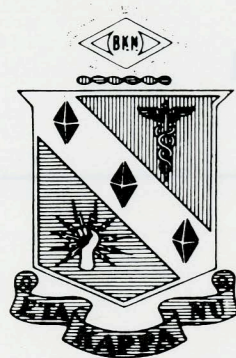


BRIDGE of Eta Kappa Nu

THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD
1998



**Jeffry Thomas Ross
Winner**



Editor and Business Manager
J. Robert Betten

November 1998

Vol. 95 - No. 1

Contributing Editors

Marcus Dodson
Larry Dwon
Simpson Linke



The Bridge is published by Eta Kappa Nu Association, an electrical and computer engineering honor society. Eta Kappa Nu was founded at the University of Illinois, Urbana, October 28, 1904, that those in the profession of electrical (now electrical and computer) engineering, who, by their attainments in college or in practice, have manifested a deep interest and marked ability in their chosen life work, may be brought into closer union so as to foster a spirit of liberal culture in the engineering colleges and to mark in an outstanding manner those who, as students in electrical and computer engineering, have conferred honor on their Alma Maters by distinguished scholarship activities, leadership and exemplary character and to help these students progress by association with alumni who have attained prominence.

The BRIDGE is published four times annually—November, February, May, August- and is published by Eta Kappa Nu, Haywood Printing Company, 5th & Ferry Sts., Lafayette, Indiana. Second Class Postage paid at Lafayette, Indiana. Eta Kappa Nu Association, Subscription price: three years, \$15, Life Subscription, \$60.

Address editorial and subscription correspondence and changes of address to:

HKN BRIDGE, P.O. Box 2107
Rolla, MO 65402

Postmaster: Send address changes to: HKN Bridge, P.O. Box 2107, Rolla, MO 65402.

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PAUL K. HUDSON HKN DEVELOPMENT FUND ANNUAL CAMPAIGN

Paul K. Hudson
1916-1988



Eta Kappa Nu Executive Secretary
and BRIDGE Editor,
1958-1988

Established by the Board of Directors in April 1992, this important fund will honor the memory of Paul Hudson, a devoted servant of HKN and a man who truly exemplified the qualities that "balance the bridge."

The Hudson fund, managed by the HKN Board of Directors, will be used to support the general development of Eta Kappa Nu. For example, the fund will be used where necessary to help support HKN's national award programs; expansion, including the development of new college chapters and alumni chapters; and chapter visitations by current and past national officers and directors to assist with special occasions. All of these examples represent activities which Paul so heartily endorsed. Other developmental projects will be considered by the Board as funding grows and new objectives important to HKN become established.

As we honor Paul, we also honor donors to the fund by recognizing them as Paul K. Hudson Fellows. Five levels of giving are recognized, as in the form below. One-time donations at any level will be gratefully accepted. In addition, donors may now make pledges for annual donations. All donations will be counted cumulatively for the purpose of establishing the donor's current level of giving. Fellows at each level will be recognized annually by name in the BRIDGE.

Eta Kappa Nu thanks those who have already become Paul K. Hudson Fellows. We invite all members and friends of HKN to join the growing list of Fellows. And whether or not you are presently a Fellow, consider extending your support of the Hudson Fund on an annual basis. Simply fill out and return the form below. Thank you for your part in supporting and strengthening Eta Kappa Nu.

_____ I wish to become a Paul K. Hudson Fellow at the level of (check one)

_____ Distinguished Fellow (\$2000 and above)

_____ Century Fellow (\$1000 - \$1999)

_____ Sustaining Fellow (\$500 - \$999)

_____ Supporting Fellow (\$100 - \$499)

_____ Fellow (\$25 - \$99)

with the enclosed contribution of \$_____.

_____ I wish to pledge a total of \$_____ to the Hudson Fund, at \$_____ per year for _____ years, beginning _____.

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University of Missouri-Rolla
Rolla, Missouri 65401

TAU BETA PI ANNOUNCES 1998 NATIONAL OUTSTANDING ADVISOR JOHN A. TUCKER

Tau Beta Pi, the National Engineering Honor Society, has named its fifth National Outstanding Chapter Advisor in its program to recognize the important contributions of engineering faculty to their students and collegiate chapters. The primary concern of Tau Beta Pi is to recognize students of superior scholarship and exemplary character and to honor eminent practicing engineers; the Association also encourages excellence in engineering education and in the ethical practice of engineering.

John A. Tucker, Massachusetts Epsilon '49, advisor to the Massachusetts Beta Chapter and retired director of the student internship program of the electrical engineering and computer science department at the Massachusetts Institute of Technology, is the 1998 Tau Beta Pi National Outstanding Advisor and was honored on October 10, 1998, at the 93rd annual Convention held in Manhattan, Kansas. Executive Councilor Robert O. Barr Jr. presented \$1,000 and a commemorative plaque to Mr. Tucker. Another \$1,000 cash grant was presented to the engineering college's discretionary fund.

Referred to as a "shadow leader," John has been ever-present in the background, privately encouraging officers, instructing them in their duties, and prompting them when they have procrastinated. During his years in the shadows, he has kept other advisors informed of activities through numerous letters, e-mail messages, and personal visits. His door is always open, and more than a few times he has expressed encouraging words to prospective members who thought Tau Beta Pi might be just another line on their resumes. He provides a personal history of Tau Beta Pi initiations each term and peppers his dinner conversations at banquets with historical anecdotes. In his office, he has col-

lected a wall of postcards from alumni who send him greetings from around the world.

Fifteen years ago, John recommended that the institute have a closer relationship with the Boston Museum of Science. He encouraged the chapter leaders and electees at the time to approach the museum and offer student aid and assistance in exchange for reduced admission fees for all institute students. The now free admission has encouraged the students to become involved in many of the educational outreach activities of the museum. Students enjoy this privilege in exchange for annual funding of \$5,000. Initially funded by "Doc" Harold Edgerton, Massachusetts Beta '25, the money is now raised through a career fair and resume book sale sponsored by the institute and the Massachusetts Beta Chapter.

During the past 20 years, securing the records of scholastically eligible Tau Bates from various administrators has been difficult because of concerns about student confidentiality. John has been able to interface with the administration to help Tau Beta Pi officers resolve concerns with the registrars so the chapter could continue to function smoothly.

To improve the visibility of Tau Beta Pi, John is helping to organize the relocation of the Bent monument on the MIT campus. He helped dedicate the first Bent monument on campus in 1983 in the Barker Engineering Library under the great dome.

Although John has retired from his position in the electrical engineering and computer science department as director of the student internship program, he has remained active as Massachusetts Beta's chief advisor. Tau Beta Pi shines a spotlight on the man in the background with 41 years of service by bringing him to the fore and honoring him as the 1998 National Outstanding Advisor.

HISTORICAL HKN BENCHMARKS

Part 6

National Activities of a Dynamic Honor Society

by

Larry Dwon

Starting with the November 1993 issue of the Bridge, a shortened version of my 1976 history of Eta Kappa Nu has appeared as short articles on selected activities of this society which came into existence in 1904. The purpose for writing was to focus attention of members on a potential opportunity to celebrate the 100th Anniversary of HKN. This is another article in this series which has appeared in each November Bridge issue since 1993.

Eta Kappa Nu is more than an honor society, although that may be its principal function. It serves and honors people through activities rendered by college, alumni and industrial chapters as previous articles have outlined. The college chapters are important in that they identify and initiate new members who meet the Association's "whole person" standards. Student members volunteer for community and campus activities which serve society in a professional way. As alumni later, many members become distinguished engineers, scientists, educators and managers in industry and education.

A substantial number also volunteer professional services in civic, community and national activities. Such electrical engineers may be nominated for the HKN Outstanding Young Electrical Engineer Award—an activity for which Eta Kappa Nu has received world-wide attention and prestige. A discussion of this award, as well as others will follow. The Outstanding Young Electrical Engineer Award (OYEE) was conceived and developed by Roger I. Wilkinson, a member of the New York Alumni Chapter during the 1930 depression decade. It war-

rants the distinction to be discussed first, in my opinion. Other alumni chapters conceived and developed the following awards:

- Outstanding Student
- Outstanding Teacher

These two awards will be discussed later. I am driven by experience to suggest that an Outstanding Faculty Advisor award would be a valuable additional activity to undertake by HKN.

Eta Kappa Nu also has established Awards and recognition activities to honor its members and some non-members who have distinguished themselves in the service of their profession. In these categories, the following awards are included:

- Honorary Member
- Eminent Member
- Distinguished Service

These awards will be amplified later.

OYEE AWARD

The Outstanding Young Electrical Engineer Award, OYEE, was founded during the decade of the Great Depression.

