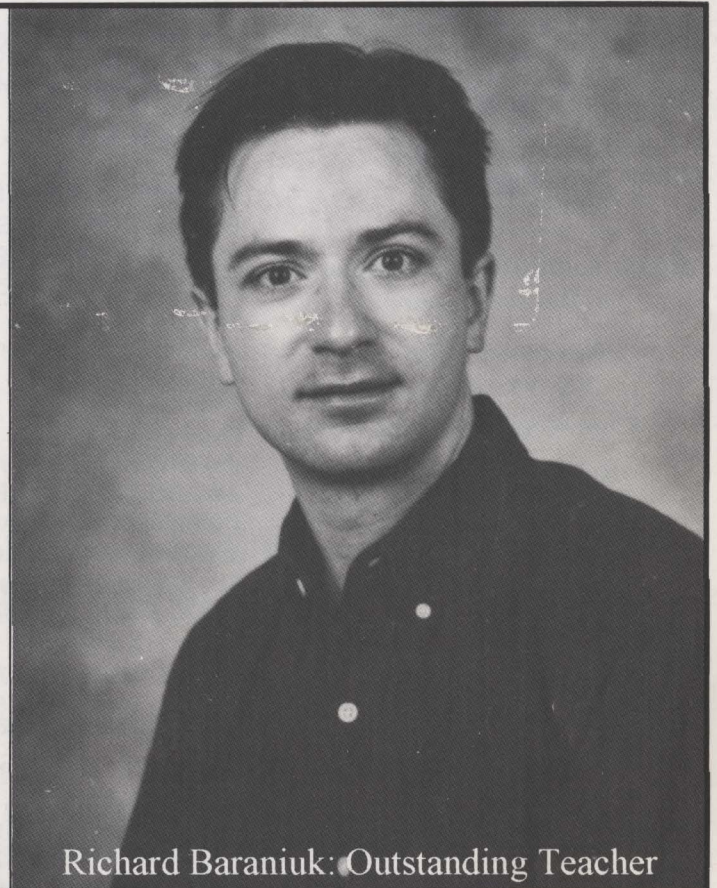


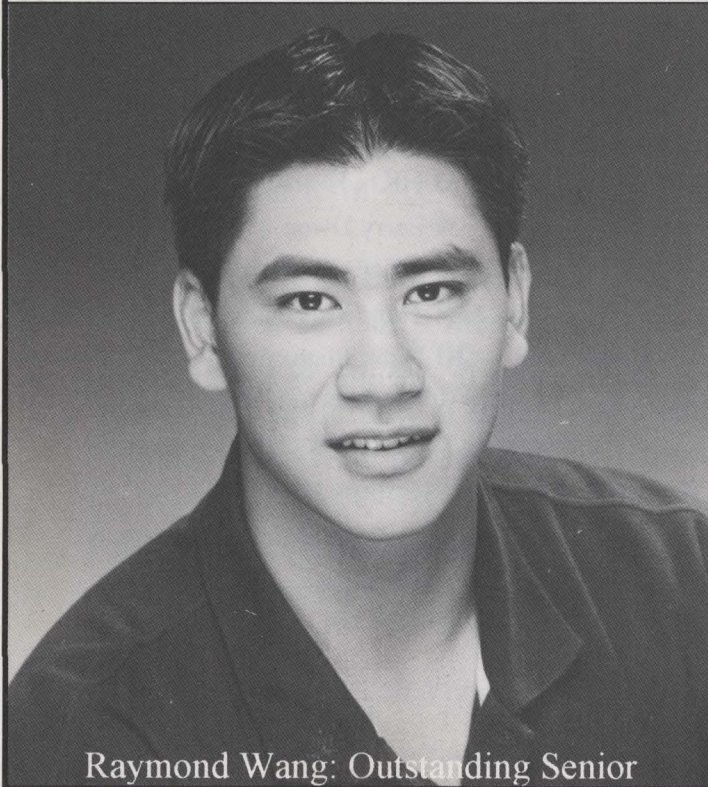


BRIDGE of Eta Kappa Nu

1999 Winners



Richard Baraniuk: Outstanding Teacher



Raymond Wang: Outstanding Senior



Wesley Bolsen: Outstanding Junior

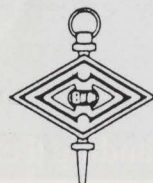


Editor and Business Manager
J. Robert Betten

November 1999
Vol. 96 - No. 1

Contributing Editors

Robert F. Arehart
Donald Christiansen
Marcus Dodson
Larry Dwon
Laureen K. H. Parker
George W. Swenson, Jr.
Steve Watkins



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 Mater 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.

INTERNATIONAL EXECUTIVE COUNCIL
President: Richard J. Gowen
Vice Pres: Mohammad Shahidehpour
Executive Secretary: J. Robert Betten

INTERNATIONAL BOARD OF DIRECTORS
William E. Hord
Clifford R. Pollock
Charles A. Gross
Curran D. Cotton

AWARDS COMMITTEES

OUTSTANDING EE STUDENT AWARD COMMITTEE
(Zerby-Koerner Award)
Chairman:
Mr. Marcus D. Dodson, P.E.
Consulting Engineer
9302 Grindlay Street
Cypress, CA 90630

OUTSTANDING EE JUNIOR AWARD COMMITTEE
(Norman R. Carson Award)
Chairperson:
Ms. Laureen H. Parker
13030 Silver Creek Drive
Austin, TX 78727

OUTSTANDING YOUNG EE AWARD COMMITTEE
Chairman:
Mr. John G. N. Henderson
Hitachi American
307 College Road East
Princeton, N.J. 08540

OUTSTANDING TEACHING AWARD COMMITTEE
(C. Holmes MacDonald Award)
Chairman:
Mr. Robert F. Arehart
720 Emerson Street
Philadelphia, PA 19111

OUTSTANDING CHAPTER ACTIVITIES AWARD COMMITTEE
Chairman:
Mr. Alan Lefkow
17 Jacobs Road
Thiells, NY 10984

KARAPETOFF EMINENT MEMBERS' AWARD COMMITTEE
Chairman:
Mr. Donald Christiansen
434 West Main Street
Huntington, NY 11743

Contents

Announcements

23 Paul K. Hudson - HKN Development Fund: Annual Campaign

24 HKN Chapter Banners Available:

22 Karapetoff Eminent Members' Award: Nominations Are Open

Honors and Awards

9 Dr. Steve Watkins Wins Outstanding Student Advisor Award

10 Dr. Richard G. Baraniuk Wins 1999 C. Holmes MacDonald Outstanding Teaching Award; and Dr. Sheila S. Hemami Wins Honorable Mention

13 Wesley J. Bolsen Wins Outstanding EE Junior Award. Also, Gustavo E. Gonzalez and Shannon Knoepflein Win Honorable Mention

15 Raymond Wang Wins Zerby-Koerner Outstanding EE Student Award; Jade Michael Kizer, Jaime Ann Melanson, Michael David Powell and Danmary Sanches receive Honorable Mention Awards

General Interest

3 HKN Headquarters Staff Resigns

4 Larry Dwon's HKN History: Part 7

9 Winning More Women For EECS

19 Three Eminent Members Inducted

20 Night Flight from Aberdeen, by Professor George W. Swenson, Jr.

Become a Paul K. Hudson Fellow

Do it Today!

See Details on Page 23

ALSO VISIT HKN's WWW HOME PAGE

<http://www.umr.edu/~hknhdqrs>

INTERNATIONAL HEADQUARTERS

Eta Kappa Nu Association

ELECTRICAL and COMPUTER ENGINEERING HONOR SOCIETY

DR. J. ROBERT BETTEN
EXECUTIVE SECRETARY

Telephone: (573) 341-6400
FAX: (573) 341-6449
E-mail: hknhdqrs@umr.edu

BOX HKN
University of Missouri-Rolla

ROLLA, MISSOURI
UNITED STATES OF AMERICA
65409-1410

Memo To: HKN Board of Directors
From: J. Robert Betten *JRB*
Date: October 20, 1999

Colleagues:

It has been a distinct and genuine pleasure, indeed, for me to work as a professional employee of this excellent Eta Kappa Nu Association for more than twelve years, beginning on October 10, 1987.

