George H. Heilmeier
1993 Winner
Vladimir Karapetoff Eminent Members’ Award

Also Featured:
Robert W. Lucky Honored
With HKN Eminent Membership

Gamma Mu’s Certificate of Merit Report
KARATEPF EMINENT MEMBERS’ AWARD COMMITTEE
Chairman: Mr. Donald Christiansen
434-A West Main Street
Huntington, NY 11743

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The HKN Membership Fee is $25 which includes a 2 year initial subscription to BRIDGE as determined in the 1991-92 HKN MAIL Convention

1992-93 Special Mail Convention
National Constitution Revisions
135 Chapters sent in ballots.
142 ballots were required for resolution (Needed 3/4 of 189 chapters to pass).
Many, many thanks to each chapter that sent in a ballot.
We will try again this year.
Robert W. Lucky
Inducted
Eminent Member
in the
Eta Kappa Nu Association

EMINENT MEMBER
INDUCTION CEREMONY

New Brunswick, New Jersey
April 18, 1993

Citation

In recognition of his outstanding technical achievements in the field of Communications Research during his long professional career, his technical and managerial contributions, making technology available to the general public, and because of his involvement and leadership in Electrical Engineering Societies, including his service as Executive Vice President of the Institute of Electrical and Electronics Engineers, and as Eta Kappa Nu Board Member

Biography

Robert W. Lucky is vice president, applied research, for Belcore. Dr. Lucky is an expert on communications technology and former executive director of the Communications Sciences Research Division at AT&T Bell Laboratories in Holmdel, NJ.

He is well known as inventor of the adaptive equalizer, a distortion correcting technique in use for all high-speed data transmission.

Dr. Lucky won recognition in the Outstanding Young Electrical Engineer Award program of Eta Kappa Nu in 1967. He serves on the HKN committee that screens nominations for the outstanding young engineer award, and he is a member of the HKN Eminent Members’ Committee that reviews nominees for the Vladimir Karapetoff Eminent Members’ Award.

He has also been active in IEEE, serving as Editor of the Proceedings of the IEEE, vice president, publications, and executive vice president. He also was president of the IEEE Communications Society. Dr. Lucky was elected a Fellow of the IEEE in 1973 for his contributions to the theory and practice of data communications.

Dr. Lucky is known for his skill in making technology accessible and intelligible to the general public. He is the author of Silicon Dreams, a popular treatise covering advanced technology with emphasis on end applications of electronics. He has also appeared frequently on public television programs.

Among the honors and awards he has received are: the Marconi International Fellowship Award, 1987; the USAF Medal for Exceptional Civilian Service, 1990; the Communications Society Armstrong Award, 1971; and the IEEE Centennial Medal, 1984.

Dr. Lucky is a member of the National Academy of Engineering. He has written or co-authored more than 50 papers on data communications and writes a bimonthly column, “Reflections,” for IEEE Spectrum. A recent book published by IEEE Press, Lucky Strikes Again, is based on his Spectrum Columns.

Dr. Lucky earned his BSEE, MSEE, and Ph.D. degrees from Purdue University, and was named a Distinguished Engineering Alumnus in 1989. He was further honored by Purdue with a Doctorate of Engineering (Hon.) in 1988, and by the New Jersey Institute of Technology with a Doctorate of Science (Hon.) in 1994.

In his spare time, Dr. Lucky is an avid “computerist,” plays the violin and piano, and is an enthusiastic bicyclist.
Photos: At top left, Eminent Member Robert Lucky expresses thanks; and at top right, Dr. Lucky and wife, Joan. At center left are (from left to right) Mrs. Gertrude Hudson, Dr. Lucky, and Mrs. Lillian Howard. At center right, Dr. Lucky with Beatrice D'Arcy and James D'Arcy. At bottom left, Dr. Lucky and Mrs. Lucky with Ceremonial Team and Guests.

Photos above: Ceremonial Team Members induct Eminent Member, Robert Lucky. At top left, Vice President David Meyer displays HKM Shield, while Past President James D'Arcy describes symbolic meaning. At top right, President Laureen Parker reads citation. At center left, James D'Arcy and Dr. Lucky during ceremony, and at center right, Dr. Lucky with Dr. David Meyer and Ms. Laureen Parker. At bottom right, Dr. Lucky is surrounded by HKM Directors, Dr. David Stephenson at far left, Mr. Dennis Lettumman at center left, Dr. Robert Bartolini at center right, and Dr. Billie Ball at far right.
George H. Heilmeier is 1993 Winner Vladimir Karapetoff Eminent Members’ Award

by Donald Christiansen

George H. Heilmeier was presented the 1993 Vladimir Karapetoff Eminent Members’ Award on April 19th in a ceremony at the Hyatt Regency, New Brunswick, N.J. It is the major award presented byEta Kappa Nu for career-long accomplishment. It is made in recognition of an invention, development, or discovery in the field of electrical engineering that has had a major impact on society through the improvement of standard of living, the public welfare, and/or global stability.

