), who many of you know from his teaching of statistics, neural nets, and systems. I want to thank Charlie for his great effort and the positive impact he has made on the school, and welcome Terry to the office. We look forward to continued excellence in this position!

Cliff Pollock, Director

Student

Ian Wang

Commencement come and gone, and degree in hand, Ian Wang ‘07 had one more task to complete: his final competition. A member of the Cornell University Autonomous Underwater Vehicle (CUAUV) team for four years, Ian became team leader his junior year. He spent all of his summers in Ithaca working on the project. The competition was held in July at the Space and Naval Warfare Systems Center in San Diego. Cornell advanced three places in one year, moving from seventh place in 2006 to finish fourth in 2007. Congratulations, CUAUV!

Ian currently lives in San Francisco and works at McKinsey & Company as a business analyst. ECE courses such as Signals and Information taught by Professor Sheila Hemami and Radio Frequency Circuits and Systems taught by Wesley Swartz, though rigorous, gave Ian the solid foundation necessary to begin his career. “I enjoyed Swartz mainly because he made an effort to teach, not just lecture.” Ian enjoys leading a team and hopes to learn more about management at McKinsey. “I definitely got my job because of my CUAUV experience, including leadership, problem-solving, and teamwork. The engineering degree helped build a solid analytical base, but it was the team that interested them.”

Now that he is an alumnus, he plans on staying connected to CUAUV and his other world, the Cornell Ultimate Frisbee team. “I’ve had the opportunity to interact with a lot of Cornell alumni and see the positive impacts that they’ve made. Since I’ve gained so much from my experience on the CUAUV team, it’s appropriate for me to play a similar role for them now that I’ve graduated.”
Alumni Highlight

Don Kerr

If you have not already met or heard of Don Kerr or don’t know that he is an alumnus of ECE, we would like to introduce you to him. Don is the ideal ECE graduate. Don’s interests span energy, history, applied physics, intelligence, and microwave electronics, as well as engineering. His education includes a B.S., M.S., and Ph.D. received between 1963 and 1966.

Dr. Kerr’s distinguished public career started at the Department of Energy in 1976. In 1979, he received the department’s Outstanding Service Award. From there he moved to the Los Alamos National Laboratory, where he conducted and led research in high-altitude weapons effects, nuclear test detection and analysis, weapons diagnostics, ionospheric physics, and alternative-energy programs. After serving as director there from 1979 to 1985, Dr. Kerr became an assistant director of the FBI, responsible for its laboratory division. He has continued to serve in significant public roles, as can be seen by his appointment in August 2001 to the position of deputy director for science and technology at the CIA, his receipt of the CIA Distinguished Intelligence Medal in 2005, becoming the fifteenth director of the National Reconnaissance Office in July, 2005, and being appointed as the assistant to the Secretary of the Air Force later that year, as well as most recently being nominated by President Bush to be Principal Deputy Director of National Intelligence.

In addition to his extensive public service, Dr. Kerr held several key executive positions in private industry during the past three decades, including executive vice-president and director at Information Systems Laboratories, Inc., and corporate executive vice-president and director at Science Applications International Corporation. He also held positions as senior vice-president, executive vice-president, and president and director at EG&G.

Dr. Kerr began his formal education in engineering physics, but moved into electrical engineering once he decided what he wanted to do. His interests remained broad, and incorporated—in addition to a continued interest in physics and electrical engineering, economics, systems analysis, and history—minoring in the history of science for his Ph.D. Professor Les Eastman said, “Skip had to submit a paper for his minor and spent significant time interviewing Nobel Laureate Professor Peter Debye. I still have that paper in my office.” Professor Eastman was so impressed with Kerr that he took him on as his graduate student. Dr. Kerr has the distinct honor of being Professor Eastman’s first Ph.D. student.

Reflecting on his time at Cornell’s Department of Electrical Engineering, now the School of Electrical and Computer Engineering, Dr. Kerr stated that, “...learning a broad range of science and engineering techniques and knowledge enabled me to have an interesting career throughout transitions of technology.”

New Appointments

Aaron Wagner (July 2006)

Aaron joins us from U.C.—Berkeley, where he earned his Ph.D. in electrical engineering and computer science in 2005. During the 2005–06 academic year, he worked as a postdoctoral research associate in the Coordinated Science Laboratory at the University of Illinois at Urbana–Champaign. Aaron’s research focuses on information theory, particularly on the fundamental limits of compression in network contexts in which the compression must be coordinated across spatially-separated systems. Recently, Aaron has also begun to study applications of information theory to computational linguistics. He teaches ECE 411: Random Signals in Communications and Signal Processing and ECE 562: Fundamental Information Theory.