Subsequent to that date, upon the death, February 3, 1988, of my esteemed predecessor, Professor Paul K. Hudson, I was immediately appointed, February 4, 1988, by the HKN Board to serve as Acting Executive Secretary until the time of the 1988 Mail Ballot Convention, held during that Spring, and through which I was formally Elected to the Office of HKN Executive Secretary.

Successively, through subsequent HKN Mail Ballot Conventions, including the most recent past Convention during the Spring of 1999, I have been reelected to a three year term.

However, from both a personal and professional perspective, I cannot in good conscience remain a member of **this current BOARD**. I believe it would be best for Eta Kappa Nu to obtain the services of another interested HKN Member, preferably a highly experienced management and marketing professional to lead and guide HKN both into the new millennium, and beyond.

Please accept this resignation letter, effective December 31, 1999, along with my best wishes for the continued success of this important and unique organization.

HISTORICAL HKN BENCHMARKS

PART 7

Ritual and Chapter Activities

by

Larry Dwon

Starting in November 1993, a series of brief historical articles have appeared in each annual November Bridge issue. Their purpose was to alert members to the 100th anniversary of Eta Kappa Nu which will occur in October, 2004. It was the intention to continue this series until the anniversary year and then to reproduce it as a booklet—including other appropriate articles, which have been printed in the Bridge—as a gift for those who attend the anniversary celebration. It might also prove to be a booklet that many other members would desire to purchase. The revenue from such purchases would be used to enhance chapter activities as determined by the Board or an appointed committee.

Three subjects which deserve a place in this series because of their unique importance in the affairs of the Association are the Initiation Ritual, chapter activities and chapter visitation programs. The first two subjects will be treated in this article. The last one will be covered in the final article of this series.

Informed alumni continue to believe that the destiny of the Association depends largely on how well and how often chapter visitations are made by informed and experienced alumni members. The HKN constitution stipulates that part of the initiation fee is for visitations. Today the initiation fee is \$40. In 1936 the fee was only \$16. Components of this total then were: Bridge (\$7), NEC and Board (\$7) and Visitations (\$2). The Executive Secretary should be able to provide the

components of the fee charged today. Historically, a fee that students thought was too great for the value received made many qualified students to refuse initiation into HKN. This seems to be occurring today.

Articles describing Regional Visitations — a program that I developed to reinforce the diminishing emphasis on this activity, during Paul Hudson's period as Executive Secretary — appeared in Bridge issues dated August, 1971, August 1972, and February, 1973. Visitations of both kinds seem to have been discontinued since then. When A.B. Zerby was Executive Secretary, a great effort was devoted to visit as many of the chapters as time and resources permitted. He and elected qualified alumni members made these visits. Students and Faculty Advisors reported very favorably about them. The opportunity to interact with experienced members enhanced their understanding about the goals of HKN. They became more willing to volunteer their services to the chapter's activities. It would be interesting to determine the reason why visitations have been discontinued when the Constitution provides for them.

THE INITIATION RITUAL

This was another important and difficult task that confronted the founders and subsequent members. They were dedicated volunteers who also had professional and personal responsibilities. The HKN ritual is a very inspiring document and activity for those who are privileged partici-

pants. It is filled with the idealistic thoughts of successful professional engineers, educators and executives in industry. Volunteers devoted substantial time and energy initially to create a ritual and later to revise the creation in order to adapt it to evolving views of new members, situations and attitudes about honor societies. Many members participated in this evolutionary process including: M.L. Carr and E.B. Wheeler in 1904; L.H. Harris (1913); Chicago Alumni (1917); C.A. Faust (1935); E.B. Kurtz (1945); J.E. Farley, J.H. Craig, C.T. Koerner and L. Dwon (1958); J.A. Tucker and W.B. Groth (1960). In 1971, L. Dwon surveyed college chapters on this subject. Based on it, a substantial revision was made. The survey results were published in the Bridge in 1972.

President Clifford A. Faust reported about HKN activities. The following statements are taken from that 1936-37 report: "*During the preceding year, the HKN Ritual and accompanying props were modified to make the initiation ceremony more impressive and easier to memorize. With each of the five most recent chapter installations, further refinements were made, and all were approved by chapter and National officers who used the latest version*".

Professor Edwin B. Kurtz made the next revision with the help of two students. His letter dated July 20, 1975, presented his recollections about rituals: "*The ritual in current use was prepared by myself and two students in the early forties. It was offered to HKN as a replacement of one then in use, which we believe unworthy of HKN for many reasons such as:*

- (a) Required kneeling of candidates.
- (b) Wheatstone conducted entire basic ceremony.
- (c) Very poor explanation for the use of the Wheatstone bridge as a symbol.
- (d) Many others."

"*After a year's trial by N.E.C. at new chapter installations, it was adopted. Later on ABZ and I made several other minor deletions to make it non-secret so others could be present, etc.*"

"*The part I am proud of is the use of the bridge as our symbol. I invented that myself. It ties everything together and makes the whole thing sound plausible.*"

This is a good place to introduce a recent historical discovery by John A. Tucker and Bruce Wedlock who have been very dedicated alumni members in the Boston Alumni chapter for a very long time. Please refer to an accompanying article written originally by Professor Dennis Karwatka at Morehead State College in Kentucky. It also appeared in a publication of Lowell Institute of Technology where Bruce Wedlock was employed as director. At the suggestion of these educators, I make reference to this revealing article; because it contains facts that are significant, interesting and probably not known by many electrical engineering students including initiated members of HKN.

During my term as President—in anticipation that the ritual would be a subject of discussion at the 1959 assembled convention—I appointed the following committee to study the advantages and disadvantages of a secret ritual: J.E. Farley, chairman, J.E. Craig, C.T. Koerner and myself. The committee reported to the convention. Delegates at the convention voted to conduct it in whatever way a chapter chose. However, because of continuing criticism, I conducted a survey among the chapters and reported the results in the Bridge in 1972. A revised ritual was officially issued to all chapters. From its preface, the following excerpted: "*It is especially noted that flexibility has been introduced. In planning an initiation. Choose the version that suits your chapter's personality from among the following approaches:*

- Traditional—with slight revised wording.
- Revised—with the same wording.
- Combination—of the above, as you like it."

"*Remember also that you have the privilege of performing the ceremony as a closed affair for members only; or as a function which may be witnessed by invited non-members.*"

"*Remember also that the ritual is intended to*

be an inspiring message; and many distinguished educators, practicing engineers and executives have contributed their talents to make it such a message. Therefore, conduct it in an appropriate manner."

Other revisions of the ritual were made to adopt it for the initiation of Eminent members. John A. Tucker was an active contributor to this revision. He wrote to me: "From 1959 through 1961, when I was a member of the National Board of Directors, I remember writing an Eminent member induction ceremony which was approved by the Board during that period. I also remember a modified Eminent Member ceremony when I was asked to go to RPI and induct Philip L. Alger in conjunction with their local chapter."

"Dr. Bruce Wedlock was involved with me in some of these induction ceremonies—in particular that of John L. Burns, President of RCA, when we were on NBC TV (11-14-61). Then Governor of Massachusetts, John A. Volpe, attended the ceremony held in conjunction with the NEREM Meeting in Boston that year." It is very probable that other members were similarly involved in other parts of the country.

Chapter Activities

Among the many activities in which Eta Kappa Nu members have participated, the student members' activities on campuses and adjacent communities represent an important volunteer effort. In 1932, to inspire more and better quality voluntary efforts by students and their faculty advisors, the New York Alumni Chapter proposed, to the National Officers, a Chapter Award for outstanding performance. The Award was to be sponsored by the New York Alumni Chapter. Initially, the chapter which received the award was selected by a Board of Selection consisting of three members of the National Executive Committee and one member of the New York Alumni Chapter. In later years, the selection group became an Awards Committee comprised mainly of New York alumni members. Table I shows the participants in the selection

process from 1932 through 1975.