Dr. Heilmeier was selected for his work in the field of liquid crystals. The jury of award cited Dr. Heilmeier as "an outstanding engineer whose career focus has been on developing and bringing to fruition cutting-edge technologies in the field of electro-optics. His major discoveries in the field of liquid crystals made possible the liquid crystal display, used in a variety of formats in industrial, military, and consumer products around the world." The jury recognized the importance of Dr. Heilmeier's discoveries in enhancing standard of living and quality of life in many areas of the globe.

Dr. Heilmeier is president and chief executive officer of Bell Communications Research, Inc., a research consortium owned by the seven regional Bell operating companies. He received the David Sarnoff Award in recognition of his discovery of several new electrooptic effects that led to displays for calculators, watches, and other electronic products.

He received the BS and MS degrees from the University of Pennsylvania in 1958, the M.S. degree in engineering from Princeton University in 1961, and the Ph.D. degree in 1962. He joined RCA Laboratories in 1958, where from 1965 to 1968 he was director of solid state device research.

Dr. Heilmeier was named a White House Fellow in 1970 and served as special assistant to the Secretary of Defense until 1971. From 1971 to 1975 he was Assistant Director of Defense Research and Engineering in the Office of the Secretary of Defense. Then, for two years, he served as Director of the Defense Advanced Research Projects Agency.

Following his government service he returned to industry as vice president for research, development, and engineering for Texas Instruments, where in 1983 he was made senior vice president and chief technical officer. In 1991, he joined Bell Communications Research in his present position.

Dr. Heilmeier has served as a member of the Defense Science Board, the Air Force Science Advisory Board, and the advisory group on electronics devices of the Department of Defense. He is the holder of some 30 patents relating to liquid crystals, ferroelectric devices, and display structures, and the author or co-author of more than 70 publications relating to liquid crystals or other physical/electronics subjects.

He received the David Sarnoff Award in 1969, the IR-100 new product award of the Industrial Research Association in 1969-70, and the Distinguished Civilian Service Award from the Defense Department in 1975. Dr. Heilmeier is a Fellow of the IEEE and a member of the National Academy of Engineering, Sigma Xi, Tau Beta Pi, and Eta Kappa Nu. He was named Eta Kappa Nu's Outstanding Young Electrical Engineer in 1968.

The Karapetoff award was established in honor of and through the estate of Vladimir Karapetoff, an Eminent Member of Eta Kappa Nu and a Fellow of the IEEE. The fund to support the award was initiated through a bequest of Dr. Karapetoff's widow, R. M. Karapetoff Cobb, herself a distinguished chemical engineer. Dr. Karapetoff emigrated from his native St. Petersburg, Russia, in 1922, became a U.S. citizen in 1960, and was a professor at Cornell University until his retirement in 1969.

Eta Kappa Nu is currently soliciting nominations for the 1994 award. The award is accompanied by a handsome stipend. Nomination forms may be obtained from: Donald Christiansen, Chairman, Eminent Members' Committee, 434A West Main Street, Huntington, N.Y. 11743, FAX: 516-385-4940.
The 1992 Outstanding Young Electrical Engineer Awards were presented at the HKN Annual Awards Banquet held at the Hyatt Regency New Brunswick, New Jersey on Monday, April 19, 1993. Patrick O. Nunally, IntelliSys Automation Inc., Diamond Bar, California, was honored as the 1992 OYEE. Phyllis Lotostanski Cosentino, AT&T Bell Laboratories, Naperville, Illinois, and Gail R. Lalk, Bellcore, Morristown, New Jersey, were awarded Honorable Mentions. Donald E. Bossi, United Technologies Research Center, East Hartford, Connecticut, David L. Thomson, AT&T Bell Laboratories, Naperville, Illinois, and Christopher P. Yakymyshyn, GE Research and Development Center, Schenectady, New York were introduced as Finalists for the first time. All of the above were selected in a two-tier process from over a hundred nominations which were solicited and received by the Awards Organizing Committee in 1992.

The 1992 Vladimir Karapetoff Eminent Members’ Award was also presented at the annual banquet, to George H. Heilmeier, chief executive officer of Bell Communications Research. Heilmeier holds some 20 patents relating to liquid crystals, ferroelectric devices, and display structures, and was recognized byEta Kappa Nu in 1968 as the OYEE. [See Karapetoff article elsewhere in this issue.]

James A. D’Arcy, past National President of theEta Kappa Nu Association, served as Master of Ceremonies, and John H. Powers, Executive Director and General Manager of the Institute of Electrical and Electronics Engineers, gave the keynote address. Laureen H. Parker, current HKN National President and a member of the Jury that selected the awardees, bestowed the certificates.

