Constance J. Chang-Hasnain
1991 Winner
Outstanding Young Electrical Engineer Award

Feature Articles:
Chapter Activities Award Winners
Southampton (from the files of the late Paul K. Hudson)
Epsilon Beta Chapter Hosts HKN National President D'Arcy

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NOTICE
THE HKN MEMBERSHIP FEE WILL BECOME $25 ON JULY 1, 1992

which includes a 2 year initial subscription to BRIDGE as determined in the 1991-92 HKN MAIL Convention

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Epsilon Beta Chapter
Arizona State University
Hosts HKN National President
by Craig R. Smith

The Fall 1991 initiatives of the Epsilon Beta Chapter of Eta Kappa Nu at Arizona State University were honored by the attendance of a number of distinguished guests at the initiation ceremony held on November 15, 1991 in Phoenix. Mr. James A. D’Arcy, P.E., National President of HKN, spoke on current national HKN activities and awards, including the Outstanding Young Electrical Engineer Award. The Epsilon Beta chapter was pleased that a former chapter president, Arv Behzad, who was also in attendance, was a runner-up in the 1991 Alton B. Zerby Outstanding EE Student Award Program. President D’Arcy also encouraged the initiatives to remain active members and to participate in alumni chapters after graduation.

The president of ASU, Dr. Lattie Coor, also spoke at the initiation. He delivered a prepared speech and instead expounded on each point of the HKN Honor Code. He pointed out that education and excellence are lifetime goals that require lifelong effort and urged initiatives to not be satisfied with their current achievements.

Also present at the ceremony were Dr. David Perry, Chairman of the Electrical Engineering Dept. at ASU, Dr. Charles Backus, Dean of the ASU College of Engineering, and Donald Sprir, Manager of Electronic Systems at Salt River Project, a local utility. One faculty and twenty-three student initiates were in attendance, none of whom will forget the memorable event.

The following is a transcript of the speech given by President D’Arcy:
Introduction. "I would like to thank you for the invitation to be here with you for your initiation ceremony. I am very happy to be here. I had an opportunity to see your campus this afternoon, and I must say that I was quite impressed. Also, I would like to congratulate the new members of Eta Kappa Nu. You were invited to join because of your attainments here at Arizona State University. Now, having been elected a member of HKN, you will always be a member. But this membership brings with it a responsibility.

I would like to tell you about this responsibility as I continue my talk. I would also like to tell you about some HKN activities following gradu-
many opportunities to apply your talents to society, such as:

- Community, Civic and Church involvement in such activities as service clubs.
- Government committees involving hi-tech policy, advice on capital improvements, school boards, and
- Professional Society Activities.

One final example which is somewhat dramatic, involves a friend of mine who matriculated in Law School a year after his graduation as an Electrical Engineer. He is now an Attorney with Community Legal Services in New Jersey and is thoroughly enjoying the work. He originally intended to become a Patent Attorney, but a temporary move in his life convinced him he would be happier there. Will he ever consider going to Patent or Corporate Law?? I doubt it.

HNK Activities After Graduation.

Now, I would like to tell you about Eta Kappa Nu activities after graduation. I realize that you are more concerned at present with finishing your undergraduate education, finding a job, and perhaps matriculating in graduate school. But eventually we hope that you may have the opportunity to participate in an HKN activity.

As a starter, may I suggest that you renew your BHGRE Magazine subscription after it expires in two years. Perhaps, more importantly, you should send a change of address to HKN headquarters when you leave school.

In HKN, we have several active alumni chapters, including Philadelphia, Los Angeles, Lone Star in Austin, Texas, and the Columbus Chapter in Columbus, Ohio. The members of these chapters are those HKN members who are living in the area. Each alumni chapter is responsible for a major HKN activity.