Table I
Chapter Award Selection Participants
1932-1975

School Year	Chairman	Member	Member	Member	Member
1932-33	R.I. Wilkinson	G.M. Newman	L.A. Spangler	J.W. Weigt	
1933-34	"	N.L. Best	A.B. Zerby	M.S. Mason	
1934-35	C.A. Faust	"	"	"	
1935-36	"	M. Buck	"	J.B. Kelly	
1936-37	L.A. Spangler	"	"	"	
1937-38	"	B.F. Lewis	"	"	
1938-39	F.X. Burke	"	"	G.P. Sawyer	
1939-40	"	F.E. Harrell	"	H. Whittle	
1940-41	G.B. Hoffman	"	"	"	
1941-42	"	"	"	L.L. Carter	
1947-48	R. Beach	F.E. Sanford	"	T.W. Williams	
1948-49	"	"	"	L.W. Kirkwood	
1949-50	O.W. Eshbach	"	"	M. Brenner	
1950-51	"	E.B. Kurtz	"	E.F. Grazda	
1951-52	E.T.B. Gross	"	"	"	J.H. Craig
1952-53	E.F. Shuster	E.D. Callahan	"	"	"
1953-54	J.H. Steiner	"	"	"	"
1954-55	F.W. Young	"	"	"	L. Dwon
1955-56	"	"	"	E.F. Shuster	"
1956-57	"	W.B. Groth	"	"	H.B. Hantsteen
1957-58	"	"	"	"	J.H. Mulligan
1958-59	L. Dwon	"	"	E. Levidow	"
1959-60	I.E. Cole	S. Fishman	"	"	H.J. Perlis
1960-61	A.F. Gabrielle	R.E. Anderson	"	"	"
1961-62	E.D. Callahan	E.G. DeMott	"	F.A. Russell	B. Sheffield
1962-63	E. Markland	P.F. Carr	"	"	H. Greenberg
1963-64	W.T. McMahon	"	"	"	B. Renz
1964-65	"	D.G. Fink	"	A. Lefkow	"
1965-66	B. Renz	"	"	"	"
1966-67	"	"	"	"	"
1967-68	A.F. Gabrielle	"	"	"	"
1968-69	"	"	"	"	"
1969-70	"	"	"	"	"
1970-71	A. Lefkow	"	"	"	"
1971-72	"	"	"	"	"
1972-73	"	"	"	"	"

Alan Lefkow became chairman of the OCAA program in 1970 and retains the position today. At my request, Alan provided the following information about this important HKN activity: "In early 1968, Bruce Renz, chair of the OCAA at the time, asked National to generate certificates for recent winners. That was his last act. Then Tony Gabrielle—a national officer—took over the

chair of OCAA and sent the certificates to the chapters. Tony continued to run the activity until 1971 and I helped him."

In the Fall, 1971, Alan was appointed chairman. In April 1972, he reported the following winners:

- National and Eastern Region - University of Maryland
- East Central Region - Ohio University
- West Central Region - University of Missouri-Rolla
- Western Region - University of Southern California

Included in this report was the following message to the Chapters. "The report is not merely a mechanism of communication between you and National: it is your chance to illustrate that your chapter members are attaining Eta Kappa Nu goals of excellence. Since this annual report represents your chapter as a whole, its appearance, organization, writing style and most important, the activities described, all reflect on the chapter's character. However, since activities and achievements are primary, the Award Committee weighs them twice as much as all other factors combined in the judging. Hence, an active chapter will not be unduly penalized should its report not be, for example, the fanciest or prettiest."

"The forthcoming Spring issue of the Bridge will contain a description of the '70-71 competition including a highlighting of several noteworthy activities that may be of value in planning future programs, such as, outstanding sophomore award, participation in an Engineering Day/Week, career symposium, graduate school symposium, tutoring service, faculty and course evaluations, student and faculty social activities, a loan fund, a laboratory breakage insurance fund, career guidance to high school students, participation in the annual Regional Visitation, service support to your E.E. Department, outstanding faculty member award and activities associated with community problems and with disadvantaged persons."

"...When each of us became a member of HKN we assumed a responsibility. I urge you to report on your involvement in Eta Kappa Nu in meeting this responsibility."

In 1980, Alan became a Director of HKN. He used this opportunity to obtain funding to generate an annual brochure for the OCAA program. He also enhanced the award plaques so that even runner-up winners have something substantial to display at their school. The National and Honorable Mention winners receive metal plaques that are in full color with the HKN emblem and award lettering in raised metal against a silver and colored background. Certificate of Merits are laminated in walnut. As a result, many more quality reports come in each year. Also in this period, Alan eliminated the concept of Regional winners in order to make room for more winners than four. Instead, the committee went back to the Honorable Mention approach with the rule that there could be any number of Honorable Mentions as long as the quality was high. He also established the category, "Certificate of Merit"

Alan also asked the Board to permit printing in the Bridge a copy of the National Award winning report. The Board and Editor refused this request on the basis that the large scale of the winning report would scare away most of the chapters from entering their own report, whereas, Alan believed it would increase the number of reports and might even improve the quality.

When Bob Betten became Executive Secretary and Bridge Editor, a winner's report was published. It resulted in higher quality reports, according to Alan. Since then, the Bridge has published reports annually. However, some of them were printed in such small type that it was difficult to read them even with a magnifier. This practice does not enhance the quality of the Bridge and may detract from the prestige of HKN, in my opinion. A different approach should be devised by the OCAA to accomplish their goal—more quality reports from the chapters.

The following Table II lists the outstanding college chapters selected by the OCAA as National winners.

**Table II
National Winners of HKN OCAA**

Year	Chapter Name	University
1932-33	Gamma	Ohio State
1933-34	Beta	Purdue
1934-35	Pi	Oregon State College
1935-36	Kappa	Cornell
1936-37	Omega	Oklahoma State
1937-38	Epsilon	Pennsylvania State
1938-39	Sigma	Carnegie Institute of Technology
1939-40	Delta	Illinois Institute of Technology
1940-41	Beta Zeta	New York University
1941-42	Kappa	Cornell
1947-48	Delta	Illinois Institute of Technology
1948-49	"	"
1949-50	Beta Pi	City College of New York
1950-51	Beta	Purdue
1951-52	Beta Alpha	Drexel Institute of Technology
1952-53	"	"
1953-54	Gamma Theta	Missouri School of Mines & Met.
1954-55	"	"
1955-56	Upsilon	Southern California
1956-57	Beta Nu	Rensselaer Polytechnic Institute
1957-58	Gamma Theta	Missouri School of Mines & Met.
1958-59	"	"
1959-60	"	"
1960-61	Beta Epsilon	Michigan
1961-62	Gamma Theta	Missouri School of Mines & Met.
1962-63	Beta Pi	City College of New York
1963-64	No National Award	Only Regional Winners Selected
1964-65	Rho	Colorado
1965-66	Beta Pi	City College of New York
1966-67	"	"
1967-68	Gamma Xi	Maryland
1968-69	Beta Alpha	Drexel
1969-70	Gamma Gamma	Clarkson College
1970-71	Gamma Xi	Maryland
1971-72	"	"
1972-73	Omega	Oklahoma State
1973-74	Gamma Chi	New Mexico State
1974-75	"	"
1975-76	"	"
1976-77	Gamma Theta	University of Missouri-Rolla
1977-78	Beta	Purdue
1978-79	Xi	Auburn
1979-80	"	"
1980-81	Gamma Theta	University of Missouri-Rolla
1981-82	Beta	Purdue
1982-83	"	"
1983-84	"	"
1984-85	"	"
1985-86	"	"
1986-87	"	"

1987-88	"	"
1988-89	"	"
1989-90	"	"
1990-91	"	"
1991-92	"	"
1992-93	"	"
1993-94	"	"
1994-95	"	"

It is remarkable to observe the number of times that Beta Chapter at Purdue University has received the National Award for its reports. Other chapters have received similar recognition in several consecutive years. It is my belief that such situations are the result of dedicated faculty advisors, highly motivated chapter officers and volunteers among the chapter members who have somehow caught the HKN "whole-person spirit" of the Eta Kappa Nu Association. In my experience this spirit was transmitted by older members, such as M.L. Carr, E.B. Wheeler, R.I. Wilkinson, A.B. Zerby—with whom I became associated as member of the New York Alumni Chapter after graduation in 1935—and others who have been mentioned as extra-ordinary contributors in this series of articles.

One missing link in HKN's recognition efforts is that for Faculty Advisors. I recommended such an award several times in the past. I recommend that the HKN Board put this activity in its long term planning program.

It is obvious that Alan Lefkow has expanded and honed the OCAA into a smoothly operating activity. Table III was prepared by Alan to indicate the chapters that received recognition in the categories of Honorable Mention, Regional, and Certificate of Merit.