From the accomplishments of the awardees, one can only surmise that the sluggish recovery and belt-tightening being experienced by the engineering community at the current time must soon come to an end. All of them are hard at work inventing new products or new processes which will surely enhance the employment picture. This, together with the keynote address, indicating the plans the IEEE is mounting to enter the twenty-first century, in a more peaceful international cooperative and interdependent atmosphere than we have ever had in the twentieth century, convinced the banquet attendees, that the future for continuing engineering education is in good hands.

Patrick O. Nunally, the Outstanding Young Electrical Engineer of 1992, was being honored for his entrepreneurial contributions to signal processing and microelectronic design in the area of pattern recognition and vision processing. When the neural-net device which he developed for a military application in the 1980's was not needed anymore by General Dynamics Corporation, his employer, he was encouraged to pursue civilian uses for the device by founding E-Metrics, an independently operated subsidiary of the company. E-Metrics has since been sold to Hughes Aircraft. He subsequently switched his entrepreneurial skills to co-founding IntelliSys Automation Inc., where he developed a personal people meter system that monitors total media exposure (TV, radio, etc.) for the Arbitron Corporation.

In addition to the time he spends on technical and business problems, he still finds time to obtain teaching credits and to teach courses. Furthermore, he assumed responsibility for establishing the core curriculum for a new electronics technology associate program for Coastal Community College. He also acts as a mentor for the Future Scientists and Engineers of America, and serves as vice-chair of the IEEE LA Section of the Engineering Management Society, among others.

Nunally had been nominated three years earlier by H. P. Schmid of General Dynamics, who had to forgo witnessing the culmination of the nomination process, the actual awarding of the winning bowl and certificate, because of a business commitment. Instead, Patrick was introduced to the banquet guests with well-wishes by Robert Bartolini, a member of the Awards Organizing Committee.

The first 1992 Honorable Mention introduced at the banquet was Phyllis Lotostanski Cosentino, currently Technical Manager of International Wireless Switching Systems Engineering for AT&T. Mrs. Cosentino had worked earlier on voice band transmission problems on the public switched telephone network and thus is thoroughly versed in both the "wired" and the "wireless" part of telecommunication. One innovation her team accomplished was to detect and provide cellular phone service to customers roaming outside of their service area, and, of course, to provide proper billing information to the pertinent local offices just seconds after call completion.

In her management position, she is in a good position to influence world-wide cellular telephony deployment, an expanding business for her company. Her outside-of-work interests, among others, include tutoring disadvantaged students; mentoring, through outreach programs and adopt-a-school programs, for minority students interested in computer science or engineering as a profession. She also plays the clarinet in community orchestras.

She was nominated by D. M. Potoczny, Vice President of Technical Support, and introduced by Dr. Talmage P. Brash, AT&T Department Head of Wireless Base Station Systems Engineering.

The second 1992 Honorable Mention introduced at the banquet was one of last year's finalists, Gail R. Lalk, a researcher at Bellcore, who is currently involved with the AURORA Gigabit Testbed, one of five national gigabit testbeds being constructed as part of the National Research and Education Network. Her technical field is optical electronics and as editor of the Laser and Electro-Optics Society Newsletter, which is read internationally, she does have a direct influence on publicizing developments in the field, and thereby contributing to the field's progress. In addition, she organizes and leads discussion groups on such topics as the ethical and moral implications of advanced communications technologies, and volunteers as mentor for undergraduate students assigned to her laboratory, and participates in community charity drives and walkathons.

Mrs. Lalk was nominated by P. F. Liao, Assistant Vice President of Network Research. She was introduced this year by her direct supervisor, Dr. Kenneth C. Young, Jr.

Among the three first-time finalists selected were Donald E. Bossi, developer of device structures and fabrication processes for integrating various photonic and electronic components on a single gallium arsenide substrate for use in fiber-optic communication/control systems. Dr. Bossi is known for his congeniality and acts as mentor for young engineering students. He was nominated by Anthony J. DeMaria, assistant Director of Research for Electronics & Photonics Technologies at the United Technologies Research Center in East Hartford, Connecticut, and was accompanied to the
podium to receive his certificate by Leon Newman, Manager, Photonic Systems, his direct supervisor.

David L. Thomson, the second finalist, was chosen for his work in speech processing, which led to the development of a speech recognizer used by AT&T in an automated operator for collect calls. He is a holder of six patents and of one patent application. Mr. Thomson regularly volunteers as sign language interpreter for the deaf, presides over a young single adults group and sings in his church choir. He was nominated by M. Iwama, Chief Technical Officer for Switching Systems at AT&T Bell Laboratories in Naperville, Illinois, and was accompanied to the podium by his immediate supervisor, Dr. Judy Tschirgi.