You are probably familiar with several of the activities since they are related to undergraduate life. I shall just mention those activities briefly:

- The Outstanding EE Student Award is managed by the Los Angeles Chapter. On a recent visit, your previous Chapter President, Arvid Behrad, received Honorable Mention last year. I had the opportunity of seeing him in Anaheim in July when he received his award. The winner was Geoffrey Audick, State University of New York at Buffalo.
- The Outstanding EEE Junior Award is coordinated by the Lone Star Chapter in Texas. The most recent winner has been announced and is Tracy Walen, Colorado State University.
- The Outstanding Electrical Engineer Professor Award is handled by the Philadelphia Chapter. The most recent winner is Professor Moshe Kam of Drexel University.
- The Outstanding Chapter Award is coordinated by an HKN volunteer who was a member of the former New York Chapter. Purdue University is the most recent winner.

- The Outstanding Young Electrical Engineer Award is managed by the AEP Chapter. This is the award through which I have recognized outstanding young electrical engineers. The award was founded by the New York Chapter in 1935, but over the years it has become more of a national activity. The primary purpose of the Young Engineer Award is to emphasize among EEs' that their service to mankind is manifested not only by achievements in purely technical pursuits but in a variety of other ways. It is held that an education based upon the acquisition of technical knowledge and the development of logical methods of thinking should fit the engineer to achieve substantial success in many lines of endeavor.

This award has been given annually for more than 50 years, since 1936. The criteria for the award requires winners to be under 35 years in age, less than 10 years from B.S. degree, and an E.E. Degree from an accredited U.S. University. I am a member of the YEEA Award Committee. We complete the initial screening of candidates in October and a winner was recently selected by the Jury of Award. On April 27, 1992, the winners will be honored at a dinner in New Brunswick, N.J. Examples of past winners include:

1957 Winner; Guy Suiters, formerly V.P. of Research for GE
1958 Winner; Malcolm Currie, CEO of Hughes
1968 Winner; George Heilmeier, New President of Bellcore, formerly Senior Vice President of Texas Instrument

Simon Ramo was 1941 Honorable Mention when he was a GE Electrical Engineer. He later helped to found TRW (The "T") in 1961. The 1991 Winner was Cecelia Jankowski of Grumman Aerospace.

The most recent academic winner is 1989 Honorable Mention Carl Nett, an Electrical Engineering Professor at Georgia Institute of Technology.

Another of our activities is the Management and Guidance of HKN. As you know, each year our chapters elect the Officers and Directors of HKN. In fact, you should receive the annual ballot shortly (November 1991) if you have not already received it, and we hope you will vote and return the ballot promptly. There are four directors selected by random selection from one of the following four categories:

- Officers of the Office of Director are nominated by the HKN Board from among the faculty advisors for student chapters as well as those graduates who have been particularly active in HKN activities.
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OUTSTANDING YOUNG EE AWARD

by Michael R. Hajny, OYEE Award Committee

CONSTANCE CHANG-HASNAIN

Constance J. Chang-Hasnain is the Outstanding Young Electrical Engineer of 1991. Her award was presented at the 56th Anniversary Eta Kappa Nu Banquet in New Brunswick, New Jersey on Monday, April 27, 1992. At the same ceremony Francis P. Gaffney, Hung T. Le, and Bradley Rubin were awarded Honorable Mentions for 1991. Constance Chang-Hasnain is a Member of the Technical Staff, Applied Research Area, Bell Communications Research, Inc. She is named the Outstanding Young Electrical Engineer for 1991 by virtue of her notable contributions to electro-optics in the area of monolithic semiconductor laser arrays; and for her leadership in professional societies.

Since joining Bellcore in 1987, Constance’s research has been centered on investigating two-dimensional arrays of vertical cavity surface emitting lasers (VCSELs) and high power visible lasers based on novel material structures. Her work on VCSELs has resulted in the first demonstration of discrete and continuous wavelength tuning in these lasers using a novel 3-mirror, 2-electrode device configuration. More recently she has demonstrated a two-dimensional VCSEL array containing 140 lasers each with a unique wavelength. This invention represents a source for wavelength division multiplexing (WDM) applications providing an approach to monolithic sources capable of extremely high data transmission rates. For example, with bits coded by wavelength, even with lasers operating at modest individual bitrates, overall throughput can exceed Terabit rates.