**Table III
Honorable Mention, Regional and Certificate of Merit Recipients**

Year	Award	Chapter	School
1974-75	Honorable Mention	Xi	Auburn University
"	"	Omega	Oklahoma University
1975-76	East Regional	Gamma Gamma	Clarkson College of Technology
"	East Central Reg.	Xi	Auburn University
"	West Central Reg.	Omega	Oklahoma State University
1976-77	Honorable Mention	Beta	Purdue University
"	"	Xi	Auburn University

The Bridge continues to report about this important activity.

Winning More Women for EECS

Excerpt from the "Technology Review July/Aug. 1999" MIT
Submitted to BRIDGE by John Tucker

They are only 18 women, but they aim to make a difference in the lives of nearly 2,000 high school students. Together they have visited 40 high schools across the nation to encourage women to consider careers in electrical engineering and computer science (EECS). The outreach is part of the new Women's Initiative, a program launched by MIT's chapter of Eta Kappa Nu (HKN), the national EECE honor society, and funded by Microsoft.

"The program started in the spring of 1998, when HKN's proposal was approved by Microsoft and we started sketching out plans," said Lauren Fletcher '99, director for the women's Initiative. "The idea was that high school students would easily identify with the MIT women as students." Over the summer, high school math

and science teachers learned of the program through conferences. Schools were selected based on geographic representation.

In each region, participants make presentations at several high schools. Each presenter averaged a week of travel – speaking in classes, and after-school club meetings, during lunch and in study hall. "The presentations were designed to be interactive. We wanted the students to feel that they were learning something and were having fun."

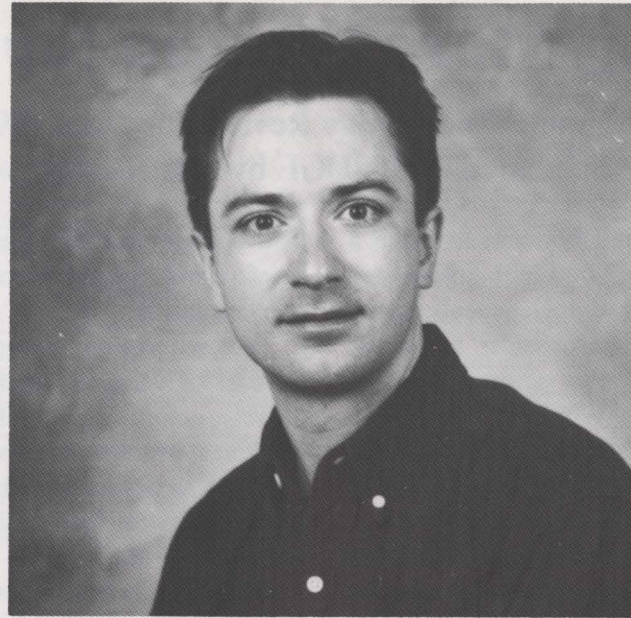
Next year, HKN hopes to recruit more MIT students and more high schools. It shouldn't be hard, said Fletcher. After all, she explained. "We're demonstrating that EECS can be fun and creative, and that women are capable of excelling in and enjoying EECS."

Dr. Steve Watkins Awarded Outstanding Student-Advisor Award by MSM-UMR Alumni Association

The MSM-UMR Alumni Association awarded the Outstanding Student-Advisor Award to Dr. Steve Watkins during the MSM-UMR Alumni Association's Awards Banquet held October 2, 1999, at the University of Missouri-Rolla. The awards banquet is held in conjunction with UMR's Homecoming celebration.

Steve E. Watkins of Salem, Missouri, is an Associate Professor of Electrical and Computer Engineering at UMR. He received the bachelor of science and master of science degrees in electrical engineering from UMR in 1983 and 1985, respectively. He received a Ph.D. in electrical engineering from the University of Texas-Austin in 1989. He

was a visiting scholar at Nippon Telegraph and Telephone from 1985-1986. Since 1986, he has worked at UMR in a number of capacities, except for a stint from 1989-1991 as a visiting physicist in the Phillips Laboratory. Since 1996, he has been an associate professor of electrical and computer engineering. He is the advisor for the UMR Toastmaster's Club #4850, as well as the Gamma Theta Chapter of Eta Kappa Nu. He is also a member of the Institute of Electrical and Electronics Engineers. He is the recipient of the 1994 Young Engineer Award from the St. Louis IEEE Section, the 1995 MSM-UMR Alumni Excellence in Teaching Award, and the 1996 Education Award from the St. Louis IEEE Section.



Dr. Richard G. Baraniuk
Wins 1999
C. Holmes MacDonald
Outstanding Teaching Award

by
Robert F. Arehart

This year the total number of candidates submitted for evaluation was 6 (six). This is down from the 11 (eleven) submitted in 1998 but same number, 6 (six) submitted in 1997. It must be said that although the candidates were few in number, the quality of these young professors was outstanding. At least four could have deservedly been named our outstanding professor for 1999. We presented a very difficult choice for the National Jury.

The semi-finalist submitted to the National Jury for evaluation in alphabetical order were:

- Dr. Richard G. Baraniuk - Rice University
- Dr. Mariesa L. Crow - University of Missouri-Rolla
- Dr. Sheila S. Hememi - Cornell University
- Dr. David F. Nagle - Carnegie-Mellon University

After receiving and evaluating the resumes of

the four semi-finalists candidates submitted to them, the National Jury arrived at the following final results on April 26, 1999.

- 1999 WINNER**
- DR. RICHARD G. BARANIUK**
Rice University
- 1999 HONORABLE MENTION**
- DR. SHEILA S. HEMEMI**
Cornell University

The presentation of the award, the engraved pewter tray and certificate was made to Dr. Baraniuk at a reception honoring the class of 1999 engineering graduates and their parents on Friday, May 14th, the day before graduation. The tray and certificate presentation was made by Dr. C. Sidney Burrus, the Dean of Engineering at Rice University.

A letter of congratulations and an engrossed certificate were sent to Dr. Hememi, our selected



Dr. Sheila S. Hememi
1999 Honorable Mention

Honorable Mention. Dr. Hememi has five more years of eligibility. She is a remarkable young EE professor.

Sidney Burrus, Dean of Engineering at Rice University, presented the 1999 C. Holmes MacDonald Distinguished Young Electrical Engineering Teaching Award to Dr. Richard Baraniuk on May 14, 1999. Dean Burrus presented the award at the annual reception honoring the class of 1999 engineering graduates and their parents. This was an especially relevant event, since many of the students who nominated him for this award were in attendance at the reception.

Dr. Baraniuk is one of the most popular teachers in the Electrical and Computer Engineering Department at Rice. He has served as advisor to the IEEE student chapter and is sought after as an advisor for student projects. He is responsible for introducing signal processing as an undergraduate course and is an internationally recognized researcher in this area.

The Jury of Award for 1999 Eta Kappa Nu Association C. Holmes MacDonald Outstanding Teaching Award:

Dr. Richard J. Gowen, National President, President - South Dakota School of Mines and Technology, Rapid City, South Dakota;

Donald Christiansen, Former Member of HKN National Board of Directors and HKN Eminent Member, Retired - Editor of the IEEE Spectrum, Huntington, New York;

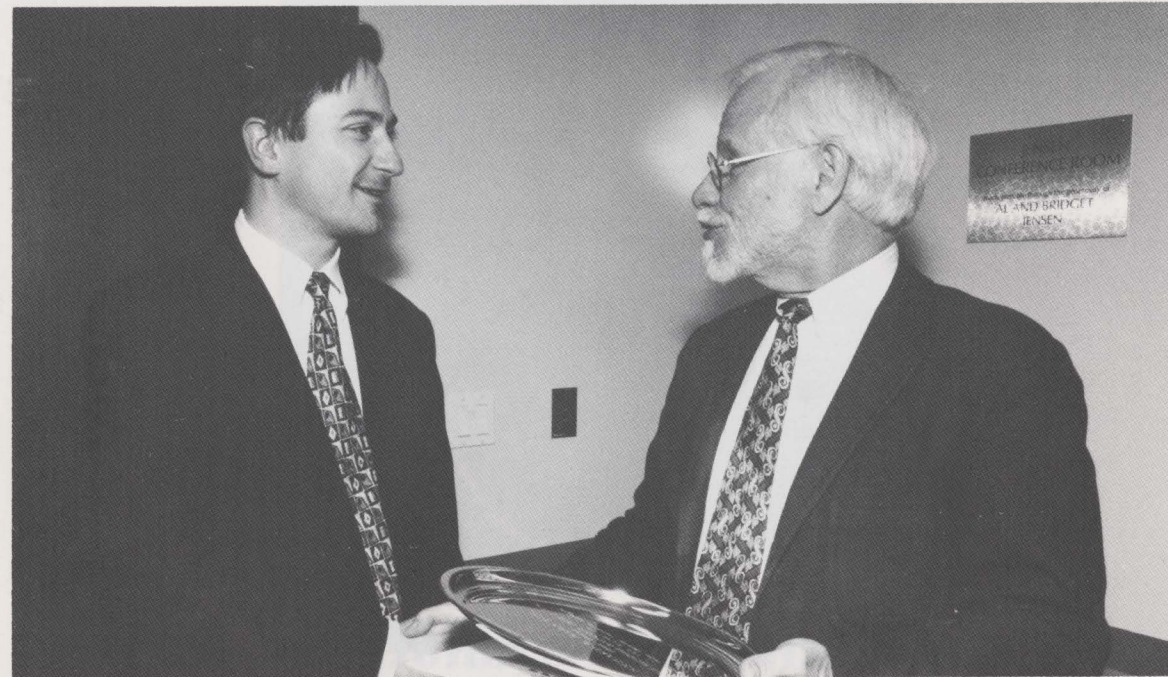
Dr. John D. Cressler, Winner 1996 - HKN Outstanding Teaching Award, Professor, Electrical Engineering Department, Auburn University, Auburn, Alabama;