Clifford A. Faust, President of the New York Alumni Chapter, appointed an awards committee under the leadership of Roger I. Wilkinson who had been promoting the idea for several years and who had been in correspondence relative to it with distinguished engineering educators and executives of industry which used large numbers of electrical engineers. Roger assembled the following committee: Edmund B. Wheeler, E. F. Watson, Anthony Paone, K.G. Wynen, A.R. Chappelka, Ralph

Brown, B.F. Lewis and Clifford A. Faust.

On April 24, 1933, the committee met for the first time. Its members discussed several award possibilities. On May 25, The committee met again and Roger proposed his first cut at this famous Award: *"The Award of Distinction will be given annually by the New York Alumni Chapter of Eta Kappa Nu to the Eta Kappa Nu Member who within (number of years to be specified) after graduation (or initiation) has contributed in greatest measure to the enjoyment of living for his fellows, and to the general advancement of civilization."*

With other inputs from committee members, in particular from A.R. Chappelka, the Award was defined closer to its present form. Modifications were made by committee members and others before an agreement resulted. Roger and Alton B. Zerby explained the concept of the Award to many students and educators on their visits to college chapters. Additional ideas were thusly gathered. In 1936, the National Executive Council agreed to establish the Award. In its present form the charter reads as follows:

"The Eta Kappa Nu Recognition is awarded to emphasize among electrical engineers service to mankind not only by achievements in purely technical pursuits but in a variety of other ways. Eta Kappa Nu holds that an education based upon the acquisition of technical knowledge and the development of logical methods of thinking fits the engineer to achieve substantial success in many lines of endeavor."

"As evidenced by their past records and future promise, this Recognition shall be given annually to young electrical engineering graduates for meritorious service in the interests of fellowmen as well as for outstanding achievements in their chosen profession."

"Any person who on May 1 of each year has been graduated not more than ten years from a baccalaureate program, and who has not reached his/her 35th birthday, shall be eligible for the recognition. A candidate must be a graduate from an approved program of electrical engineering (not electrical engineering technology or electrical technology) from which a BSEE, BEE or the equivalent has been granted; or a graduate from

an approved masters or doctoral program in electrical engineering which grants an MSEE or PhDEE or Equivalent degrees."

The candidates' dossiers are first evaluated by members of the Award Organization Committee, AOC. The AOC members decide which of the dossiers they reviewed should be sent to the Jury comprised of specially selected distinguished educators and industry persons. The selection is the responsibility of the chairman. It is worthy to emphasize that this award is open to all electrical engineers—not just HKN members—who qualify.

Evaluations by AOC and Jury are made for:

- Career Achievements of note—including inventions of devices or circuits, development of new methods, exceptional teaching results, outstanding industrial management, or direction of research and development.
- Service to community, state, or nation.
- Cultural or aesthetic development.
- Other noteworthy accomplishments.

Further details on each of these categories may be obtained from many articles which have been published in the Bridge, particularly the following:

- "Some data compiled from the 1936 Recognition," R.I. Wilkinson, June/July 1937.
- "Salary Performance of 102 Candidates for the HKN Award," R.I. Wilkinson, January 1941.
- "What Do Ye More than Others," R.I. Wilkinson, July 1941.
- "The Most Outstanding Young Electrical Engineers," 1936-1953, V.L. Dzwonczyk, Part 1, Winter 1954, Part 2, Spring 1954.
- "Outstanding Young Electrical Engineers: A 50 year review 1936-1985," November 1986.

The last article was written for the 50th anniversary celebration of this Award. The committee responsible for that celebration consisted of the following members:

50th Anniversary Committee

James A. D'Arcy, Chairman
Donald Christiansen, Editor of Anniversary Booklet
Larry Dwon, Historian
Irving Engleson
Anthony F. Gabrielle
Michael R. Hajny
James M. O'Brien

Ralph J. Preiss
Gary Ridge
Berthold Sheffield
Howard H. Sheppard
Joseph J. Strano

Award Organization Committee, AOC, is comprised of very dedicated and conscientious, hard working members. Each year a large number of new and hold-over candidates' dossiers must be reviewed to select those which are to be reviewed again by the distinguished Jury. It is the jury who selects one person deserving the OYEE and one or more Honorable mentions.

Some dossiers are voluminous—over an inch thick. Most of the candidates have a large number of activities which must receive a proper evaluation of merit. The following Table 1 lists the chairmen in the period from 1936 to 1975. Please refer to the Bridge for more recent names of AOC chairmen.

Table 1
AOC Chairmen
1935-1975

Chairman	Years	Comment
R.I. Wilkinson	1935-1946	Award originator
O.H. Loynes	1946-1947	(*)
L. Dwon	1947-1951	Responsible for 1942-1951
E. Elvove	1951-1955	
J.H. Craig	1955-1959	
W.B. Groth	1959-1966	
B. Sheffield	1966-1970	
H.J. Perlis	1970-1975	
D. Christiansen	1975-19??	See the Bridge for later data.

(*) The award was discontinued during World War II; but all dossiers submitted in that period were reviewed in one massive effort in 1947. An OYEE and honorable mention recipients have been selected each year since 1936. The award dinner for the large number in 1947 was held in Pittsburgh, PA. All other dinners have been held in the New York and New Jersey area, as determined by the AOC.

The chairmen of the AOC since 1975 may be obtained from the Bridge or its editor. In 1997, the Chairman was Robert A. Bartolini. Members of his committee included Mark G. Adamiak; Amy Brotherton; Donald Christiansen; James D'Arcy; Larry Dwon; Irving Engleson; Quayne G. Gennaro; Willard B. Groth; Michael R. Hajny; James D.

Hebson, Jr.; John Henderson; Cecelia Jankowski; Stephen Mauser; William E. Murray; Ralph J. Preiss; Berthold Sheffield; Joseph J. Strano; Kurt M. Trampel; and Won Tien Tsang. Several of these members have served many years. They provide the desirable consistency of evaluations which was a dominant requirement when Roger Wilkinson was chairman and member of the AOC.

On May 15, 1997, Chairman Bartolini announced the appointment of Fern Katronetsky as the Executive Administrator of the OYEE Award Committee, with the statement that *"This recognition is long overdue."*

Outstanding Senior Student Award

In 1961, the Los Angeles Alumni Chapter began discussions about a student activity which would provide greater incentive for electrical engineering students to become more proficient. The Fall, 1965 Bridge describes this activity. It has been named "Alton B. Zerby and Carl T. Koerner Outstanding EE Student Award," in honor of two very dedicated HKN members.

In 1962, the following Los Angeles Chapter officers proposed this award to the HKN Board.

J. Arnett, President, 1961
T. Rothwell, President, 1962
L. Hamilton, Secretary, 1961
G. Mleccko, Treasurer, 1961.

The latter member prepared the first draft of the intended activity. In 1964, the Board authorized a survey of scholastic standards and practices at the universities at which HKN chapters had been installed and were operating. It also requested a well defined and planned program to satisfy the one outlined by the Los Angeles Chapter. The final version was developed by Mleccko and a survey of scholastic standards was conducted by L. Hamilton, W. Murray and S. McCullough. The Board approved the program in 1964. It was defined as follows: *"The Outstanding Electrical Engineering student may be described as being outstanding by virtue of scholastic excellence and high moral character, coupled with exemplary service to classmates, university, community, and country."*

The first recipient was Carl Anthony Cooper of Upsilon Chapter at the University of Southern California in 1965. Honorable mention recipients

were D.T. Mangano of Beta Beta Chapter at Brooklyn Polytechnic Institute and R.L. Didday of Beta Chapter at Purdue University. Subsequent recipients may be ascertained from articles in the Bridge or by contacting HKN Headquarters.

An idea of the caliber of the selection jury may be gleaned from the following Table 2.

Table 2
Jury for the 1964-65 Outstanding EE Student Award

Jury Members' Names	Affiliation
L.V. Berkner	President, Graduate Research Center of South-west
J. Hillier	Vice President, RCA Laboratories
M.J. Kelley	Former President, BTL
Q.H. Pickering	Director, Jet Propulsion Labs, Cal Tech
G. Starr	President, Atomics International
J.B. Wiesner	Dean of Engineering, MIT

A comprehensive article about this award by L.E. Hamilton appears in the Bridge, February 1970.

Outstanding Junior Student Award

This award began to be implemented in 1974 by the Lone Star Chapter, Austin, Texas. Please refer to the Bridge for details.