Christopher P. Yakymshyn, the third finalist, was recognized for his team’s effort in overcoming stability problems in dimethyl amino stilbazolium tosylate (DAST) for use as an electro-optic material. This material has an electro-optic figure of merit roughly twelve times that of lithium niobate, and has become the basis for a new generation of high-performance spatial light modulators. After work, Dr. Yakymshyn is involved in efforts to direct site selection for a low-level radioactive waste facility. He was nominated by Dr. Walter H. Herbinger, Manager of the Engineering Physics Research Center of the General Electric Research and Development Center in Schenectady, New York, and was accompanied to the podium by the Center’s Laboratory Manager, Dr. Kirby G. Vosburgh.

As indicated above, all the awardees were persons who qualified not only for technical reasons, but also for leading a well-rounded life, and contributing to the well-being of the communities in which they reside. They thus have a direct impact on both the general economy and on the quality of life. May they be successful for evermore!
NEW OFFICERS AND DIRECTORS

David G. Meyer
President

Dr. David G. Meyer received the B.S. degree in electrical engineering in 1973, the M.S.E. degree in mechanical engineering in 1976, the M.S. degree in computer science in 1979, and the Ph.D. degree in electrical engineering in 1981, all from Purdue University, West Lafayette, Indiana. In 1982, he joined the School of Electrical Engineering at Purdue University, where he is currently an associate professor specializing in advanced architecture microprocessors, computer architecture, electro-acoustics, digital signal processing, parallel processing computer systems, and educational delivery systems.

Dr. Meyer is a member of the Institute of Electrical and Electronic Engineers (IEEE) professional society, the Audio Engineering Society (AES), the Association of Computing Machinery (ACM), and the American Society for Engineering Education (ASEE). He is also a member of theEta Kappa Nu electrical engineering honorary society and Tau Beta Pi electrical engineering honorary society. He has served as a faculty advisor for the local student chapters of both HKN and IEEE.

Dr. Meyer has developed two new courses in the computer engineering area: a graduate course on advanced architecture microprocessors, and a digital systems senior project course. In addition, he has completely revised the introductory lecture laboratory course on microprocessors and made major contributions to the introductory laboratory course on logic design.

Dr. Meyer has won over ten teaching awards in his career. In 1987, he was the national recipient of theEta Kappa Nu C. Holmes MacDonald Outstanding Teaching Award. In 1986, he was one of 11 national recipients of Digital Equipment Corporation’s “Incentives for Excellence” Award. This award has allowed Dr. Meyer the opportunity to improve laboratory facilities and to experiment with the use of interactive laser videodisc instructional delivery systems.

Dr. Meyer has published two research books, eight journal articles, thirty-two conference papers, and nine technical reports since his appointment to a tenure track position in 1983. Dr. Meyer has received research grants from IBM for studies in parallel/distributed computing from the Indiana Corporation for Science and Technology for development of advanced robot control hardware and software from Digital Equipment Corporation for the development of computer-aided educational delivery systems. He has been the Principal Investigator or Co-Principal Investigator on numerous research contracts, and he has received valuable equipment grants from several companies.

The need to adapt presentation of course material to students with different backgrounds and abilities and the need to teach in the “visual arena” have motivated Dr. Meyer to push for use of “multimedia” in education. Three years of equipment funding from Digital Equipment Corporation followed by three years of Creative Undergraduate Instruction Project funding from the Dean of Engineering have facilitated the creation of a cost-effective testbed system for multimedia instructional delivery at Purdue’s School of Electrical Engineering. This testbed system, called the “Videojockey Multimedia Delivery System” (VMDS), provides electronic delivery of multimedia instructional materials to various classrooms, and provides students outside of class with select access to the same multimedia instructional materials used during lecture—e.g., still frames, animations, and segments stored on laser videodisc, videotaped demonstrations, “electronic field trips,” etc. Remote access to the database of multimedia materials is provided using an existing in-house closed circuit cable TV network called the Engineering Computer Network (ECN).

VMDS distributes multiple channels of video sources to individual student workstations as well as various lecture and computer terminal rooms. One of the ECN lab host computers supports a user interface (Figure 1) that includes the frame of still frames and videotaped segments currently available, (2) schedules the frame/segment for transmission over the in-house cable TV network, and (3) autoloates the videodisc and videotape playback units to find the selected frame/segment and/or segments. A text window, which can be closed, also has the capability for either the user to provide additional “annotation” (e.g., textual explanation of specific material and/or a “lecture presentation” frame) or to help/see also information. Via VMDS, students are able to access visual still frames and videotaped segments presented in lecture outside of class, from a variety of locations.

The Videojockey Multimedia Delivery System, described above, has grown out of an earlier instructional innovation developed by Dr. Meyer: the “Lecture-Workbook,” a skeleton set of notes with carefully chosen sections left to be completed in class. Structure and organization of the Lecture-Workbook is based on studies that show note-taking transmited mere archival ability. Significant learning can occur during lecture due to the active encoding of information that notetaking facilitates. This fact in turn helps focus class-time attention on material that has the greatest potential for elucidating important concepts while minimizing the amount of class-time spent on peripheral details. Not only is class-time efficiency maximized, but there is greater opportunity for interaction and discussion, thanks to a more relaxed atmosphere.