Dr. Ralph Showers Professor Emeritus, Department of Electrical Engineering University of Pennsylvania Philadelphia, Pennsylvania;

Dr. Cary Y. Yang Professor, Department of Electrical Engineering Santa Clara University, Santa Clara, California.

Eta Kappa Nu

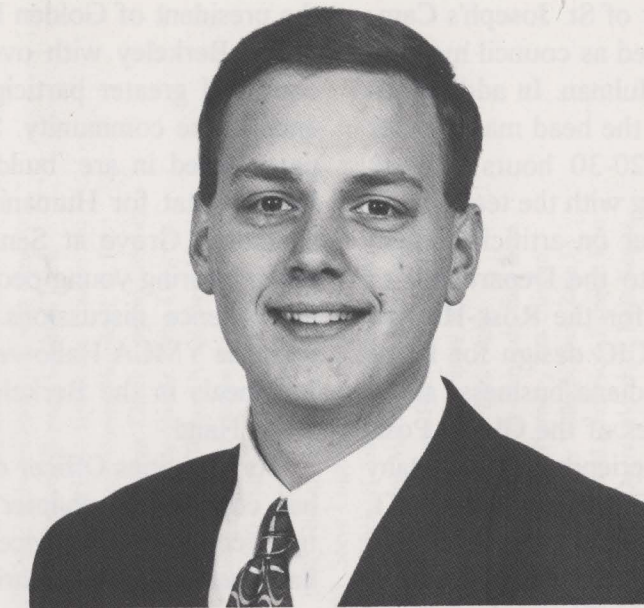
1999 C. Holmes MacDonald Outstanding Teaching Award



Left to Right: **Dr. Richard G. Baraniuk**, 1999 Winner C. Holmes MacDonald Outstanding Teaching Award, **Dr. C. Sidney Burrus**, Dean of Engineering at Rice University.



Standing Left to Right: **Dr. J. R. Jump** - Chair ECE Department; **Dr. Don H. Johnson**; **Dr. Richard G. Baraniuk**, 1999 Winner; **Dr. C. Sidney Burrus**, Dean of Engineering.



WESLEY J. BOLSEN WINS NORMAN R. CARSON AWARD for 1998/1999 OUTSTANDING JUNIOR IN ELECTRICAL ENGINEERING

by
Lauren K. H. Parker

Wesley J. Bolsen, a junior from Rose-Hulman Institute of Technology, has won the Norman R. Carson Outstanding Junior Award for the academic year 1998/1999. This award was established by Mr. and Mrs. Norman Carson to recognize the student's ability to lead, persuade, and influence the actions of others, as well as to recognize his or her diligence, intelligence and technical competence.

In addition to maintaining a 3.9 GPA in electrical engineering, Wesley has been very active in numerous organizations. As president of the Epsilon Eta Chapter of Eta Kappa Nu, he has worked to

increase the chapter's activities and recognition at Rose Hulman. He has served as the President and Junior Advisor of Alpha Lambda Delta, an undergraduate honor society and he has been very active in Tau Beta Pi and in Pi Mu Epsilon, the national mathematics honor fraternity.

Wesley was a founder of Students Against Destructive Decisions, S.A.D.D., at Rose Hulman and served as it's president last year. He brought in national drug and alcohol prevention speakers to the school and community and assisted middle school, high school, and college drug and alcohol coordina-

tors. Wesley is also a member of St. Joseph's Campus Center where he has served as council member and head of liturgy at Rose-Hulman. In addition to his other activities, Wesley is the head manager for the football team spending 20-30 hours a week during football season working with the team.

Wesley has written a paper on artificial intelligence which was submitted to the Department of Defense, a Feasibility Study for the Rose-Hulman TASC organization on an ACIC design for frame grabber technology for an Indiana business, and a paper on the Agricultural Uses of the Global Positioning System. His work experience includes many years on the Bolsen Angus Farm, summers at TI, Raytheon, and Delphi Delco Electronic Systems, and the 1998/99 academic year at the Rose-Hulman Technical Assistance and Service Center.

RUNNERS-UP

This year there were two runners-up for the Outstanding Junior Award: **Chad E. Bettac**, Iota Phi Chapter, United States Military Academy, West Point; and **Jonathan R. Lee**, Mu Chapter, University of California at Berkeley.

Cadet Chad Bettac has been an active leader holding many leadership positions at West Point. He was a team leader responsible for two freshman cadets during the academic year. He served as Assistant Drill Sergeant at Fort Sill in Oklahoma responsible for training 60 soldiers in the fundamental Army skills. He was Platoon Sergeant responsible for the well-being and training of 38 freshman cadets in Cadet Basic Training. He has been a squad leader responsible for the direct supervision and military, academic, and physical development of sophomore and freshmen cadets. He has also been Supply Sergeant.

Chad is a member of IEEE and is an Advisory Council Member for the Mess Hall. He is a rower on the West Point Crew team and has competed in two national competitions. He has completed two marathons, the Marine Corps Marathon and the North Central Trail Marathon in which he finished third. In addition, he has spent numerous hours at Saturday Special which is a chapter of Special Olympics, at the Susquehannock Environmental Center, and at the Forest Hill Retirement Center.

Jonathan R. Lee has also been very active. As

the president of Golden Key National Honor Society at Berkeley with over 1000 members, he encouraged greater participation in making a difference in the community. Several projects they have participated in are: building houses with the East Bay Habitat for Humanity; cleaning up the AIDS Memorial Grove at San Francisco's Golden Gate Park; tutoring young people and assisting in games and science discussions at the YMCA; assisting with the YMCA Halloween carnival; and delivering hot meals in the Berkeley community for Project Open Hand.

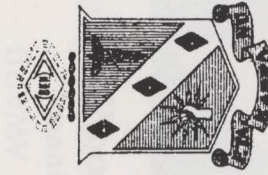
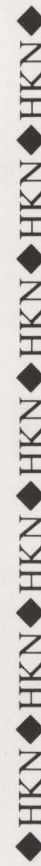
As Activities Officer of Eta Kappa Nu, Jonathan has coordinated chapter activities and introduced new community service events. This year, they have participated in Christmas in April where volunteers complete home safety repairs for low-income, disabled seniors. They also help Berkeley Neighborhood Computers by troubleshooting, fixing, and then delivering computers to low-income families, high schools, and non-profit organizations. In addition, they have helped with the Eggster Hunt and Learning Festival which raises funds for various non-profit children's organizations in the Bay area. They also enjoyed a Winter Officer's Retreat in North Tahoe.

Additional responsibilities include Historian and Newsletter Editor for the Honor Students' Society and Captain/Manager of an intramural volleyball team. Activities include tutoring, creating valentine cards for the elderly, building a playground, helping the San Francisco Civic Center Halloween festival, helping at a wheelchair basketball competition, and helping with Berkeley Youth Alternatives at a local Berkeley after-school program.