Outstanding Teacher Award

This award was conceived by C. Holmes MacDonald and has been implemented by the Philadelphia Alumni Chapter since 1972. The first award was presented in 1973. The first chairman of the Distinguished Young EE Teacher Award Committee was S.J. Gitomer. Members of that first committee included the following volunteers:

R. Arehart	W. Johnson
R. Burger	A. Kidder
I. Cogan	H. MacDonald
N. Farhat	H. Paxton
C. Fletcher	R. Rikoski
S. Heyer	H. Sheppard
T. Hudson	T. Williams

On the first Award Jury were the following distinguished persons: A.E. Humphrey; J. Vollmer; W.E. Murray; S.R. Warren, Jr.; L.B. Cherry; and F.C. Weimer.

This jury selected Charles V. Smith of the University of Texas-Arlington to receive the main award. Honorable mention recipients were D.P. Gelopulos, Arizona State University; R. Pimmel, Ohio State University; and E.K. Stanek, West Virginia University.

Bob Arehart became chairman of this committee in 1989. He provided the following information and

Table 3. The C. Holmes MacDonald Outstanding Teaching Award is given to a young (age 35 or younger) outstanding Electrical Engineering Professor. It is administered by the Philadelphia Alumni Chapter. Bob emphasized that *"The award is intended to recognize that the central and crucial role of the college professor is training and motivating future electrical engineers. The award program attempts to identify and give national recognition to electrical engineering professors who have demonstrated early in their careers special dedication and creativity in their teaching responsibilities. Thus, it is in part, a counter balance to the significant pressure for research and publication performance on young professors, and re-affirmation of the basic and essential need for excellence in teaching."*

Table 3
Outstanding Teaching Award Recipients

Year	Winner	School	Honorable Mention
1972	C.V. Smith	University of Texas-Arlington	D.G. Gelopulos, R.E. Pimmel, E.K. Stanek
1973	J. Heinin	Marquette University	
1974	L.J. Griffiths	University of Colorado	B.A. Eisenstein, F.T. Ulaby, R.J. Mattauch
1975	B.A. Eisenstein	Drexel University	K.R. Carver, L.T. Todd, P.D. Fisher
1976	S.R. Liberty	Texas Tech University	G.T. Heydt, M.B. Silevitch, L.T. Todd
1977	J.E. Fagan	University of Oklahoma	P.S. Maybeck, R.J. Neiderjohn, M. Strintzis
1978	R.J. Neiderjohn	Marquette University	A.J. Grodzinsky, S.R. Robinson
1979	P.S. Maybeck	Air Force Institute of Technology	M. Zahn
1980			
1981	R.O. Claus	Virginia Polytechnic Institute	
1982	C.R. Johnson	Cornell University	M. Silvia, V.P. Nelson
1983			
1984	A. Blanchard	University of Texas-Arlington	R.J. Roedel
1985			
1986	A.R. Newton	University of California-Berkeley	L.A. Akers
1987	D.G. Meyer	Purdue University	R.H. Moss
1988	C.R. Pollock	Cornell University	S.J. Franke
1989			
1990	M.S. Shahidepour	Illinois Institute of Technology	B.W. Johnson
1991	M. Kam	Drexel University	D.D. Denton, B.W. Johnson
1992	B.W. Johnson	University of Virginia	N.M. Jokerst
1993	D.D. Denton	University of Wisconsin-Madison	"
1994	B.L. Walcott	University of Kentucky	S.R. Jones
1995	J.D. Carothers	University of Arizona	B.M. Welsh

1996	J.D. Cressler	Auburn University	T.S. Rappaport
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VKEMA Award

The Vladimir Karapetoff Eminent Member Award was established in 1991 by the Board of Directors in honor of Professor Karapetoff of Cornell University who died in 1948. He was among those who received Honorary Membership in HKN before this award category came into existence. He also was a Fellow Member of IEEE and was the recipient of many honors from various organizations. His activities in HKN extended over a very long period and they included services to Kappa Chapter at Cornell and the New York Alumni Chapter where he became popular for his annual Kary lecture. He also attended many of the early OYEE Award dinners at which he often appeared as a guest pianist to the delight of the audience in attendance. His wife Cobby accompanied him to these functions and became a devoted friend of HKN. Many articles have appeared in the Bridge concerning Kary, as he was affectionately addressed by his close friends. "Kary and Cobby" appeared in the November 1988 issue. It provides pertinent background information for the establishment of this award program. The August 1996 issue contains an article by Nancy Hantman concerning Harold A. Wheeler, the 1996 recipient of this award, for his invention of the classic volume control circuit and for his pioneering work in commercial radio and television receivers as well as his contributions to defense electronics.

The VKEMA Award recipients received their recognition at the OYEE dinner function from 1992 to 1997. Wilson Greatbach was the first recipient of this award for multiple patents relating to the development of the implantable cardiac pacemaker.

Members of the original VKEMA committee appointed by the Board included Don Christiansen, Chairman; William E. Murray; Ernst Weber; Mark D. Dodson; Howard H. Sheppard; S. Reid Warren, Jr.; and Larry Dwon.

Honorary Members

The original constitution included honorary members among the four grades listed. Article 5, Section 5 stated, *"Electrical engineers who by their work have established themselves to be leaders in the profession shall be eligible for honorary*

membership." Table 4, which follows, lists the Honorary members initiated in the period from 1904 to 1941.

Table 4
1904-1941 Honorary Members

Name	Title	Bridge Vol.	Bridge No.	Bridge Page
W.L. Abbot		37	5	9
S.J. Barnett	Professor CA Inst of Technology	9	1	11
F. Bedell	Professor, Cornell University	20	1	40
M.C. Beebe	Professor University of WI	7	1	5
E.B. Bennett	Head, EE Dept. University of WI	29	4	Cover
E.J. Berg	Dean, Union College	29	1	Cover
P.S. Biegler	Dean, University of Southern CA	28	3	Cover
M. Brooks	Professor University of Illinois	6	1	4
J.M. Bryant	Professor University of IL	6	1	4
F.C. Caldwell	Professor, OH State University	30	2	Cover
L.D. Cowell	Professor, Case Institute of Technology	7	1	5
J.C. Clark	Professor, Case Institute of Technology	7	1	5
C.L. Cory	Dean, University of CA	20	1	40
H.B. Dates	Professor, Case Institute of Technology	6	1	4
R.H. Dearborn	Professor, OR Agricultural College	20	1	40
P.S. Donnell	Dean, OK A&M	28	4	Cover
A.S. Dunstan	Head, EE Dept. Alabama Poly	31	3	Cover
H.S. Evans	Dean, University of CO	26	2	Cover
D.D. Ewing	Professor, Purdue University	20	1	40
F.A. Fish	Professor, IA State University	20	1	40
C.E. Fleager	VP, Pacific T&T Co.	27	2	13
E.H. Freeman	Head, EE Dept. Armour Institute	30	1	Cover
C.F. Harding	Head, EE Dept. Purdue University	30	3	Cover
A.M. Holcomb	Professor, Case Institute	8	1	4
J.H. Hunt	Professor, OH State University	6	1	4
J.P. Jackson	Professor, Penn State University	6	1	4
F.F. Johnson	Head, EE Dept. IA State University	31	1	Cover
V. Karapetoff	Professor, Cornell University	20	1	40
C.F. Kettering	Consultant, G.M. Research	20	1	40
D.S. Kimball	Dean, Cornell University	28	1	Cover
C.L. Kinsloe	Professor, Penn State University	30	4	Cover
C.T. Knipp	Professor, University of IL	6	1	4
B.G. Lamme		20	1	40
A.C. Lanier	Chairman, EE Dept.	31	4	Cover

	University of MO-Columbia			
P.M. Lincoln	Head, EE Dept. Cornell University	20	1	40
A.M. MacCutcheon	Professor, Case Institute	20	1	40
C.M. Martsof	Bell Tel of PA	8	1	4
A.S. McAllister	Professor, Penn State University	8	1	4
S.G. McMeen		20	1	40
R.C. Muir	Professor, University of WI	35	4	12
M.W. Nichols		20	1	40
H.H. Norris	Boston Elevated RR Co.	9	1	11
E.B. Paine	Professor, University of IL	29	2	Cover
H. Pender	Professor, University of PA	28	5	Cover
J.R. Price	Professor, University of WI	7	1	5
L.D. Rowell	Professor, Purdue University	9	1	11
H.J. Ryan	Professor, Stanford University	20	1	40
H.B. Shaw	Professor, University of MO-Columbia	8	1	4
E.O. Shreve		20	1	40
R. Sibley	Professor, University of CA	20	1	40
J.E. Snow	Professor, Armour Institute of Technology	20	1	40
C.P. Steinmetz	Professor, University of IL	7	1	5
A. Still	Professor, Purdue University	20	1	40
A.N. Topping	Professor, Purdue University	20	1	40
W.L. Upson	Professor, OH State University	6	1	4
J.W. Watson	Professor, University of WI	8	1	4
A.M. Wilson	Head, EE Dept. University of Cincinnati	31	5	Cover

"Cover" signifies that the recipient was featured on the cover of the Bridge. A biography is in the issue.