In her professional societies, Constance has submitted numerous technical papers; she is an Associate Editor of Circuits and Devices Magazine, she is presenter, organizer and session chairperson at numerous conferences; and she has participated in the National Science Foundation Panel charged with investigating methods to increase the representation of woman recipients of NSF grants. She was also one of eight United States members participating in the First Joint Soviet American Workshop on the Physics of Semiconductor Lasers - 1991.

Francis P. Gaffney is a Senior Engineer in the Electrical Engineering and Stations Operations Department of the Boston Edison Company, Boston, Massachusetts. He is named Honorable Mention for 1991 by virtue of his notable contributions to electric system protection philosophy, and power pooling; and, for his dedication to community service. Francis has made significant contributions to the application of system protection relaying at the Boston Edison Company. He has identified and introduced new techniques of applied relaying, he has focused attention and helped standardize within the company the philosophy of relaying, and he has helped management identify significant technological trends in the industry. Francis is active in church and sports events for youth. He teaches at both Northeastern University and within the Boston Edison Company. He is active in the Boston Chapter of the IEEE Power Engineering Society, and was Secretary of the 1990 International Joint Power Conference. He is an avid reader, and he is a member of both Eta Kappa Nu and Tau Beta Pi.

Hung T. Le is a member of the Technical Staff of the IBM Manassas Laboratory, Manassas, Virginia. He is named Honorable Mention for 1991 by virtue of his broadly applicable contributions to signal processing research; and, for his cultural achievements and his community activities.
Hung developed a theoretical framework using methods of functional analysis, which allows one to study the whole class of transient signal estimation problems from a unified point of view. The generalized nature of the resulting approach has lead to its wide applicability in areas such as biomedical engineering, control theory, seismic data analysis, and under water acoustics.

Hung is actively involved with the Beat People S.O.S. Committee in fund raising to support resettlement programs for the asylum seekers stranded in Southeast Asian camps. He helped initiate a news letter for the beat people, and is presently the Editor-in-Chief. Hung also participates as a group leader to teach Vietnamese culture to Vietnamese American Children.

Bradley Rubin is a Project Engineering Manager with IBM in Rochester, Minnesota. He is named Honorable Mention for 1991 by virtue of his notable contributions to the architecture and firmware integration of a multi-function input-output processor; and, for leadership in civil and professional activities.

Bradley has made contributions in VLSI design, VLSI design tools, processor performance modeling techniques, multi-processor architecture, system cost analysis, input-output processor architecture and operating system implementation, and strategies for future storage devices. Performance modeling contributions include developing a new deterministic modeling technique that allows engineers to quickly model proposed processor hardware structures and run these models with actual instruction traces—with much shorter model development time, much shorter model run time, and significantly improved accuracy.

In addition to teaching at universities in the United States, Bradley has taught computer engineering courses at universities in both South and Central America. He has been the Chairman of the Southern Minnesota Chapter of IEEE. He is also a member of theEta Kappa Nu, Tau Beta Pi, and Alpha Lambda Delta honor societies.

Two other engineers were recognized as first time Finalists:

- Gail R. Lalk, Bell Communications Research, Inc. (Bellevue), Morristown, New Jersey and
- Steven W. Tomashat, IBM, Essex Junction, Vermont.

The award winners are honored for their contributions to electrical and computer engineering, and to society at large. These were brought to the attention of the Jury of Award by the persons who nominated the winners. Constance Chang-Hasenruck was nominated by Robert F. Labeny, Division Manager, Electronic Science and Technology Research, Bell Communications Research, Inc.

Francis Gaffney was nominated by Stephen J. Sweeney, Chairman and Chief Executive Officer of the Boston Edison Company. Hung Le was nominated by W. Giansupulos, the Director of the IBM Manassas Laboratory. Bradley Rubin was nominated by Timothy C. Hung, IBM Development Engineering Manager, Rochester, Minnesota.