HONORABLE MENTION

Honorable Mention for Outstanding Junior go to **Gustavo E. Gonzalez**, Betz Xi Chapter, University of Oklahoma; **Shannon Knoepflein**, Gamma Theta Chapter, University of Missouri-Rolla; **Jimmy Ross**, Delta Iota Chapter, Louisiana State University; and **Gaurav Tewari**, Beta Theta Chapter, Massachusetts Institute of Technology.

Eta Kappa Nu heartily congratulates each of the Norman R. Carson Outstanding Junior winners for their achievements and outstanding qualifications. We wish each the best in his or her future.



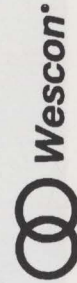
Eta Kappa Nu

The National Electrical and Computer Engineering

Honor Association

Presents

THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD
1999



San Jose, California
21 October 1999

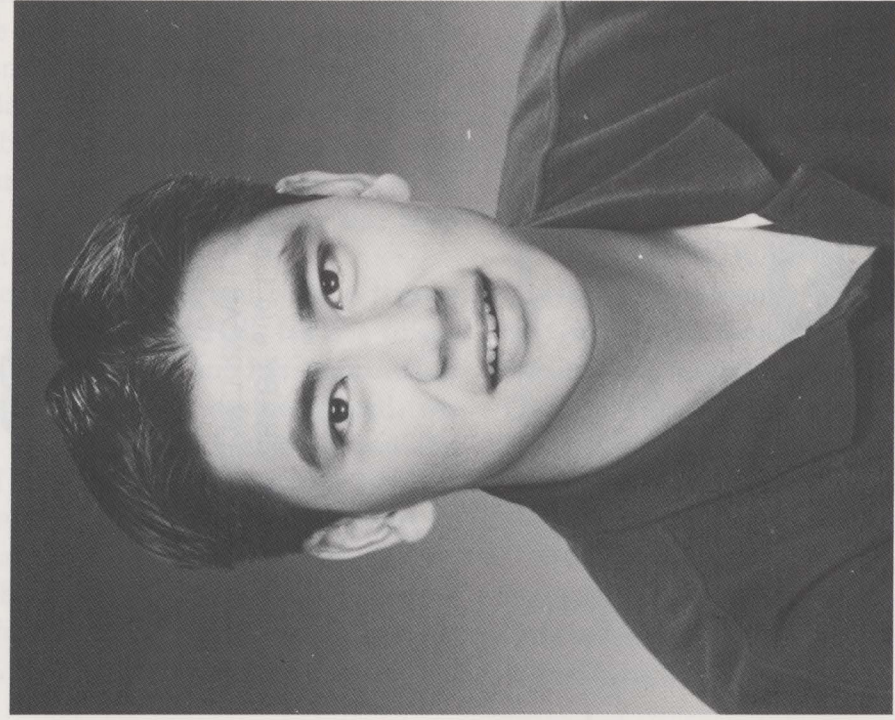


Alton B. Zerby and Carl T. Koerner Outstanding Electrical Engineering Students

- 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 Jeffrey Thomas Ross, Gamma Beta
- 1999 Raymond Wang, Mu



THE
ALTON B. ZERBY and CARL T. KOERNER
OUTSTANDING ELECTRICAL ENGINEERING STUDENT
AWARD
1999



Raymond Wang
Winner

RAYMOND WANG graduated with a GPA of 3.97, ranking 4th in a class of 261 EE Seniors. He was nominated by Mu Chapter at the University of California, Berkeley, and has been honored with membership in Golden Key and Tau Beta Pi, as well as Eta Kappa Nu.

Raymond's minor is in music, and much of his research and studies involve methods to advance the performance and enjoyment of music. He has performed extra-curricular piano concerts on campus and in Livermore, his home town. This avocational interest in music combined with his professional interest in signal processing has led to interdisciplinary papers, talks, and a product. He, with others, invented "SMaRT" (Scrolling Musical Reader Technology), a device to display and scroll a musical score.

The titles of his papers were:

- Sound Description Interchange Format.
- Survey Comparison of Ptolemy and MAX/MSP.
- Supporting SVIF in the MAX/MSP Environment.

The titles of his talks were:

- Sound Description Interchange Format.
- NT Device Driver Design Methodologies.

On campus he participated in, and was the leader of many activities, such as: Faculty Mixers, Student Orientation, the Undergraduate Study Committee, and several more. He was "Big Brother" to five students and tutored two general students in all technical subjects.

Raymond has worked for several notable companies performing on hardware and software projects related to multi-media processing, including: Intel, Lucent Technologies, and Advanced Micro Devices. Also with the UCB Berkeley Wireless Research Center, the Center for New Music & Audio Technologies, and the Digital Design Laboratory

In his community he has played the piano for Livermore's music festivals, Del Valle Fine Arts Society, and several nursing homes. In Berkeley he worked for the blood drive, Habitat for Humanity; and repaired computers, printers, and upgraded software for low-income families. He participated in the Asian-American Society for community outreach. Raymond speaks two Chinese dialects — Mandarin and Taiwanese.

Raymond's recreation includes:

- Music (piano and cello), and participation in many small and large music groups. He founded "Quartetto del Pranzo"; and also recorded his first professional CD in December of 1998.
- Advanced weight lifting, playing intra-mural basketball, football, tennis, soccer, volleyball, and frisbee.
- Playing and teaching math games; winning several math contests.

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

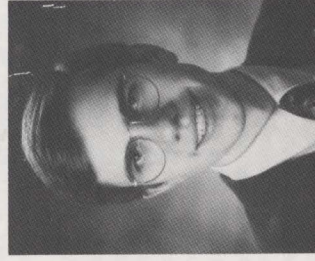
1999 HONORABLE MENTIONS



Jade Michael Kizer



Jaime Ann Melanson



Michael David Powell



Danmary Sanchez

1999 Finalists:

Michelle Marie DeHerrera
Timothy James Peters
Anthony James Skaraba
Jennifer Ann Weed

Colorado State University
University of Southern California
Pennsylvania State University
University of South Florida

JADE MICHAEL KIZER graduated with a GPA of 3.97, ranking 1st in a class of 34 EE Seniors, was nominated by the Beta Chi Chapter at the South Dakota School of Mines and Technology. He was honored with membership in Tau Beta Pi as well as Eta Kappa Nu and is a member of IEEE. He held offices in Tau Beta Pi and Eta Kappa Nu and tutored Freshmen.

While an intern at Rockwell International, he developed hardware to integrate PCMCIA and Ethernet capabilities into an embedded system, and qualified the unit to meet environmental and EMI specifications. His Senior Design Project was to develop an embedded system to control power to appliances, design the circuit, specify and order the parts and to develop user interface and software for the device.

Jade was in the Army for three years and is still active in the National Guard. His recreation includes weight-lifting, skiing, running and reading. He enjoys camping and the great outdoors.

JAIME ANN MELANSON graduated with a GPA of 3.68, was nominated by the Beta Xi Chapter at the University of Oklahoma. She was honored with membership in Tau Beta Pi, Golden Key, Alpha Lambda Delta, as well as Eta Kappa Nu. Also she is a member of the OU Engineers Club, Society of Women Engineers, Student Congress, and IEEE.

As an intern at Hewlett-Packard, she created the hardware and software for a digital camera demo test system, and rebuilt the software and hardware of a miniature testing system. While at Spectralink, Inc., she rebuilt and tested microcellular components. She submitted a patent for a light-detecting-and-integrating circuit while at H-P. She placed 2nd in an IEEE student paper contest titled "The Train Brain", a train control design project.

Jaime Ann served on the OU Academic Misconduct/Appeals Board. Her recreation includes skiing, dancing mountain sports, volleyball, swimming and reading.

MICHAEL DAVID POWELL graduated with a GPA of 4.0, ranking 1st in a class of 314 EE Seniors, was nominated by the Beta Chapter at Purdue University. He was honored with membership in Tau Beta Pi as well as Eta Kappa Nu and he is a member of IEEE.

His summer employment included working for Tellabs Design Department where he coded and verified ASIC schematic blocks in VHDL, and developed scripts for automation of VLSI software tools.

Michael published and presented "An Application of Multimedia Networking in a Traditional Shop Floor Environment" for the International Institution for Production Engineering Conference.

Michael helped organize and participated in service activities, such as Habitat for Humanity and Food Drives, through HKN.

His recreation interests include collecting coins, investing in the stock market, foreign policy, current events and the Purdue College Republican Club.