Finally, use of a Lecture-Workbook facilitates a structured lecture-lab course outline, providing high consistency in the course content from semester to semester regardless of who is teaching the course. Dr. Meyer has developed complete Lecture-Workbooks for EE 360 Laser Electronics Design (used from 1980-1985) and EE 362 Microprocessor Systems and Interfacing (used from 1982-present). He is currently developing similar materials for EE 477 Digital System Senior Project and EE 566 CISC Microprocessor System Design. He is also co-authoring, with Harold S. Stone, a textbook covering the EE 362 and EE 477 course material: Microprocessor Systems and Interfacing (Addison-Wesley), to appear in 1984.

Another noteworthy innovation pioneered by Dr. Meyer is a computerized grading/course management system that provides students, via E-mail, with their exact class standing along with a projected grade at various times throughout the semester. Development of this system has been motivated by the desire to let students know exactly where they stand following each exam, while at the same time respecting their privacy (by not posting scores and/or projected grades publicly). The grading algorithm developed and refined over the past ten years has proven to be very fair, reliable, and stable. An accompanying set of utility programs provide the instructor with a wide range of statistical information as well as course support services (e.g., grade entry sheets, office hour log sheets, etc.). Dr. Meyer has used this system in all the classes he teaches and has made it available to other professors as well.

Dr. Meyer lives in West Lafayette, Indiana with his wife, Marsha, and two sons, Corben and Connor.

Bruce P. Johnson
Vice-President

Born in Lewiston, Maine on August 8, 1938, Bruce attended Bates College where he majored in Physics, developed an interest in electronics, and became building stereo systems out of World War II surplus electronics, and played varsity tennis for two years. Graduation from Bates College brought him to the University of New Hampshire, Durham where he was teaching and research assistant and held a National Science Foundation (NSF) pre-doctoral fellowship. His specialization at UNH was in the area of solid state transport properties of semiconductor materials at elevated temperatures. The M.S. degree in Physics was completed in 1963.

In 1962, he joined the faculty of the Department of Physics at Hobart and William Smith Colleges in Geneva, N.Y. teaching all levels of undergraduate Physics and supervising undergraduate research on the dielectric and optical properties of materials. In 1964, Bruce enrolled for the Ph.D. at the University of Missouri, Columbia, at Missouri, in addition to being a teaching assistant, Bruce attended a Stewart and a National Science Foundation Fellowship. The dissertation research area was on color centers in silicon crystal strontium oxide, a material in oxide coated cathodes for efficient electron emission.

The completion of the Ph.D. in Physics in January of 1967 took him to the Advanced Engineering Laboratory of General Electric’s Medical System Division in Milwaukee, Wisconsin. The work at GE, Milwaukee was on non-conventional x-ray imaging systems including semiconductor-electroluminescent sandwichs and x-ray luminous fiber optic imaging systems. In December of 1969, he transferred to the Lamp Division of General Electric at Nela Park in Cleveland, joining a new GE effort to develop solid state lamps. Responsibilities at GE have included training of technicians and engineers doing research and development on light emitting
diods and displays. When GE transferred this effort to Syracuse, N.Y. in 1974, Bruce decided to return to teaching and academic research. He joined the faculty of the Electrical Engineering Department at the University of Nevada-Reno as an Associate Professor with responsibilities for courses in integrated circuit design, devices, opto-electromagnetic fields and computer engineering. In 1978, he was elected chairman of the department and served through 1983 with promotion to full professor in 1981.

With the generous assistance of Eminent Member Marcus Dodson, the Theta Psi Chapter of Eta Kappa Nu was created at UNR in 1982. Bruce has been the Chapter Advisor since its founding. He served on the Board of Directors of Eta Kappa Nu from 1990 to 1992 as the Western Director.

President Jimmy Carter appointed Bruce to the United States Metric Board from 1978-80 and from 1980-82 as he served two terms including chairman of the USMBe research committee. Active in IEEE, he has served as student chapter advisor, chairman of the Northern Nevada Section, Region 6 Central Area Student Activities Coordinator, and from 1991-present as the Region 6 Student Activities Chairman. As a member of the Board of Directors of the Year Committee. Other professional associations have included Sigma Pi Sigma (Physics honor society), American Society for Engineering Education, American Physical Society, Electrochemistry Society, and the Association of Science and Technology for Economic Development. In 1991, he was elected to a second term as chairman of the Electrical Engineering Department. Through the years at UNR, he has served on the Faculty Senate including the Faculty Senate Executive Committee, the Graduate Council, the Graduate Research Advisory Board, and many campus, college and department committees. He is currently co-chairman of the International Symposium on Recent Advances in Microwave Technology to be held in New Delhi, India in December, 1993.