Gail Lalk was nominated by George H. Heilmeier, President and Chief Executive Officer of Bell Communications Research, Inc. Steven W. Tomashat was nominated by Doug A. Grose, Assistant Site General Manager, IBM, Essex Junction, Vermont.

Those honored with this prestigious award are selected each year through a well-defined process which has remained virtually unchanged since its inception. The nomination process involves the initiative of the nominator and the participation of a number of referees in support of the candidate. The dossiers of all nominees are carefully screened by the Award Organization Committee which selects about a dozen finalists. These finalists are judged by a Jury of highly prestigious leaders of the profession for final selection of the winner and honorable mention.

In 1991, the Jury of Award consisted of the following individuals:

- James E. Carnes, President and Chief Operating Officer, David Sarnoff Research Center, Princeton, New Jersey.
- Paul Dragoumis, Executive Vice President, Photomac Electric Power Company, Washington, D.C.
- Stephen Kahne, Past Vice President, Technical Activities, IEEE, and Consulting Engineer, MITRE Corporation, McLean, Virginia.

1991 Jury of Award

Standing, Left to Right: S. S. Rao, James A. D'Arcy; Stephen Kahne; Robert L. Norwood; Seated, Left to Right: James E. Carnes; Paul Dragoumis; Michael R. Hajny.

- Robert L. Norwood, Deputy Director, Space Technology, Office of Aeronautics and Space Technology, National Aeronautics and Space Administration, Washington, D.C.
- S. S. Rao, Chairperson, Electrical Engineering Department, Villanova University, Villanova, Pennsylvania.

The Eta Kappa Nu Outstanding Young Electrical Engineering Award is given annually to young electrical and computer engineering graduates for meritorious service in the interest of their fellow man as well as for outstanding achievements in their chosen profession.

Selection of the winner and honorable mention(s) is based on accomplishments; it is not influenced by the newsworthiness or commercial value of a contribution. As we all know, it sometimes takes many years for technical discoveries to be included in commercial product development. A well known example is the commercial applications of technology promoted by NASA in the 1960's and 70's, which gave the world such diverse products as Teflon and miniature components.

The process of refining a product was invented in 1842, yet only recently have FAX machines become a large commercial success. Another example is this year's winner works in monolithic semiconductor laser arrays for communications.

In the same way, contributions to local neighborhood schools, religious organizations and the arts can take years to reach fruition. The Eta Kappa Nu recognition is awarded to electrical engineers to emphasize that their service to mankind is not only by achievements in purely technical areas but also in a variety of other ways as well. Eta Kappa Nu holds that an education based upon the acquisition of technical knowledge and the development of analytical and logical thinking is a prerequisite to achievement in many lines of endeavor. This year's winner joins a long list of individuals who have brought distinction to themselves, their community and the profession.

Nominations for the award are solicited each year through the Eta Kappa Nu Award Organization Committee. Nominations may be made by any member, or group of members, of Eta Kappa Nu; by leaders from industry; by any Section or Society of the Institute of Electrical and Electronics Engineers, Inc.; by the head of the electrical and computer engineering department of any U.S. college or university; or by other individuals or groups, who in the opinion of the Award Organization Committee, are properly qualified to make nominations.

The nominations for the 1992 awards should be submitted to the Chairman of the Award Organization Committee, or to the Executive Secretary of Eta Kappa Nu, by August 1, 1992. An eligible candidate is one who:

- has an electrical engineering degree (BS, MS, or Ph.D) from a recognized U.S. Engineering school,
- will have been graduated not more than 10 years as of May 1, 1992 from a specified baccalaureate program, and
- will not have reached his or her 30th birthday as of May 1, 1992.