Aaron received two research awards as a graduate student, the David J. Sakrison Memorial Prize from the U.C.—Berkeley Department of Electrical Engineering and Computer Science and the Bernard Friedman Memorial Prize in Applied Mathematics from the U.C.—Berkeley Department of Mathematics. He also received numerous academic awards as an undergraduate. He has already received the NSF CAREER award at Cornell.

Aaron was raised in Detroit. He earned a B.S. in electrical engineering from the University of Michigan, Ann Arbor, as did his wife, Jasmine. Jasmine currently works as a circuit designer for a private firm in Ithaca. Aaron’s father is also an electrical engineer who specializes in power systems for industrial applications.

(continued on page 8)
Ehsan Afshari (July 2006)

Ehsan Afshari joins us from Cal Tech, where he finished his Ph.D. in electrical engineering in 2007. His broadly defined research interest is in analog circuit design. More specifically, he exploits nonlinear effects to generate solitons in circuits. His work involves the application of the mathematical theory of wave propagation to high-performance circuit design. He blends electrical engineering, applied physics, and mathematics into a coherent research theme. The result has been the development of novel circuit-design techniques for very high-frequency and/or high-power applications.

Ehsan was born in Tehran, Iran, in 1979. He received his B.S. degree in electronics engineering from the Sharif University of Technology, Tehran, Iran and his M.S. and Ph.D. degrees in electrical engineering from Cal Tech. Ehsan was given the nation’s Best Engineering Student award by the president of Iran. He is also the recipient of the best paper award in the Custom Integrated Circuits Conference (CICC), September 2003; the first place at Stanford-Berkeley-Cal Tech Inventor’s Challenge, March 2005; the best undergraduate paper award in Iranian Conference on Electrical Engineering, 1999; the recipient of the Silver Medal in the Physics Olympiad in 1997; and the “Award of Excellence in Engineering Education” from Association of Professors and Scholars of Iranian Heritage (APSIH), May 2004.

Peter Doerschuk (July 2006)

Professor Peter Doerschuk shares an appointment between biomedical engineering and ECE. Before joining Cornell University, Peter was on the electrical and computer engineering and biomedical engineering faculties of Purdue University. He received B.S., M.S., and Ph.D. degrees in electrical engineering from MIT and an M.D. degree from Harvard Medical School. After post-graduate training at Brigham and Womens’ Hospital in Boston, he held a post-doctoral appointment at the Laboratory for Information and Decision Systems at MIT before joining Purdue.

Peter’s research concerns identifying information on biological and medical systems from the viewpoint of computational nonlinear stochastic systems. A wide range of spatial and temporal scales is represented in his collaborative research. At the smallest spatial scale, he has developed algorithms and parallel software for problems associated with determining the 3-D shape of viruses from electron microscopy images and X-ray scattering data. At the largest spatial scale, he has developed nonlinear differential-equation models of the pharmacokinetics of ethanol. He has used these models to develop signal-processing and pattern-recognition algorithms and software for processing the outputs of a long-term implanted ethanol sensor system and to determine parameters describing the ethanol-related physiology of an individual from breath ethanol measurements.

He is currently an associate editor for IEEE Transactions on Image Processing, a leading journal in the area of signal-processing aspects of image processing, imaging systems, and image scanning, display, and printing. The focus of his editorial activities is medical and biological imaging manuscripts.

Ed Suh (January 2007)

Gookwon “Edward” Suh joins us from MIT, where he finished his Ph.D. in 2006, working on a single-chip secure processor. He earned his B.S. in electrical engineering from Seoul National University in 1999. Following graduate school, he spent a year at PUFCO Inc., where he led the development of unclonable RFIDs and secure embedded processors.

Ed’s research interests include computer systems in general, with particular focus on computer architecture. He is interested in combining architectural techniques with low-level software to enhance such aspects of computing systems as performance, security, and reliability. Recent and ongoing research topics include high-performance memory systems, secret hardware functions that exploit process variations, architectural techniques for security and verification, and new programmable substrates for simplified synthesis.

Whenever he has free time, he likes to travel, catch new movies, or play squash. His graduate years in Boston also influenced him to be one of those who closely follow every Red Sox game.

Ed and his wife, Judy, are expecting a baby girl soon.
Retirements

**Toby Berger (January 2006)**

Toby Berger retired and became professor emeritus in January, 2006. Toby was a faculty member for 37½ years. He received his B.E. degree (*summa cum laude*) in engineering in 1962 from Yale University, and his M.S. and Ph.D. degrees in applied mathematics in 1964 and 1966, respectively, from Harvard University. He began in ECE in 1968, and became the J. Preston Levis Professor of Engineering in 1988. He was named the first Irwin and Joan Jacobs Professor of Engineering in 1998.