In 1910, L.E. Harris wrote some provocative views about honorary membership which presented a problem to Eta Kappa Nu. His words follow: "The matter of selecting men to honor in this way is, however, one that deserves careful consideration, for there are men of good standing who will accept membership in an organization without thought as to good or harm that may result to them to accept honorary membership for the sake of carrying their names on the role is vain glory indeed, and not worthy of the serious purpose of our society."

The next article on honorary membership was written by A.B. Zerby. It appeared in the Bridge,

November 1920. He wrote that there were many questions being asked about this highest membership in HKN. He further stated the qualifications included being a leader in the profession who has done things. Only active college chapters had the power of choosing honorary members and the Constitution actually prohibited such action by alumni chapters. This fact may account for the large number of recipients who were educators. Honorary members had to be approved by the NEC and by three fourths vote of the active chapters. Furthermore, three fourths vote of the members of a chapter was necessary for approval. Honorary members were listed in the Bridge. Some of them had their pictures on the cover of the Bridge. Short biographies were also published in the Bridge. This category of membership was discontinued in the 1941 Constitution. In its place, the category of Eminent Member appeared.

Eminent Member

NEC Officers Morris Buck, Benjamin F. Lewis and A.B. Zerby proposed the amendment in the 1941 Constitution. It became Article VIII, Section 7, as follows: "Eminent membership may be offered only to those individuals who by their technical attainments and contributions to society have shown themselves to be outstanding leaders in the field of electrical engineering and great benefactors of their fellow men. Proposals for election of Eminent Members may be made by college chapters, alumni chapters, or any member of the National Executive Council or of the National Advisory Board. The candidates must have unanimous approval of the NEC, the approval of the NAB, and the approval of at least three fourths of the college chapters. Acquiescence by three fourths of the active members shall be necessary for a chapter's approval. Eminent Members shall be initiated by the National President or his deputy."

The first Eminent Member was initiated in 1950. National President Robin Beach wrote in the Bridge, March 1950, as follows: "The afternoon of January 1950, Eta Kappa Nu entered upon an inspiring and illustrious extra-curricular phase of its career and there gave birth to a new era in its growth and development—that of initiating eminent members into its brotherhood. Dr. Vannevar Bush, Royal W. Sorenson and Vladimir Zworykin became

the first three Eminent Members."

The ritual for this special occasion was prepared by Ralph W. Fouse. The officers at the ceremony were: Robin Beach, National President; Frank E. Sanford; National Vice President; A.B. Zerby, Executive Secretary; and E.B. Kurtz; T.W. Williams; Eric T.B. Gross; and members of the NAB. E.B. Wheeler, founder; E.M. Strong; and C.F. Dalziel served as escorts for the candidates.

John A. Tucker and Bruce Wedlock contributed their talents, long experience and knowledge of HKN tradition by helping to revise the ritual for Eminent Member initiations. In the Boston and New York areas during the period 1959 through 1961. They were directly involved in the initiation of J.B. Wiesner, Director of electronic research; and G.S. Brown, Dean of Engineering at MIT, where John and Bruce were employed as educators. These two dedicated volunteers were also involved in other important HKN activities for the Boston and New York Alumni Chapters during their most active period.

On April 28, 1969, the Constitution was amended again with respect to Eminent Membership as follows:

- Article VI, Section 1—Induction to membership in Eta Kappa Nu Association shall be in one of two forms: Member and Eminent Member.
- Article VI, Section 5—Induction as Eminent Member is reserved for those individuals who, by their technical attainments and contributions to society have shown themselves to be outstanding leaders in the field of electrical engineering and great benefactors of their fellowmen.
- Statutes Title 7, Section E—Nominations to Eminent Membership may be made by a college chapter, an alumni chapter, or by any member of Eta Kappa Nu. For election, the candidate must receive the approval of a majority of the Board of Directors and the approval of three fourths of the college chapters.
- By-Laws Article IV, Section 2—Eminent Members shall be inducted by the National President or his deputy.

In 1962, an Eminent Member Commission was established to relieve the Board of this important

selection process. In October 1964, an Eminent Member committee was established to recruit and evaluate nominations before they were sent to the commission for selection. Approval of a candidate by the Board of Directors and the chapters remain as requirements.

The following Eminent Members were inducted between 1950 and 1975, information later than 1975, may be obtained from the Bridge. References to the Bridge in the table provide information about the individuals listed.

Eminent Member Listing

Eminent Member	Date Inducted	Bridge Volume	Bridge Number
V. Bush	01-30-50	46	3
R. W. Sorenson	"	"	"
V.K. Zworykin	"	"	"
F.E. Terman	01-22-51	47	3
J. Slepian	"	"	"
K.B. McEachron	"	48	2
S.H. Mortenson	"	48	"
W.H. Timbe	"	"	"
L. Deforest	05-02-52	"	3
C. Molina	01-19-53	49	2
H. Pender	"	"	"
C.A. Powel	"	"	"
P. Sporn	"	"	"
W.R.G. Baker	01-18-54	"	"
M.J. Kelly	"	"	"
R. Rudenberg	"	"	"
J.B. Black	04-20-54	50	4
A.A. Potter	10-16-54	51	3
E.B. Paine	"	"	"
E.S. Lee	"	"	"
E.F.W. Alexanderson	01-31-55	"	"
A.N. Goldsmith	"	"	"
H.S. Osborne	"	"	"
H.S. Winne	"	"	"
J.B. Whitehead	"	"	"
H.H. Beverage	10-05-55	52	1
L.N. McClellan	"	"	"
W.D. Coolidge	01-30-56	"	3
H. Niquist	"	"	"
L.N. Brilouin	"	"	"
J.G.H. Dellinger	10-03-56	53	2
W.B. Kouwenhoven	"	"	"
D.A. Quarles	10-14-58	55	2
C.F. Hood	10-30-58	"	"
P.L. Alger	04-02-60	56	4
G. Starr	10-29-60	57	2
A.D. Moore	09-10-61	58	2
J.L. Burns	11-14-61	"	"
J. Hillier	11-17-61	"	1
C.F. Wagner	11-20-61	"	2
J. Bardeen	02-29-62	"	4
I.V. Berkner	"	"	"
E.M. Percall	"	"	"
J.B. Wiesner	10-10-62	58	"
E. Webber	11-05-62	59	2
G.S. Brown	03-25-63	"	4
W.L. Everitt	10-30-63	61	2
L.A. DuBridge	08-25-64	"	"
J.A. Stratton	11-05-64	"	"

D.G. Fink	11-04-65	62	3
S. Ramo	08-25-66	63	2
W.E. Kock	11-03-66	"	3
W.H. Brown	11-02-67	63	3
W.H. Pickering	08-22-68	65	2
H.E. Edgerton	11-07-68	"	3
E.R. Pioré	11-06-69	66	3
P.E. Hagerty	08-20-69	67	1
W. Cisler	03-19-69	69	1
E.L. Kanouse	08-17-70	70	3
E.C. Jordan	04-24-74	71	2
E.T.B. Gross	04-06-76	72	1

Please refer to Bridge, (Dwon History) November 1997.

Distinguished Service Recognition

Founder M.L. Carr wrote an article for the Bridge, October/November 1939, which was titled "Dreams that have come true". That article expressed a need for this kind of recognition in the following manner "*It (HKN) grew because there have always been many members who were willing and eager to serve it loyally and unselfishly. I would like to see some form of recognition conferred upon members who have rendered such service to Eta Kappa Nu.*"

Larry Dwon developed such a recognition. On November 15, 1971, Robert A. Donia, Chairman of

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the New York Advisory Board, submitted it to the Board of Directors and the National Officers of the Association.

The Distinguished Service Recognition is intended only for a member who has truly rendered outstanding service, for a continuing long period of time, as brother Carr's quotation states. Its purpose is to inspire future members to likewise serve HKN, enabling it to remain viable and continue honoring and serving the profession of electrical engineering long into the future.

The recipients of this recognition shall be chosen by the Board of Directors as a unanimous decision. The presentation shall be made at a public suitable function that is attended by the recipient's peers. It should be reported in the Bridge. The first six recipients are listed in the table below.