Present research interests center on high frequency electronics including CAD modeling of electronic devices and circuits and intelligent vehicle highway systems. Bruce has over 40 publications and has been involved in a wide variety of funded research from agencies such as NSF, ARO, NASA, and several private companies. A recent project he is working on involves developing a radar module to laterally guide a vehicle along the automated highway of the future with no driver intervention. This project is funded by the California Department of Transportation. He recently completed another project funded by the Federal Strategic Highway Research Program which involved instrumenting a truck tire with a video camera that monitored the internal rib deformation as the tire encountered different surface characteristics. This approach represents a novel method for real time data collection of pavement condition at high driving speeds.

Bruce has been married to his wife Marcia since 1961. Marcia is a registered nurse and a care manager at the local Rehabilitation Hospital. They have four children, two boys and two girls, with Sam and Becky in College, Michael a Chef at a Reno casino, and Robyn finishing her Ph.D. in psychology at the University of Southern California.

Rusllell J. Niederjohn

Russell James Niederjohn was born in Schenectady, New York, on June 13, 1944. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Massachusetts, Amherst, Massachusetts, in 1967, 1968, and 1971, respectively. While attending the University of Massachusetts he had summer positions at General Electric Company in Pittsfield, Massachusetts (Summer 1965), and Syracuse, New York (Summer 1966), and at IBM in Kingston, New York (Summer 1967). In addition, while in graduate school, he worked as a teaching assistant (one semester) and research assistant (three and one-half years). In 1971, he joined the faculty of the Department of Electrical Engineering, Marquette University as an assistant professor. He was appointed associate professor in 1975 and professor in 1980. For the past six years he has served as chairman of the Electrical and Computer Engineering Department.

Dr. Niederjohn's research interests include speech processing, real-time control systems, computer design methods, and engineering education. He has taught courses and written numerous technical papers in these areas. His most recent work has involved the enhancement of speech intelligibility in high noise levels.

Dr. Niederjohn is the recipient of several awards including the Eta Kappa Nu C. Holmes MacDonald Outstanding Young Faculty Award as a Professor in the United States Award (1978), the Dow Outstanding Young Faculty in the ASEEN North Midwest Section Award (1985), the IEEE Wiiwaukee Section Memorial Award for "Contributions to the Field of Speech Signal Processing and Out standing Achievements in Electrical Engineering," the Marquette University Faculty Award for Teaching Excellence (1988), the Marquette University Outstanding Engineering Teaching Award (1985), the Marquette Chapter of Eta Kappa Nu Teaching Excellence Award (1989), and the Marquette University Outstanding Achievement Award for "Distinguished Scientific Research Achievement in Speech and Signal Processing." (1983). He is listed in several directories including Who's Who in America (since 1986). He is an active member of several professional societies including advisor to the Marquette Chapter of Eta Kappa Nu, Vice President for Publications of the IEEE Industrial Electronics Society, and Associate Editor of the IEEE Transactions on Industrial Electronics. He was elected as Chairman of the IEEE Milwaukee Section (1985–86), a member of the IEEE Milwaukee Section Executive Committee (1974–79 and 1982–87), Chairman of the American Society for Engineering Education (ASEE) North Midwest Section (1977–78), a member of the Board of Directors of the ASEE Milwaukee Section Executive Committee (1974–91), president of the Marquette University Sigma Xi (1987–88), and a member of the IEEE Industrial Electronics Society Administrative Committee (1986– present) and the IEEE Instrumentation and Measurement Society (1986– present). Dr. Niederjohn is a registered professional engineer in the State of Wisconsin, a member of Eta Kappa Nu (since 1964), Tau Beta Pi (since 1964), and Sigma Xi (since 1970).

Robert I. Egbert

Robert I. Egbert was born in St. Louis, Missouri on May 25, 1960. He attended Riverview Gardens High School in St. Louis and graduated in May, 1988. He entered the University of Missouri-Rolla (UMR) in the fall of 1988 as an electrical engineering major. At UMR he was a member of Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi, and IEEE. During his senior year at UMR he became involved in a research project with a faculty member in the UMR Electrical Engineering Department. Involvement in this research activity ultimately led him to decide to attend graduate school.

After receiving his B.S.E.E. from UMR in 1987, he enrolled in graduate school at UMR and received an M.S.E.E. degree in 1973 and Ph.D. in Electrical Engineering from UMR in 1976. During his graduate studies he was employed first as a Graduate Teaching Assistant...
Missouri and has been active in a variety of technical, professional, and honor societies. At WSU he has been the faculty advisor for the WSU chapter of Eta Kappa Nu for the past thirteen years and served as the faculty advisor for the WSU student chapter of the National Society of Professional Engineering from 1981 to 1986. He is a member of the American Society for Engineering Education (ASEE) and served as the Papers Chairman for the 19th Annual Midwest Section ASEE Meeting in 1984.