Toby developed and taught the courses in random signals and systems and information theory, and communication networks and information theory. He won numerous teaching awards, and was a recipient of the IEEE Leon K. Kirchmayer Graduate Teaching Award.

Toby's research interests ranged from information theory, to communication networks, video compression, signature verification, and coherent signal processing. Toby received a multitude of honors and awards during his career, including the coveted Shannon Award in 2002. He became a member of the National Academy of Engineering in 2007.

**Don Farley (July 2006)**

Don Farley retired and became professor emeritus in July 2006 after 39 years as a Cornell faculty member. Don started here in 1951 as a freshman in Engineering. Don received the B.E.P. degree at Cornell in 1956 and the Ph.D. at Cornell in 1959. After a NATO Postdoctoral Fellowship at Cambridge and a docent position at Chalmers University, Don took a position as physicist at the Jicamarca Radar Observatory in Lima, Peru, was appointed director in 1964, and, in 1967, returned to Cornell as professor of electrical engineering. Don was appointed as the J. Preston Levis Professor of Engineering in 1998.

Don's calling has been to develop and use the principles of radio-wave scattering to understand the ionized upper atmosphere. In 1963, he published a paper in *Physical Review Letters* that, two decades later, won him an award from the *Citation Index* for sheer quantity of citations and which associates his name with a fundamental physical process called the Farley-Buneman instability.

As an educator and a teacher, Don has been no less remarkable. His gift is for reducing complicated problems to straightforward concepts and finding simplicity in complexity.

In Memoriam

**Sergio Servetto (1968–2006)**

We are saddened to report that Sergio Servetto, assistant professor, died July 24 in a private plane accident. He was 39. Sergio had talked of his love of flying for many years and recently decided to follow his dreams. He purchased a single-engine Cessna in Michigan and was flying it back to Ithaca when the accident occurred.

Sergio characterized his research and educational goals when he said, “All of my educational and outreach activities . . . are designed around the general goal of providing a solid theoretical basis to our students in networking and communications.” He was writing a book, tentatively entitled *Digital Communications Over Packet-Switched Networks*. He also had been making great progress on a major paper that he hoped would resolve the multi-terminal rate distortion problem, a problem of some 30 years’ standing. Experts plan to submit finished portions of it for publication in Servetto’s name.

Sergio was best known among the students for his teaching of Digital Communications Over Packet-Switched Networks. He introduced new rigor into the course, and students found it stimulating and challenging. Graduate students will always remember his seminars on information theory, and the leaders he invited to campus to spend time with these students. Sergio will always be remembered for his passion about his work and his field.

Servetto is survived by his wife, Viviana Sitz, and two young sons, Alejandro and Luciano, whom he loved dearly.
Last year, Cornell University launched the most ambitious campaign in its history. Far Above . . . The Campaign for Cornell will empower the university to lead and be a model for higher education in the twenty-first century and position the College of Engineering to support collaboration and discovery and to educate diverse and dynamic leaders who will change the world. The School of Electrical and Computer Engineering, the largest in the college, with 40 faculty members, 300 graduate students, more than 500 undergraduates, and 9,502 living alumni, has a wonderful opportunity to preserve its signature strengths and move with confidence into new areas.

Campaigns are designed to raise funds for specific needs, have a precise time frame and an exact dollar goal, and are heavily promoted. Campaign gifts are distinct from Annual Fund support, which comprises the annual, unrestricted gifts that give the ECE director the flexibility to meet the school’s most pressing needs. ECE will double unrestricted gifts over the course of the campaign, providing the director with faculty start-up support, seed funds for new initiatives, visiting lecturer support, equipment for instructional laboratories, and the ability to respond to new opportunities.

In addition, ECE will dramatically build its endowment. Cornell’s endowment, the university’s financial foundation, generates funds each year. By building the endowment, the director will have a stable, permanent source of funds to recruit and retain the best faculty, attract the best graduate students, and offer the best courses and opportunities for undergraduates.

Using both funds raised for endowment plus the annual fund, ECE will renovate the existing infrastructure. To support education and research goals, we must provide upgraded facilities and laboratories. Physical spaces impact the quality of student experience and faculty research and this campaign offers us the chance to modernize and begin to implement the College of Engineering’s master facilities plan.