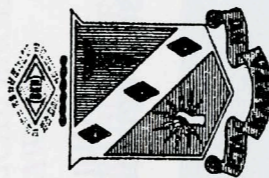
Distinquishted Service Recognition Listing

Year	Recipient	Author	Bridge Volume	Bridge Number
1971	A.B. Zerby	L. Dwon	69	1
1972	R.I. Wilkinson	B. Sheffield	70	3
1973	C.A. Faust	C.T. Koerner	71	2
1974	C.H. MacDonald	P.K. Hudson	"	"
1975	C.T. Koerner	W. Jessup C.A. Faust	72	3
1976	L. Dwon	A.F. Gabrielle	73	1

Nominations are now invited For The Ninth Vladimir Karapetoff Eminent Members' Award

**Nomination Forms may be
obtained by writing
Eminent Member Committee
Chairman
434 West Main Street
Huntington, NY 11743**

◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆



Eta Kappa Nu
The National
Electrical Engineering Honor Association

Presents

THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD
1998



Anaheim, California
17 September 1998

◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆ HKN ◆

THE ALTON B. ZERBY and CARL T. KOERNER OUTSTANDING ELECTRICAL ENGINEERING STUDENT AWARD

The Alton B. Zerby and Carl T. Koerner Outstanding Electrical Engineering Student is outstanding by virtue of their scholastic excellence and high moral character; coupled with demonstrated exemplary service to classmates, university, community, and country.

Among the purposes which Eta Kappa Nu expects to achieve by the operation of this program are: **Honor** annually the outstanding electrical engineering student by providing accepted recognition of accomplishments in this field; **Recognize** the outstanding electrical engineering student's school; **Motivate** electrical engineering students to earn membership in Eta Kappa Nu; **Distinguish** the undergraduate chapter of Eta Kappa Nu from which the outstanding EE student was chosen; **Provide** additional opportunity for publicity and recognition of the Eta Kappa Nu Association and its objectives; and **Incentivize** electrical engineering schools not having a chapter of Eta Kappa Nu to qualify and establish a chapter.

Inaugurated in 1965 as the Outstanding Electrical Engineering Student Award Program of Eta Kappa Nu, it has become a traditional means of providing recognition to deserving Electrical Engineering Students in the United States of America. In 1975 the name was changed to "The Alton B. Zerby Outstanding Electrical Engineering Student Award" to honor and perpetuate the memory of Mr. Zerby, a long time leader and Executive Secretary of Eta Kappa Nu, who was dedicated to the students. In 1993 the name was further changed to include Carl T. Koerner to honor and perpetuate the memory of brother Carl, who had a lifelong dedication to Eta Kappa Nu, including serving as its President; and his selection as the fifth recipient of the prestigious Eta Kappa Nu Distinguished Service Award in 1975 in recognition of his contributions to electrical engineering and Eta Kappa Nu.

This award considers not only the scholastic achievements of the student but also pays attention to other attributes; participation in service to classmates and university in the form of curricular and extra-curricular activities, demonstrated interest in community and fellow human beings, and regard for country. These all play a vital part in the considerations leading to being selected. It also measures the student against the traditional yardstick established by Eta Kappa Nu in its goal of achievement of the well-rounded person; one who is neither a scholarly drudge nor a gregarious sport, but one that might be considered an appropriate combination of the best qualities of both.

Four years were spent in the development of this program by the Los Angeles Area Alumni Chapter of Eta Kappa Nu. Much thought and effort went into the structuring and development of the many features that are needed, and the procedures which must be followed to be assured that a truly representative selection of the top Electrical Engineering students have been examined before the designation of one of these individuals as the Outstanding Electrical Engineering Student.

The program, thoroughly reviewed with the National Executive Council and the Board of Directors during the preliminary stages of its development, is formally approved and authorized as an official program of the Eta Kappa Nu Association. The Los Angeles Area Alumni Chapter has been designated as the implementing organization and has been authorized by the Executive Council to conduct the program.

The award winner's travel and expenses are covered by financial support from the Alton B. Zerby Trust Fund. An honorarium for the winner is made possible by the Carl T. Koerner Memorial Trust Fund, established in 1978 by his widow Edie Koerner and a large number of Carl's relatives and friends. Both Trust Funds, were established to honor their namesakes, who made significant contributions to Eta Kappa Nu. The Trust participants and the Eta Kappa Nu Board of Directors felt it appropriate that earnings from the Trust Funds underwrite this award.

AIMS AND PURPOSE OF ETA KAPPA NU

An electrical engineering honor society founded at the University of Illinois, Urbana, October 28, 1904, for closer cooperation among students and others in the profession who by their attainments in college or in practice, manifest exceptional interest and marked ability in electrical engineering. Eta Kappa Nu has over one hundred seventy-five college chapters, many alumni chapters, and over 200,000 members.

**THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD
1998**



**Jeffry Thomas Ross
Winner**

JEFFRY THOMAS ROSS graduated from Northeastern University, first in his class, with a GPA of 3.99, and was nominated by the Gamma Beta Chapter of Eta Kappa Nu (HKN). He is a member of Tau Beta Pi and Phi Kappa Phi and chair of the student chapter of IEEE.

As president of the HKN chapter and chair of the IEEE chapter, he increased participation and expanded the tutoring service to enrolled students, provided tours of the campus and facilities to High School students, and weekly technical seminars for undergraduate students. Jeffry was a member of the Student Advisory Committee which met regularly with the Department Chair. Many of his suggestions were incorporated into the operation and policy of the Department. He also, as a student representative, sat on the ECE Department Chair Search Committee, interviewing candidates for the next Department Chair.

Jeffry co-authored an article "Creating Your Own Web Page" published in the magazine "Careers in the MBA". Also he was involved in a research project in the design of CMOS amplifiers, and "De-noising of Medical Imagery Using Wavelets" — the study of electrical currents that move through muscles as they contract.

As an intern at MITRE Corp., he worked on:

- Signal Processing and Algorithms in wireless communications.
- Radar systems and Wavelet signal processing.
- Electromagnetic and Nuclear Effects systems and Wavelet signal processing.
- Electromagnetic and Nuclear Effects Group and Space Time Adaptive Processing Hardware.

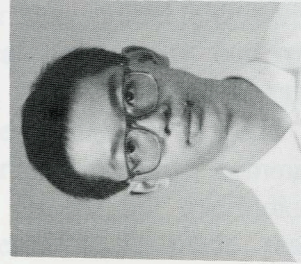
Jeffry belongs to the "Buick Club of America" and

was Photography Chair at the Buick National Meet in 1998.

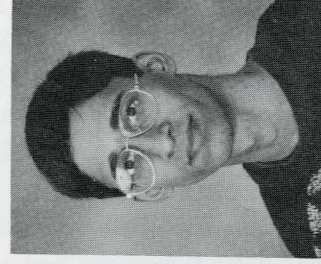
He participated in the Northeastern University solar car project.

**THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD**

1998 HONORABLE MENTIONS



Shiuh Yuan Chen



Ashwin Ganesan

SHIUH YUAN CHEN graduated from Northwestern University with a GPA of 3.90 with degrees in Electrical Engineering and Computer Engineering, and was nominated by the Beta Tau Chapter of Eta Kappa Nu (HKN). He was also honored with membership in Tau Beta Pi, Golden Key and Alpha Lambda Delta. Shiuh was Vice-chair of the IEEE Student Chapter, and was Treasurer of the Malaysian Student Council of Chicago.

As a school honors project he designed a high speed optical fiber video network to interface with a computer, and as a research assistant, he developed a mathematical model for light propagation in thin film waveguide using Mathematica. Shiuh interned with Promserv Electrical, Penang, Malaysia, where he developed harmonic analysis and real-time data logging software for electrical power systems. He also interned with DMel, Inc., Santa Clara, CA, where he implemented schematic design for a Universal Serial Bus power management chip, ran simulations on circuit characteristics to verify design integrity, and conducted mask layout versus schematic verifications of the chip.

Shiuh has multiple musical talents - piano and violin. He was first chair violinist for the Penang, Malaysia Symphony Orchestra and the University Philharmonic Orchestra. For sports he plays table tennis, soccer, and enjoys swimming.

ASHWIN GANESAN graduated from Marquette University, first in his class, with a GPA of 3.95, was nominated by the Beta Omicron chapter of Eta Kappa Nu (HKN). He has been honored with membership in Tau Beta Pi, Engineering Student Council; and he was President of HKN, Pi Mu Epsilon and the Chess Club which he founded. Ashwin was also Vice-chair of the Student Chapter of IEEE.

Among his duties as a Teaching Assistant in the Physics Department were to tutor students, lecture, grade reports, supervise experiments, and maintain equipment. As a Research Assistant, he improved "C" Language code to implement an artificial neural model to predict natural gas consumption, extended a one-day forecast to a five day forecast model.