Dr. Egbert is a Senior Member of IEEE and served as Secretary/Treasurer of the Wichita Section in 1981 and 1982, Vice-Chairman in 1982 and 1983, and Chairman of the Wichita Section in 1983 and 1984. He is also a member of the Kansas Engineering Society (KES) and has served as a member of the KES Long Range Planning Committee, the Energy Policy Task Force, and was Chairman of the Student Professional Development Committee for four years.

He is a member of Sigma Xi, the honorary society for scientific researchers and Pi Mu Epsilon, the mathematics honor society. He has also served on the EPRI Energy Storage Program Committee and has been a member of the EPRI Compressed-Air Energy Storage (CAES) Working Group. In 1992, he was appointed to the Kansas Energy Policy Committee by Governor Joan Finney.

Dr. Egbert is married and his wife, Anne, is an Associate Professor of Internal Medicine at the University of Kansas School of Medicine-Wichita. They live in Wichita. His hobbies include hunting, fishing and other outdoor activities.

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**1991-92 Chapter Awards**

*by Alan Lefkow*

The outstanding Chapter-Activities Award Program continues to do what it has been doing since 1982, recognizing excellence in college chapters by virtue of service to their students, department, school, and community. For the academic year 1991-92, seven college chapters received awards for having an outstanding program of activities. Beta Chapter of Purdue University capped the National Award winner, the eleventh in its string of wins in as many years. Epsilon Beta of Arizona State University and Gamma Chi of New Mexico State University received Honorable Mention. Four other chapters were cited for their meritorious programs and received Certificates of Merit as up and coming chapters. They were Iota Upsilon of University of Washington, Theta Chi of University of Colorado at Colorado Springs, Zeta Chi of University of Central Florida, and Gamma Mu of Texas A & M University.

The outstanding Chapter Award program is unique among the award programs of Eta Kappa Nu. One winning award can touch the hearts of a whole chapter. The award plaques themselves have been made as rich as possible. The National and Honorable Mention winners receive metal plaques engraved in color. The Certificate winners receive their award laminated in walnut.

For 60 years, winning the Outstanding Chapter Award has been a source of pride and distinction. The Chapter Award committee selects the winning chapters on the basis of the annual chapter reports. The reports are received in the fall after the end of the academic year, and the judging occurs in the winter. In the spring the committee announces the winners, and the plaques are presented.

Any chapter that sends in an annual report is automatically entered into the competition. Winning chapters invariably send in reports of distinction that do justice to their programs of activities. Many of these reports have been published in the pages of BRIDGE as examples to others. A winning report requires hard work, but then so does an outstanding program. In this issue, the report of Gamma Mu is presented.
The final speaker was Robert Drennan from Austin. Mr. Drennan spoke about the interview process and networking. He provided a thorough overview of basic networking in the job market and how to go about establishing contacts in industry. He also gave several very interesting and practical tips on how to create and promote your resume by college graduates on their first interview. Mr. Drennan left several copies of his letterhead formats for people to study or promote for their first interview.

UNIVERSITY RELATED ACTIVITIES

MNC Open House

The Memorial Student Center open house was held in early September. This event is designed to allow student organizations from the Texas A & M campus to host and highlight information about their various activities. The Gamma Ms Chapter of Phi Kappa Nu maintained a booth at the event and handed out brochures to the organizations to interested electrical engineering students. The chapter felt that freshmen and sophomores might strive to achieve higher academic goals if they knew how to get involved in the near future. Mr. Drennan spoke about this and clothing for freshman. It was a success and the officers talked to several prospective candidates.

IUT Day

The Phi Kappa Nu student group set up a booth in the library of the Zachry Engineering Center for this event. The purpose of this event is to expose high school students to the many different programs and opportunities. The HISD Youth represented the Department of Electrical Engineering at A & M. Many parents and students attended the event. IFOS members discussed the curriculum here and answered questions about electrical engineering.

COMMUNITY SERVICE

Beece Valley Church Parish

Erie Phi Kappa Nu chapter worked at the Beece Valley Church Parish this year. The food pantry serves the needs of the Beece Valley and relies heavily on volunteers. Participants performed various tasks such as bagging and setting groceries for underprivileged families.

Twincity Minstrels

A five-IBN chapter worked at the Twins City Minstrels store in College Station. The store is a second-hand store that sells used goods. The goods are donated and the store has a need in the Boys and Girls Club. The dedication helped clean the store and fold clothing. They had many good things to say about their experiences at the store. Specifically, it made them realize how fortunate they are.

EDUCATIONAL DEVELOPMENT

Course of Study Seminar

During the Fall semester Gamma Ms sponsored a seminar outlining the course of study available at Texas A & M. A & B 3-5 S 5 offers five different areas of specialization. To help students better understand what is available and required in each area, five professors were invited to speak. Dr. Campbell spoke on electrical engineering and digital design. He briefly described the undergraduate classes and mentioned some of the available graduate classes. Dr. Woodfield spoke about admissions and the classes in that area. Dr. Rosen spoke about computer science and the specific requirements here. Students found the seminar especially attractive and all the questions were answered.