DANMARY SANCHEZ graduated with a GPA of 3.95, ranking 2nd in a class of 330 EE Seniors, was nominated by the Kappa Delta chapter at the Florida International University. She has been honored with membership in Tau Beta Pi and Golden Key as well as Eta Kappa Nu. Danmary is also a member of the Association of Cuban Engineers, Society of Women Engineers, Society of Hispanic Professional Engineers, and IEEE.

On her summer job, she was an intern for IBM where she tested servers, developmental hardware and clustered domains under different NOS. Sponsored by FIU-NASA/Florida Minority Institution, Danmary, as a Research Assistant, analyzed technologies developed at NASA.

Danmary's service to the community included collecting food and distributing it to the homeless, work for Habitat for Humanity, Toys for Tots, Thanksgiving Food Drives and collecting school supplies for children of low-income families. She is active within her church.

For recreation, Danmary enjoys dancing, swimming and Aikido (Martial Arts).

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 1983 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 about two hundred college chapters, many alumni chapters, and several hundred thousand members.

ETA KAPPA NU
The National Electrical and Computer Engineering
Honor Association
1999

EXECUTIVE COUNCIL

President Richard J. Gowen
Vice President Mohammad Shahidehpour
Executive Secretary J. Robert Betten
President 1997-98 John D. Wolf

DIRECTORS

William E. Hord Curran L. Cotton
Clifford R. Pollock Charles A. Gross

OUTSTANDING STUDENT AWARD COMMITTEE

Marcus D. Dodson, Chairman Thomas L. Rothwell, Secretary
Bruce A. Angwin Justin M. Biddle
Richard H. Cockrum John R. DeGraw
William E. Hord James D. Huff
Stuart McCullough William E. Murray
Clayton L. Stevens Donald S. Stoica

JURY OF AWARD

Richard J. Gowen HKN President, 1998-99
Larry Dwon HKN Eminent Member and President, 1958-59
Anthony F. Gabrielle HKN President, 1998-99
Hadi Monsef ECI Chair (WESCON)
Berthold Sheffield HKN Eminent Member

LOS ANGELES AREA ALUMNI CHAPTER

President Thomas L. Rothwell
Vice President Donald S. Stoica
Secretary Stuart McCullough
Treasurer Jimmie D. Huff
Past President Richard H. Cockrum

THREE NEW EMINENT MEMBERS INDUCTED

By
Don Christiansen

At an induction ceremony conducted in conjunction with the Fall meeting of its Board of Directors, Eta Kappa Nu inducted Gene Amdahl, William Hewlett, and C. Lester Hogan to its highest membership grade, Eminent Member. All three are IEEE Fellows and members of the National Academy of Engineering.

Gene Amdahl is noted for his outstanding contributions to the design and manufacture of large, high performance computers. An electrical engineer, he was also the founder and chairman of Amdahl Corp. and Trilogy Ltd.

William Hewlett is known both within and beyond the engineering profession as the co-founder, with David Packard in 1939, of the Hewlett-Packard Company.

Lester Hogan is an engineer and a physicist; he is perhaps best known as the former head of Motorola Semiconductor Division

and as the former president and chief executive officer of Fairchild Semiconductor. He is also recognized as the inventor of the microwave gyrator, circulator, and isolator.

The ceremony was conducted by Eta Kappa Nu president and past president of the IEEE, Richard J. Gowen, and Donald Christiansen, chairman of the Eta Kappa Nu Eminent Member Recommendations Committee and a past director of Eta Kappa Nu.

The Eminent Member recognition dates from 1950, when the first three members---Vannevar Bush, R.W. Sorenson, and Vladimir Zworykin---were designated. Altogether, to date, 74 prominent electrical engineers have been so honored. All have achieved eminence through their leadership in technical developments, corporate management, government, education, or professional society activities.

A LIFE SUBSCRIPTION TO THE HKN BRIDGE MAGAZINE

is available at the modest cost of \$60

Send a check with your name and address to:

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

Night Flight from Aberdeen

by

George W. Swenson, Jr.

On April Fool's day, 1965, I lifted N3998S, a Cessna 172, off the runway at Elkins, WV and headed northeast toward Aberdeen, MD. The weather was fine, and an hour and three-quarters later I touched down at the Army airstrip at the Aberdeen Proving Ground.

I was serving a temporary assignment at a government research laboratory in the mountains of West Virginia, and I'd joined the flying club at Elkins in order to have access to a plane. As part of my work assignment I had to design a paraboloidal receiving antenna about 12 meters in diameter, to operate at a wavelength of ten centimeters. The structural design of the dish was farmed out to a consultant, and I had to design a flexible, 2-axis mounting to give full coverage of the sky. It assured to me that a 90-mm anti-aircraft gun would have the right sort of geometry and would make a rugged, economical, transportable mount. I'd heard that some World War II guns might be available at Aberdeen so I arranged with a colleague there to land at their restricted airport and to look at their surplus material. Our lab's machine shop manager, a young mechanical engineer whom I'll call John, came along to help me. John had a slight mid-European accent, spoke several languages, and played a mean accordion. He told entertaining stories about his previous service as a resident engineer in the palace of a middle-eastern king and as a pilot for a European domestic airline, and he was clearly looking forward to this trip. I thought his questions about the Cessna were a bit naive for an ex-airline pilot, but I attributed his innocence to his foreign origin and thought no more about it. At that time!

Our official visit took the entire day. As the

Army could not sell us fuel we flew first to Cumberland, MD, where we also ate supper and checked the weather. This took time, so it was quite dark when we taxied out for the trip home to Elkins. I was anxious to get going; though the weather reports were favorable for our route, there was a squall line approaching Elkins from the west and it was important to finish the flight before it hit. I handed John the sectional chart and the protractor and asked him to tell me the course to our destination. After all, he's an engineer and a pilot, and he can save me some time while I do my takeoff checklist. The answer came back: 215 degrees.

The sky is overcast but the ceiling is plenty high and the visibility is excellent. In that part of the country there are few lights visible on the ground; it's pitch dark, so the flight will have to be made with respect to the gyroscopic instruments. I take up a magnetic heading of 215 degrees at 4500 feet above sea level and prepare to hold it for the forty minutes or so until I can get a good bearing on the Elkins navigation transmitter (VOR) and see the beacon at Randolph County Airport. It was a pleasant flight, with the engine humming smoothly and the Cessna sliding along in calm air. It's only necessary to glance at the instruments and gauges occasionally, and to search ahead for the airport beacon and for the navigation lights of other aircraft. Soon enough, the CDI needle began to flicker and the Morse signal EKN came faintly from the loudspeaker, and then in the distance the flash of an airport beacon faintly showed. Everything's on schedule, and we're sure to make it before the storm hits. We could see flashes of lightning far to the west.

Finally I could see the boundary lights of the

airstrip ahead and the Elkins VOR signal was loud and clear. As the VOR is seven miles west of the airport it doesn't concern me that the bearing is well to the right of our course. I called Elkins Flight Service and announced my expected arrival within fifteen minutes. Beginning a gradual descent I planned an approach. I'm a bit puzzled that the lights of the town of Elkins aren't more obvious to the north of the airport. Never mind, concentrate on the landing checklist and be on the lookout for other planes. I'm now lined up on the runway heading and approaching the field altitude. But what's this? Elkins is a 2000 feet, and we're just passing that now! Nothing to do but continue the approach. Another surprise! At 1000 feet we touch down not on the smooth asphalt of Elkins but on a rough grass strip.

Obviously this is not Elkins, but where are we? There are no buildings or lights other than the beacon and the boundary lights. No sign of life. A quick search of the sectional chart shows Petersburg, WV, 18 nautical miles east of Elkins, at 960 feet. We've made a major blunder and I feel like a real April fool. There is no telephone. I'm anxious to close my flight plan with Elkins so they don't start a search, and the intervening mountain ridge prevents radio communication. I decide to take off, circle to an altitude at which I can talk to Elkins, and land again at Petersburg. The squall line is now too close to risk the flight to Elkins, and anyway, I'm too shaken by my mistake. To make the climb as quick as possible I told John to wait on the ground. It only took a few minutes for me to report our situation and our intentions to EKN, and I was back on the ground to reassure a nervous John that I hadn't abandoned him in the dark.