Ashwin had a year of internship and a year as a co-op, with Eaton Corporation, where he worked on various research and software development projects. This included system and design analysis, research for PC-based control software, programming for project management task force and Web development.

Ashwin's main recreational interest lies with chess, where he is champion at Marquette and ranked second in Midwest Intercollegiate competition. He also excelled in the Putnam Math competition. Ashwin enjoys table tennis and swimming.

WENDE MITSUKO OKAMURA graduated from the University of Hawaii with a GPA of 3.86, and was nominated by the Delta Omega Chapter of Eta Kappa Nu (HKN). She is a member of SWE and IEEE, in addition to Golden Key and Ali'i (scholar's club)

As president of Engineer's Council, Wendie was it's representative to the Dean's Council, which consists of the Department Chairs and key Staff, concerning issues and policies. She participated in New Student Orientation and chaired Engineer Career Day. She was a speaker at her High School Graduation, and returned as a college student to be a graduation day speaker. Under her watch as President of the HKN Chapter, it was awarded the "Certificate of Merit".

As a Lab Assistant at the University and a team member, she helped develop a program to extract and save values from probed diodes and transistors. She interned at TRW, assisting with the design of power amplifiers that operate in the 60-65GHz band, and assisted with test procedures for low noise amplifiers. Wendie has been a speaker at TRW seminars.

Wendie has many talents - she was 1st princess in the Cherry Blossom Festival, and representing Hawaii, toured Seattle, San Francisco, Los Angeles and Japan, promoting the understanding of Japanese heritage. She was first chair flautist in the UH Symphonic Band, the marching band and the Wind ensemble. Her sport is volleyball.

1998 Finalists:

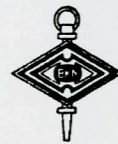
Kevin M. Holt	Pennsylvania State University
Tricia E. Mohrhauser	South Dakota School of Mines and Tech.
Raveen H. Rao	University of Illinois
Erika J. Suarez	Florida International University
Leland W. Thompson	Calif. State Polytechnic Univ., Pomona



Wendie Mitsuko Okamura

Alton B. Zerby - Carl T. Koerner
Outstanding Electrical Engineering Students

- 1965 Carl Anthony Cooper, Upsilon
- 1966 Thomas Luther Thomas, Gamma
- 1967 Douglas F. Johnstone, Beta
- 1968 Donald Alan Hanson, Alpha
- 1969 Thomas L. Niemeyer, Gamma
- 1970 Robert Warren Alford, Epsilon Mu
- 1971 Alan Michael Usas, Epsilon Pi
- 1972 Noel Howard Runyan, Delta Omicron
- 1973 John Barnes Gordon, Psi
- 1974 Steven Ross Brammer, Epsilon Mu
- 1975 William Porter Mumford, III, Pi
- 1976 Allen Devaney Elster, Epsilon Lambda
- 1977 David Doyle Welter, Delta Omicron
- 1978 Douglas Robert Kraul, Beta Mu
- 1979 Max. Wolff Hauser, Mu, and Louise Annette Veilleaux, Delta Kappa
- 1980 Mark David Vanstrum, Xi
- 1981 Gary Lee Sonnier, Delta Tau
- 1982 Richard Lee Goodson, Delta Nu
- 1983 Steve Eugene Watkins, Gamma Theta
- 1984 Michael Joseph Hargraves, Epsilon
- 1985 Yvonne Marie Utzig, Zeta Theta
- 1986 Charles Anthony Bier, Theta Rho, and Dick Philip Welch, Alpha
- 1987 Lonnie D. Chrisman, Mu, and Penny M. Gilbertson, Iota Kappa
- 1988 Emy Tan, Alpha
- 1989 Patrick Sandy Kennedy, Iota Beta
- 1990 Ashok Kumar, Iota Upsilon
- 1991 Geoffrey William Burr, Zeta Pi
- 1992 Paul David Anderson, Epsilon Rho
- 1993 Brad Darrel Marshall, Beta Kappa
- 1994 Lillian Chiamin Ho, Psi
- 1995 Andrew Lester Sears, Gamma Theta
- 1996 Jovan D. Milosavljevic, Theta Mu
- 1997 Louis R. Litwin, Jr., Beta Alpha
- 1998 Jeffry Thomas Ross, Gamma Beta



Electrical Engineering— GI Style

A World War II Memoir

by

Simpson (Sam) Linke

This incident occurred in October 1945 while I was on duty with the 308th Bomb Wing of the Fifth Air Force of the U.S. Occupation Forces in South Korea. The anecdote is not meant to be pejorative in any way but perhaps illustrates technical conditions in Korea at the time, following 40 years of prior Japanese occupation of the country.

In September, 1945, I was transferred from Okinawa to the Army of Occupation Forces in Korea and assigned to the 308th Wing as a communication and radar siting officer. Our commander, whom I shall call General H arranged for us to be quartered on the campus of Korean Imperial University in the center of the city of Seoul. Military Government Headquarters had advised the General that the University was to be reopened soon and the troops would have to move, probably in mid-December when the weather would be very cold.

Our optimistic leader believed, however, that we would all be on our way home long before we would have to vacate our dusty but relatively comfortable rooms. (He was wrong—but that is another story.) In the meantime, General H, a man who loved his personal comfort, commandeered a private house on the hill overlooking the city, and had ordered it be made ready for occupancy.

Not long after our arrival “on campus” a telephone call from General H’s temporary headquarters came in to our newly established staff room. An aide to the General wanted a signal officer to report to the General’s new house immediately and turn on the water. When asked why a signal officer instead of a plumber was needed, the aide replied that the water system depended on a pump driven by an electric motor and the motor would not start. He thought the signal officer would know about such things. Since I was the only signal officer on the staff, the assignment was given to me with the admonition that the General wanted it done “without delay”.

Fortunately our staff had been assigned an interpreter, a rather short scholarly looking man neatly dressed in a business suit, whose name was Mr. Kim. (For reasons that will become obvious I will occasionally refer to him as “my Mr. Kim”). I ascertained the location of the General’s house, obtained a voltmeter from our supply sergeant, borrowed a jeep from the Motor Pool, and picked up Mr. Kim who guided us to our destination. A caretaker at the house took us to the site of the troubled equipment.

I found that the pump was indeed driven by a rather large three phase induction motor that was

connected to a three-pole switch mounted on the wall. The switch was in the open position. When I closed the switch the motor hummed but did not start. As expected, the three wires came into the switch from the outside power line, but measurements with my voltmeter disclosed that only two of the incoming wires were energized. A quick glance at the power pole near the house revealed a small three-phase transformer at the top of the pole. From my undergraduate days at the University of Tennessee and my prewar experience with the Knoxville Utilities Board, I knew that the purpose of the transformer was to step-down the high voltage of the "primary" line to the "secondary" line that came into the house.

Since the lack of voltage on one phase meant that the trouble was at the top of the pole, it was clear that I would need assistance from the Korean Power Company to complete my mission, but Mr. Kim assured me that he knew the location of their headquarters and suggested that we should go there at once and talk with a Mr. Kim. We found the offices in downtown Seoul and my Mr. Kim introduced me to Mr. Kim and explained the problem in rapid Korean. Mr. Kim who did not speak English replied in equally rapid terms. Finally he picked up a telephone headset and began an obviously involved conversation with someone.

"What did he say?" I asked my Mr. Kim as we waited for the flow of words to cease... "He say he must call Mr. Kim." was the reply.

After about 20 minutes the telephone conversation ended and Mr. Kim spoke briefly to my Mr. Kim who then replied to me, "He say Mr. Kim not there". At this point, just as I had decided that my mission was doomed to failure, we were approached by six small Korean men carrying briefcases. One man who appeared in charge spoke to my Mr. Kim. "This is Mr. Kim", said my interpreter. "He say he and his linemen will help us."

I looked at these men in surprise and dismay. They were dressed in somewhat shabby business suits, shirts and neckties and with their briefcases in hand they resembled a bunch of office clerks rather than the practical husky linemen I thought were needed for this task. There was little time left for further discussion, however, so with considerable

misgiving, I suggested to my Mr. Kim that we should get on with it. The Koreans climbed into the back of an old truck driven by Mr. Kim and followed us back to the General's house. I asked my Mr. Kim to explain the situation to Mr. Kim and to tell him I thought the difficulty might be with the transformer. Mr. Kim nodded and gave some instructions to his crew.