PREP PROJECTS

Video Information Center

The Video Information Center (VIC) was an idea conceived over three years ago. Erie Phi Kappa Nu saw a need to provide engineering students a forum to get up-to-date information and information dispensed to the student body. The video information center is one of the few video cassette libraries. Located in the library of the Zachry Engineering Center. The video center contains three VCRs, a PC and a computer. The books are on an ongoing slide show generated by Harvard Graphics. The pictures are from the slides and video. The VIC runs information and many videos on the second floor. Any nonprofit organization is allowed to place messages on the slide show presentation. Our Karl is the VIC officer and message is placed on the entered display.

During the planning stages of the VIC, ideas of its design and purpose were considered and agreed upon. The first year was spent gaining approval from campus. Operations to place the video cassette library and video cassette in the building. During the planning stage, the VIC was shown open and fund raising began. Early this year the video cassette began and equipment prices were somewhat high. The video cassette started and will soon be purchased with the equipment used to cover the video cassette. Most of the money was raised by the finance committee and set aside for this project. There were several delays in the project due to a few set backs in the programming but the project continued.

The final stage of the VIC was getting it to run. The hard work and planning of six chapter members, three years of work and the student members of the VIC was to make it run. The VCR and the machine were to make it run. The hard work and planning of six chapter members, three years of work and the student members of the VIC was to make it run. The VCR and the machine were to make it run.
finally believe that HKN can make a difference in the quality of life, not only for its members, but for all students at the university. The chapter is already in the planning stage for its next major project. The finance committee is currently preparing to meet the challenge of financing a project that will make a difference.

**PUNO RACING**

Car Wash
Each semester the candidates held a car wash to raise money for chapter activities. The fall car wash was held at Two Chez Mois, a local restaurant. Virtually every candidate participated and the event was a huge success. The fall car wash raised about $315.

The spring car wash was held by the Bentley Bicycle Club at a local restaurant. Once again virtually every candidate turned out to help raise money. After several hours of heavy rain we tall order the final total was over $135.

The money raised at the car washes was used for chapter activities such as the picnic and other operational expenses. Fundraising projects came from corporate sources and were used only for daily expenses.

**Finance Committee**

The finance committee was headed by Jeff Harvey. In his main responsibility was raising money for the VC. About three candidates comprised the finance committee. The committee contacted corporations and informed them about the activities and goals of HKN at A & M. The candidates then established a working relationship with the company and kept them informed of our activities. The committee raised over $2400 in donations this year alone. In addition to corporate sponsorships, the committee also received donations from four departments located in the Zebulon Engineering Center. The Department, Nuclear, and Industrial Engineering divisions each donated $500. The Chemical Engineering Department donated $100. The finance committee gave money contributions to make lasting contacts in the corporate world. Several candidates have established relationships outside the finance committee with corporate members which could eventually lead to job offers.

The finance committee believed that a personal approach to fund solicitation was more appropriate than a form letter approach. The committee received lots of positive feedback from industrial sources they were able to keep the internal operation up-to-date on our activities. The finance committee has a good base for continued success in the coming semesters.

**GENERAL ACTIVITIES**

HKN T-Shirts
Each year the Gamma Mu Chapter designs new T-shirts for the candidates. Several candidates worked together on a design and a local screen printer printed the shirts. The fall semester T-shirts were gray with the HKN symbol on front and a quote from Thomas Jefferson on the back. The spring shirts were sold out with the letters HKN emblazoned on the front.

**Outstanding Active**

Jeff Harvey was outstanding active for 1982-83. Jeff was very active in all aspects of the club. He was especially effective on the finance committee and was able to raise a substantial amount of money for the VC. Jeff was elected treasurer for 1983-84.

Outstanding Electrical Engineering Student
Shayne Sisson was a strong runner in the national competition for most outstanding EE student. Shayne is a member of the Corp of Cadets and president of the Corps inner society. He was one of the 125 engineers in the national competition for his project. Shayne is also very active in HKN this year.

Outstanding SE Professor
Dr. Mark H. Weichelt was elected by the students of the Electrical Engineering Department as most outstanding professor. HKN held the election in the library of the Zebulon Engineering Center over a period of several days. The voting was very close and there was a good response from the students.

**FUTURE PLANS**

The Gamma Mu chapter has many exciting plans for the coming semesters. We are currently in the process of securing funding for the VC. This will be increased to members who are interested in the funding. The freshmen survival guide will be distributed sometime this year. We are also beginning an "Adopt-a-Sophomore" program and are searching for a location. Our community service activities have already increased and the project is set to create much needed contributions to community activities. The tutoring committee has established the local high school and established a mentoring program. This program will give high school students a chance to choose college life and school projects with HKN members.

For our next major project we are currently investigating the possibility of setting up an electrical engineering lab in a Texas high school. This will help provide members in electrical engineering and foster young engineers to meet the challenges of the future.
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