Campaigns succeed because of the collective support of many donors, and individual gifts, no matter the size, help us get closer to achieving our goals. Your gift will make a critical difference in keeping ECE strong, helping us educate the next generation of engineers while driving the leading edge of technology. Campaign commitments may be completed over a period of five years. Gifts of cash and securities, stock shares, mutual fund shares, and bonds can be applied to the campaign. The easiest way to make a cash gift is through a secure online transaction at alumni.cornell.edu/giving.htm.

If you have any questions please feel free to contact:
Jessica Traynor ’96
Cornell University
255 Carpenter Hall
Ithaca, NY 14853-2201
607.254.7122
jct3@cornell.edu
Jessica Traynor ’96, associate director for the College of Engineering’s Alumni Affairs & Development (AAD) team, joined the ECE community to support fundraising efforts in May 2007. She has been with AAD for three years. Prior to that she was a teacher in Ithaca; in fact, she taught some of our own faculty members’ children! After she graduated from Cornell, Jessica worked in AAD as a researcher, then became acting director of Campus Information & Visitor Relations. Please join us in welcoming Jessica to ECE. Should you have any comments, questions, or concerns related to alumni affairs and development, feel free to contact her.

Candace S. Altschul FR
Gordon Wood Anderson ’58 B.E.E. ’59
L. Gordon Booth Jr. ’67 M.Eng. ’68
Henry R. Brandt ’75 M.Eng. ’76
Joseph S. Bravman M.S. ’71 Ph.D. ’71
Tara K. Callahan FR
Andrew R. Chang ’74
Tina W. Chen ’95
Jim F. Cunningham ’71 M.Eng. ’75
Albert Joel Eisenberg ’48
John A. Eisenberg ’67 M.Eng. ’68
Stephen P. Elias ’83 M.Eng. ’84
John V. Faricelli M.S. ’81 Ph.D. ’84
Donald Farley Jr. ’55 Ph.D. ’60
Peter S. Greis ’73 M.Eng. ’74
H. Torsten Griem ’82 M.S. ’85 Ph.D. ’88
Milnore Hall FR
Irwin and Joan Jacobs ’54 B.E.E. ’56
Betty Kahn FR
W. Keith Kennedy Jr. ’65 M.S. ’66 Ph.D. ’68
Donald MacLean Kerr ’61 M.S. ’64 Ph.D. ’66
Lynnita K. Knoch Ph.D. ’89
Richard H. Lewis ’80
Victor S. Lin ’89 M.Eng. ’91
Roger J. Malik M.S. ’79 Ph.D. ’81
John W. Monroe ’66 M.S. ’68 Ph.D. ’70
Dorothy J. Oakes ’72
James N. Ottobre B.E.E. ’49
Richard J. Robbins ’68
Michael A. Roth ’94
Jonathan J. Rubinstein ’78 M.Eng. ’79
William Joseph Schaff ’78 Ph.D. ’84
Dr. Elliot Bruce Sloane ’74
Joel S. Spira PA
Willard P. Summers PA
Subramanian Sundaresh M.Eng. ’79
Bijan Tadayon ’86 Ph.D. ’90
Jaime G. Tenedorio ’78 M.Eng. ’79 Ph.D. ’82
H. Barteld Vanrees Ph.D. ’80
Vijaykumar Vashee M.Eng. ’75
Joel R. Wendt Ph.D. ’88
Brian F. Wruble ’64 B.E.E. ’65 M.Eng. ’66
Robert M. Zeldman Ph.D. ’88

Statistics for ECE

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Cornell ECE Ranked Tops in EE and CE in Faculty Scholarly Productivity Index

In a new ranking from Academic Analytics listed on the Chronicle of Higher Education web site, we received top honors among research universities in the 2005 Faculty Scholarly Productivity Index, which measures annual productivity of faculty based on publications, citations, research funding, awards and honors, and other factors. In both Computer Engineering and Electrical Engineering, we were ranked #1. Details can be found at chronicle.com/stats/productivity/

We continue to be in the Top 10 in the U.S. News and World Report rankings of our graduate and undergraduate programs.

Intro to New Format for Connections

This is the inaugural issue of the newly designed Connections magazine. It is based on the pioneering work of Professor Simpson (Sam) Linke (left), who produced this departmental update for nearly 15 years! To Sam, producing Connections was truly a work of love and clearly reflected his deep devotion to the school. Thank you, Sam, for your dedication and for documenting ECE accomplishments and changes over so many years.

Our editorial team hopes you will enjoy the revised format. We would very much like to hear your comments, which may be sent via e-mail to the new editor of Connections magazine, John Belina (right), at belina@ece.cornell.edu.

For more information, www.ece.cornell.edu