By American standards the ensuing activities of the Korean linemen displayed a shocking disregard of life and limb. Mr. Kim, the group leader, took off his jacket, opened his briefcase, took out a couple of small tools, and proceeded to shinny up the pole without benefit of climbing spurs, safety belt, or rubber gloves. Hanging on to the wooden crossarm near the top of the pole, and working bare-handed with the other, he pulled out and examined a plug from the bottom of one of the porcelain fuse holders that was connected to one of the 2400 volt primary wires. Apparently the fuse was blown, so he tossed the plug down to a member of his crew.

The groundman opened his briefcase, removed a spool of fuse wire, inserted a short length into the plug and tossed it back to Mr. Kim, who caught it expertly and inserted it into the fitting again without the benefit of protective insulation. Sliding down the pole with considerable aplomb, he came to earth and indicated to my Mr. Kim that the job was completed.

I returned to the pump room, found that my voltmeter now registered correct voltages on all three phases and closed the switch. The motor started with the expected conventional growl. As it came up to full speed I heard a great shout of laughter from outside. I came out of the pump room to find Mr. Kim, his entire crew and my interpreter drenched from head to toe by a lawn sprinkler that was spraying water full force in all directions.

"Everything OK now?" asked my Mr. Kim. I shut off the sprinkler and the motor and thanked Mr. Kim and his crew who responded with elaborate bows and friendly grins. My dripping voltmeter and I returned to our base where I reported that the mission was 'accomplished as ordered'.

IN MEMORIAM

RALPH ELLIS HIATT

Ralph Ellis Hiatt of Charlottesville, VA died on May 26, 1998, after sustaining a fall and severe head injury the day before.

At 88 years old, he had been in vigorous good health and his sudden loss is grieved by his family and friends.

Professor Hiatt had a long and distinguished academic research career in electrical engineering and microwave communications. He was Emeritus Professor of Electrical Engineering at the University of Michigan where he served on the faculty and as director of its radiation laboratory.

Four days after his death he was to have received the year's Distinguished Alumnus Award from his alma mater; the University of Indianapolis, formerly Indiana Central.

He was born in Portland, Indiana in 1910, to Luther and Elнора Hiatt as the seventh of eleven children and he carried the ethic of hard work gained on his family's farm throughout his life. Educated first in a one room school house in rural Indiana, he worked his way through college to receive his university baccalau-

reate in physics at Indiana Central in 1932 and a masters degree in physics from Indiana University in 1939.

There he met his wife, Elloise Kunz, whom he married in 1940. After an early career of teaching in public schools in Indiana, he joined the Massachusetts Institute of Technology's radiation laboratory in Cambridge where he contributed to the development of radar as a critical technology in the defense against submarine warfare.

During the last two years of World War II he was Chief of the MIT Ipswich Antenna Field Station.

After the war he joined the Air Force Cambridge Research Laboratories, where he became the chief of the antenna laboratory. In 1958 he joined the radiation laboratory at the University of Michigan and became its director from 1961 to 1975.

In 1970 he was appointed chairman of the electromagnetic fields and optics curriculum for the Department of Electrical Engineering. His contributions were primarily in the field of experimental and theoretical research in

radiation, scattering, ground-based antennas, airborne antennas and waveguide components.

He is listed in American Men of Science and was a member of the Institute of Electrical and Electronics Engineers, the American Physical Society, the American Association of the Advancement of Science (Fellow), Eta Kappa Nu, and Sigma Xi.

As a director his colleagues knew him for his patience, willingness to listen to diverse options and ability to reach consensus. He was an active member of church congregations in every community in which he settled and was described as a "man of strong moral character and social conscience."

He most recently served as an elder at Westminster Presbyterian Church in Charlottesville.

He is survived by his wife, Elloise; three children, Robert, of Berkeley, CA and Washington, D.C., David of Great Falls and Jean of Charlottesville; three brothers, Virgil, Herbert and Lloyd; three sisters, Mary, Irene and Lisabeth, all of Indiana; and five grandchildren, Jesse, Anna, Paul, Gregory, and Evans.

NEW OFFICERS AND DIRECTORS



Dr. Richard J. Gowen
President

Dr. Richard J. Gowen became the fifteenth President of South Dakota School of Mines and Technology in 1987. As an electrical engineer, he has brought his experiences in industry, government, and education to guide the development of new approaches to engineering and science education that build on the traditions of excellence of the university. He shares a commitment with faculty, students, staff, and alumni to provide an environment that nurtures the growth of the intellect, character, and spirit of each member of the university community. He is an advocate for the use of technology to enhance teaching and learning so that all students may experience a lifetime of success in their chosen professions.

Dr. Gowen first joined the South Dakota School of Mines and Technology in 1977 as the Vice President for Academic Affairs and Dean of Engineering. He guided the integration of computer technologies into programs in engineering and the sciences. From 1984 to 1987 he served

as the President of Dakota State University and provided leadership for the development of the university's new mission to provide computer information systems degrees in business and education.

After receiving his bachelors degree in electrical engineering from Rutgers University in 1957, Dr. Gowen began his professional career at the RCA Laboratories in Princeton, NJ as a research engineer. He was called to duty in the Air Force and for the next 20 years participated in the development of defense systems and educational programs. In 1959, he entered graduate studies at Iowa State University through sponsorship of the Air Force. He received a master's degree in electrical engineering in 1961, and in 1962 he completed a Ph.D. degree in electrical engineering with specialization in biomedical engineering and mathematics.

Dr. Gowen became a member of the faculty of the Department of Electrical Engineering at the Air Force Academy in 1962. He participated in the development of courses, degree and research programs, provided guidance and consultation for the development of various military systems and retired as a tenured professor in 1977. While at the Academy, he directed the joint NASA-Air Force Space Medical Instrumentations Laboratory that developed experiments to assess the effects of weightlessness on the cardiovascular system during space flight. Dr. Gowen served as a member of the NASA Astronaut Medical Launch and Recovery team for the Apollo and the Skylab missions. He also served as a consultant to various government agencies for the development of com-

puter, telecommunications and management systems.

As an advocate for sharing the resources of faculty, students and laboratories, he sponsored the formation of over 80 collaborations between industry, government, and the university that have both expanded existing opportunities and started new companies. He has provided leadership for the development of the High Priority Connection Internet Software to serve the needs of business and industry. He is a leader in the improvement of math and science education in our nation's schools. He shares a commitment to developing opportunities for Native American students to pursue careers in engineering and the sciences.

Dr. Gowen served as the Centennial President, in 1984, of the Institute of Electrical and Electronics Engineers, the world's largest technical society. He served as the Chairman of the Board of Directors of the American Association of Engineering Societies in 1988. From 1995-1997 he served as President of the Triangle Coalition for Science and Technology Education. He is the 1998-1999 President of Eta Kappa Nu, the Electrical Engineering Honor Society. He is a fellow of the Institute of Electrical and Electronics Engineers and has received honors in recognition for his services to the engineering profession. He was a founding director of the ETA Supercomputer Company. Dr. Gowen serves on the Board of Directors of the Rapid City Economic Development Partnership, the Journey Museum, the Rapid City Chamber of Commerce, Recyclights, Inc., and is the Co-President of the Board of Directors of the NSF-All Nations American Minority Program.



Mohammad Shahidehpour
Vice-President

Mohammad Shahidehpour is a Professor in the Electrical and Computer Engineering Department and Dean of the Graduate College at Illinois Institute of Technology. He was born in Iran, moved to the United States in 1977 and completed his graduate studies at the University of Missouri in 1981.

He then joined the University of Michigan at Dearborn in 1981 and won the distinguished faculty award in 1983. Later in 1983, he joined the Illinois Institute of Technology as an assistant professor and was promoted to full professor in 1991.

At Illinois Institute of Technology, he resurrected the power engineering curriculum, established a modern undergraduate laboratory in electric power engineering, co-authored 200 technical papers with his students, and supervised 40 mas-

ter's and PhD thesis students as well as post-doctoral scholars.

He received the university's teaching award in 1990. He also served as the faculty advisor for the Delta Chapter of the HKN and managed to promote its activities to be one of the most successful student societies on the campus.

Later he won two national awards for his teaching and research, including the C. Holmes MacDonald Award sponsored by the Philadelphia Alumni Chapter of Eta Kappa Nu and the Edison Electric Institute's Award for being an outstanding power engineering professor.

Mohammad Shahidehpour was the Associate Dean of Engineering for Research and Graduate Studies before being appointed the Dean of the Graduate College in 1994.

As a dean, he has promoted graduate studies and research at Illinois Institute of Technology and revitalized distance education for attracting corporate employees to graduate degree programs offered by the university.

He introduced a marketing activity for graduate degree programs, strengthened educational ties with Chicago industries, increased the number of graduate students, increased the level of funding for attracting better students and automated several processes for serving

graduate students and degree applicants more efficiently.