Just as I landed two vehicles drove up to the edge of the airstrip. The first car contained the sheriff and the second, a hearse, was driven by the local undertaker. The presence of both added a sense of drama to the scene! The undertaker said he was an aviation buff, though not a pilot, and he often met arriving planes to offer his as-

sistance or possibly to pick up a taxi fare. We looked around for a tie down, but there was none. Nothing to do but to set the brakes and to accept the sheriff's offer of a lift to the local hostelry. The undertaker seemed a bit disappointed and urged us to call him if he could be of service. I was nervous about the approaching storm and the inadequately secured plane, and I slept fitfully until crashes of thunder woke me in the wee, small hours. 'Phoning the undertaker I asked him to pick me up, and to bring some rope. He didn't seem to mind being roused out of bed, and it was not long before we had the Cessna properly secured.

The hotel was quaint, apparently dating to the eighteenth century. Next morning, at breakfast, the proprietress enlightened us about the undertaker. "It seems he feels we're not dying off fast enough to suit him, so he takes any off job he can find." We decided to have him drive us to Elkins, as the weather prevented a flight in the VFR-only Cessna.

I recovered the plane a few days later as part of a family outing in the beautiful mountains. I also learned that the airstrip at Petersburg, now listed on the charts as Grant County Airport, was a remnant of the old optical beacon airway which provided cross-country guidance and emergency landing sites to early airmail pilots.

Obviously there are lessons here. Most importantly, I should have done my own flight planning, regardless of the reputed qualifications of my passenger. As it turned out, John was a fraud who had obtained employment on the basis of false credentials. He was belatedly discharged after his dishonesty was discovered: no engineering degree, no flying experience. The course he gave me was 25 degrees in error. I also learned to utilize every available navigational aid and not to rely only on dead reckoning, even for such a short flight.

In retrospect, bearings from Grantsville and Kessel VORs could have revealed our error in plenty of time for a successful course correction. Finally, I now carry tie-down ropes in my plane.

Nominations Invited For The Tenth Vladimir Karapetoff Eminent Members' Award



Dr. Vladimir Karapetoff

Nominations for the tenth Vladimir Karapetoff Eminent Members' Award are now being solicited. Nomination forms and guidelines may be obtained from Donald Christiansen, Eminent Member Committee Chairman, 434 West Main Street, Huntington, NY 11743.

In 1991, the Eta Kappa Nu Board of Directors announced the establishment of an award in honor of Vladimir Karapetoff, an Eminent Member of HKN and Fellow of IEEE, who died in 1948. The first award was given on April 27, 1992.

The award, the Eta Kappa Nu Vladimir Karapetoff Eminent Members' Award, is made annually to an electrical engineering practitioner who has distinguished him/herself through an invention, a development, or a discovery in the field of electrotechnology. The fund to support the award was initiated through a bequest from Dr. Karapetoff's wife, R. M. Karapetoff Cobb, herself a distinguished chemical engineer.

A monetary honorarium is provided to the recipient (or shared by the recipients) of the award.

Factors that will be weighed by the jury will include the impact and scope of applicability of the invention, development, or discovery; its impact on the public welfare and standard of living and/or global stability; and the effective lifetime of its impact.

Dr. Karapetoff was born in St. Petersburg, Russia, January 8, 1876. His father was an engineer and his mother a

student at a military medical school. Dr. Karapetoff emigrated to the United States in 1902, and became a naturalized citizen in 1909.

In 1904 he joined the engineering faculty of Cornell University as an assistant professor. In 1908 he was made a full professor and continued in that capacity until he retired from active teaching in 1939.

In an account of Dr. Karapetoff's career, his Cornell University colleagues R. F. Chamberlain, N. A. Hurwitz, and Everett M. Strong, recalled his continuing dedication to Eta Kappa Nu. During World War II he was commissioned a Lt. Commander in the U.S. Navy. But beginning in 1942, Kary, as he was known to his associates, began to lose his sight in both eyes, and despite temporary relief through operations, he ultimately lost his sight and schooled himself in Braille and "talking books."

Even after his blindness he seldom missed the annual Eta Kappa Nu Award dinner in New York City, and would address them in "refreshingly original and lucid expositions" of his technical interests. Fellow HKN members viewed these occasions as sort of a "national Kary reunion." His handicap notwithstanding, his cheerfulness, determination, and ingenuity prevailed.

His colleagues remembered him as an accomplished musician on piano, violincello, and double bass. He toured the country giving recitals and lectures on Wagner, Liszt, and other major

composers, and developed a five-string cello on which violin music could be played. He received an honorary Doctor of Music degree from New York College of Music.

Professor Simpson Linke, writing in the Winter 1984-85 *Engineering Cornell Quarterly*, cited the following excerpt from Karapetoff's *Electrical Laboratory Notes*, published in 1906, as reflective of the flavor of EE studies in that era:

In coming to the laboratory, bring with you a slide rule, an inch rule or tape, a speed counter, a screw driver and a pair of pliers [sic]. This will save you time and trouble of looking for them or borrowing them. Do not forget to have a pocket knife for skimming off wire; a bicycle wrench is also sometimes very handy to have.

Dr. Karapetoff was the author of several standard texts on electrical engineering that were widely used and revised through several editions, as well as other texts on electrical and magnetic currents, electrical testing, and engineering mathematics.

He was a member of AIEE, the Franklin Institute, the AAAS, the American Mathematical Society, the Mathematical Society of America, the American Physical Society, the U.S. Naval Institute, and the U.S. Naval Reserve Officers' Association.

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 _____.

NAME _____

ADDRESS _____

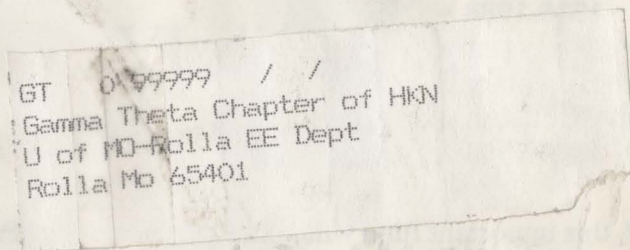
CITY, STATE, ZIP CODE _____

Return to: Eta Kappa Nu International Headquarters
Box HKN

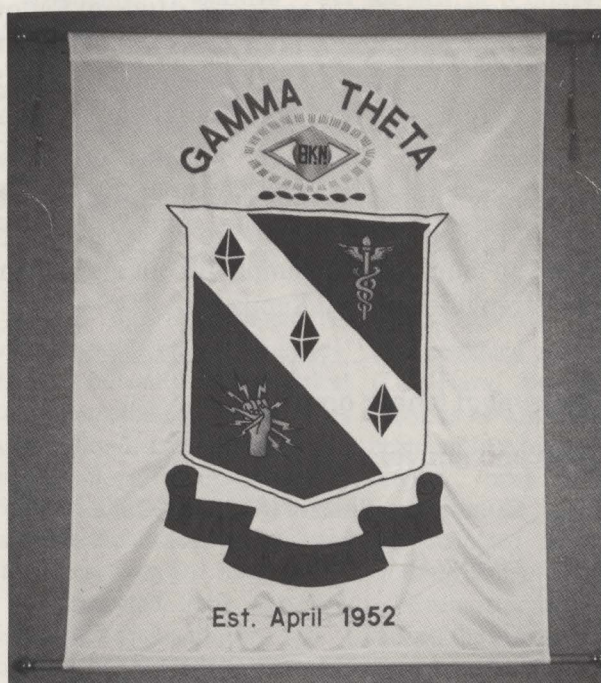
University of Missouri-Rolla
Rolla, Missouri 65401

(ISSN 0006 9809)
SECD 06 4700

Second-Class Postage
Paid at Lafayette, Indiana
and at Additional Offices



Now Available in Color!
Eta Kappa Nu Chapter Banners



These high quality, professionally embroidered banners proudly display the Eta Kappa Nu crest and can be personalized with your *Chapter Name* and *Establishment Date* or *Campus Location*. The banners are skillfully embroidered on highly durable, machine washable fabric making them great for publicity both on campus and at professional events. Available in two sizes: Wall Hanging (4 x 6 ft.) Podium/Table (3 x 4 ft.)

Order yours today at
http://www.ece.umn.edu/~hkn/banner_order.htm
or call (573) 341-6321

**A Life Subscription
to the BRIDGE
is available at a
modest cost of \$60
Send a check with
name and address
to:**

**HKN BRIDGE
P.O. BOX 2107
Rolla, MO 65402**

**Moving
Please Send Your
New Address To:
HKN BRIDGE
P.O. Box 2107**