He established the Chicago Section of the IEEE System, Man and Cybernetic Society and served as vice president for the society's 1992 national conference.

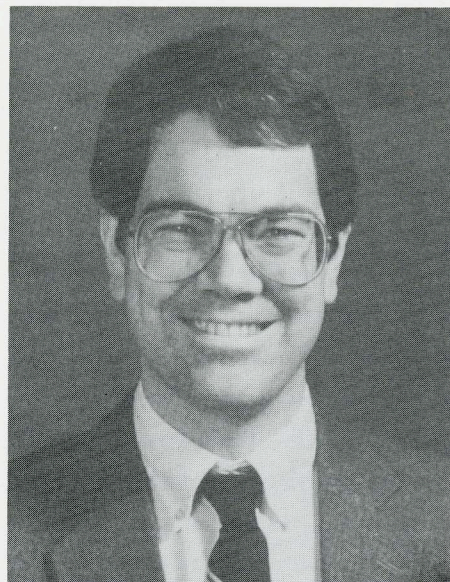
He was a member of the Executive Committee of the 1994 IEEE Transmission and Distribution Conference and served as the Associate Director of the American Power Conference for five years.

He is very active in the IEEE Power Engineering Society, has chaired numerous task forces and conference activities and currently serves as the chair of the Operation Methods subcommittee.

He has been a reviewer and technical editor for IEEE publications, a series of international journals as well as programs sponsored by the government and private funding agencies during the last twenty years.

He has served on the editorial board of four international journals and PhD advisory boards of a few universities abroad.

He is also a technical consultant to power engineering corporations and has generated software packages which are being used by electric utilities worldwide. He is married and has three children. They reside in Naperville, Illinois.



Clifford Pollock
Director

Clifford Pollock was born March 17, 1954, and was raised in Los Alamos, New Mexico. He attended Rice University in Houston, Texas, and received the BS, MS, and PhD degrees (all in Electrical Engineering) in 1976, 1979, and 1981, respectively.

Following his graduate school, he was named a National Research Council/National Bureau of Standards Postdoctoral Fellow in Boulder, CO.

While there, Dr. Pollock participated in the direct measurement of optical frequencies using a frequency chain of lasers.

These measurements were critical to the adoption of the new international length standard.

Pollock joined the faculty of Cornell University in 1983 as an Assistant Professor of Electrical Engineering.

He was promoted to Associate Professor in 1987, and in 1993 was named the first Ilda and Charles Lee Professor of Engineering. His research interests are in tunable solid state lasers and nonlinear effects in optical fibers.

His group discovered several new color center lasers, including the powerful NaCl color center laser that operates in the 1.5 micron region. He has been active in short pulse generation using this and transition-metal doped crystals such as forsterite. He has applied ultrashort pulses to the study of optical solitons in optical fibers.

Current work is directed at generating trains of ultrashort pulses using semiconductor saturable absorbers, and in the application of these pulses to nonlinear effects in fiber optic gratings.

In collaboration with researchers at Corning, Clifford Pollock is investigating methods of efficient photo-writing of diffraction gratings into glass waveguides.

Modern Applications include notch filters for WDM systems, and long period gratings for dispersion control.

He has over 70 publications, and has written one textbook.

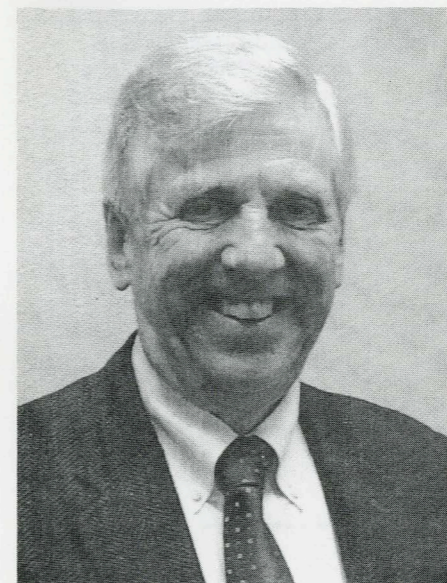
Dr. Pollock served as the program chair for the 1996 OSA Advanced Solid State Laser Conference, and he also served as the general chair of the 1997 conference.

Dr. Pollock is a member of HKN, the Optical Society of America, and is a Fellow of the IEEE. He has served as treasurer, Vice-Chair, and Chair of the Ithaca section of the IEEE. He is also the faculty advisor to the Cornell HKN Chapter

Pollock has received numerous awards for teaching, including the College of Engineering Best Teacher Award in 1987, and the C. Holmes MacDonald Outstanding Teaching Award from HKN in 1988.

He was also named a Cornell Stephen Wiess Presidential Fellow in 1997 in recognition for a distinguished record of teaching and service to students.

He became a member of the HKN Board of Directors on July 1, 1998.



William E. Hord
Director

William E. Hord was born in Leola, South Dakota and grew up in Warsaw, Illinois. He entered the Missouri School of Mines and Metallurgy located in Rolla, Missouri in 1955 and graduated with a Bachelor of Science degree in Electrical Engineering in 1959. He began his industrial career with the Sperry Gyroscope Company of Great Neck, New York where he was involved with the design and testing of high power klystrons.

He returned to Missouri School of Mines and Metallurgy in 1960 for graduate studies. During his graduate work he was a full time Instructor of Electrical Engineering and worked summers at the Sperry Gyroscope Company and the Emerson Electric Company of St. Louis, Missouri. He was awarded the Master of Science degree in Electrical Engineering in 1963 and the Doctor of Philosophy degree in Electrical Engineering from University of Missouri-Rolla in 1966.

After completion of graduate work he accepted employment with Emerson Electric Company and conducted studies on phased array antennas. During the period from 1966 to 1968 he was involved with the development

of the first airborne phased array antenna that used latching, reciprocal ferrite phase shifters. This antenna served as the forerunner for the phased array antenna subsequently developed for the B-1B aircraft. He was named a Group Engineer in 1968 and had responsibility for the activities of several engineers engaged in the development of microwave components and subsystems.

In January of 1969 Dr. Hord was appointed Associate Professor of Electrical Engineering at Southern Illinois University at Edwardsville. He was involved with the undergraduate program in Electrical Engineering that was initially accredited by the Engineering Council for Professional Development in 1973.

He was promoted to Professor in 1972 and named Chairman of the Department of Engineering and Technology in 1974 with responsibility for all engineering programs on campus as well as selected technology programs. He remained as Department Chairman until 1981 and was involved with the development of selected undergraduate programs in engineering. From 1981 until 1983 he was instrumental in the initiation of a graduate program in Electrical Engineering. In 1983 he was appointed the first Dean (Acting) of the new School of Engineering and Technology. He was named the Outstanding Electrical Engineering Educator of the St. Louis Section of the Institute of Electrical and Electronic Engineers in 1984.

He was also active as a Consultant to Emerson Electric Company and Monsanto Company. During the summer of 1971 he participated in a design study at NASA Ames for Project Cyclops, a system for the detection of extraterrestrial intelligence.

In July 1984 Dr. Hord resumed his industrial career as the Technical Director of Microwave Applications Group (MAG) in Santa Maria, California. He was named Vice-President

of Engineering in 1986. His responsibilities at MAG include all engineering design and program development activities. MAG provides ferrite-based control components and subsystems for the aerospace and defense industries of the United States as well as for radar companies and governmental agencies in Asia and Europe.

Dr. Hord is also actively engaged in the design and development of ferrite-based phased array antennas used for electronic scanning. He has published several technical papers in IEEE journals and symposia digests and has contributed a chapter to a handbook on components for antennas published by John Wiley.

Dr. Hord has been a member of the Institute of Electrical and Electronic Engineers (IEEE) since its founding. He was named Senior Member in 1978 and was elected to Fellow in 1992. He was a member of the Combined Microwave Group of the St. Louis Section of the IEEE and served as an officer for several years.

He has been a member of the Technical Program Committee of the International Microwave Symposium sponsored by the IEEE Society on Microwave Theory and Techniques since 1983 and served as Co-Chairman of the Technical Program Committee in 1985.

He is a member of the Committee on Microwave Ferrites and served as Co-Chairman of the Committee from 1986 until 1994.

He was inducted into HKN in 1957 by the Gamma Theta Chapter. He is also a member of Tau Beta Pi, Phi Kappa Phi, Sigma Xi, and the Academy of Electrical Engineering of the University of Missouri-Rolla.

Dr. Hord is married to Reva G. Hord (nee Sallee) and they live in Santa Maria, California. They are the parents of Diana L. van Breusegen of Wildwood, Missouri and Robert E. Hord of Grover Beach, California.

(ISSN 0006 9809)
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