Awards are based upon (1) the candidate's achievements of note in his or her chosen work, including inventions of devices or circuits, improvements in analyses, discovery of important facts or relationships, development of new methods, exceptional results in teaching, outstanding industrial management, or direc-
CHAPTER ACTIVITIES

Beta Chapter is National Winner (Others are Close)

by Alan Lefkow

High quality annual reports reflecting pride in chapter accomplishments marked the Outstanding Chapter Activities Award recipients for 1990-91. Their chapter reports took advantage of today's sophisticated desktop publishing techniques to produce reports that did full justice to their matching outstanding programs of activities. Each report was well-written and looked as good as it read. This year's competition clearly marked a new plateau of achievement in Eta Kappa Nu's college Chapter Activities Award program.

Beta Chapter, Purdue University, was voted National Winner for its very impressive level of chapter activities. Beta again demonstrated this chapter's dedication and commitment to their fellow students, department, school, and community. Their report did justice to their high level of accomplishments by being well written, immaculately organized and produced, and photographed in color to convey the impact of the many colorful photos contained in the report.

But Beta Chapter was not alone among outstanding chapters. Three Honorable Mention winners matched Beta Chapter's report quality, differing only in their sophistication and what lower level of chapter activities, Gamma Mu, Texas A & M University, and Epsilon Beta, Arizona State University, had immaculate reports that were also reproduced in color. Beta Epsilon, University of Michigan, had an unusual but very well-done report that was laid out as a newspaper-blamed the "Beta Epillon Times." The report was divided into classic newspaper sections of "News," "Sports," "Business Digest," "Society and Entertainment," and "Opinion and Future." Check out what covered all of the chapter's activities for the year. And the report was in full color, including photos and typefaces.

In addition to these four winners, three chapters that typified the spirit of Eta Kappa Nu were awarded Certificates of Merit for their meritorious programs. Two of these chapters, Delta Omega, University of Hawaii at Manoa, and Delta Pi, Colorado State University, had well-produced reports with color photos, and similar color coverage in the other winning chapters. The third winner, Eta Pi, State University of New York at Buffalo submitted its quality report as a professionally bound, hardcover book.

All in all, these seven winners have demonstrated that activities worth doing are worth reporting on. Annual reports are generated by the college chapters at the end of the academic year, and are submitted to National in the summer or fall. The Award committee reviews the reports in the winter and announces the winners in the spring. The National and Honorable Mention winners receive award plaques engraved in color, and the Certificate of Merit winners receive their certificate laminated in Walnut.

Delta Pi's meritiorious report is reproduced here. BRIDGE will feature others in August and November.
HKN Community Involvement
Thanksgiving Dinner Drive

The Delta Pi Chapter organized the annual Thanksgiving dinner drive for the St. Galien city and surrounding Hendricks County area. For several weeks, HKN members manned a collection booth in the Cardinal State University's Library Student Center, collecting donations from students and faculty. The donations were used to buy complete Thanksgiving dinners including all the trimmings with all of the refilled stuffing, fresh fruits, cranberry sauce, etc. In addition, homemade pumpkin pies were also made and packed into large boxes. Each dinner was personally delivered by HKN members in family-sized shares to the Salvation Army and other local organizations.

Course and Faculty Evaluation
Now the completion of each semester, HKN members pass on our findings to evaluations for the electrical engineering department at Cardinal State. The IE department uses the evaluation as constructive feedback to improve courses.

The HKN and IEEE Lounge Renovation
On the second floor of Cardinal State University's electrical engineering wing, there is a lounge known affectionately as the HKN-IEEE Student Lounge. During the fall of 1990, the lounge was a case of disrepair. The walls were made of 1960s-era drywall, the ceiling was tiled, and the student tables were filled with scuff marks and old boxcars.

The Discovery Center
The volunteer run "Discovery Center" is a child's dream come true into the exciting world of science. Numerous exhibits make students of all ages to physical science and the life sciences through interactive "hands-on" experiences to simulate the senses and stimulate the mind. Competing with the Science Park Company, the Delta Pi chapter hopes to design computer interfaces to some of the exhibits which simulate the conversion of human telepathic power into electrical power via a subway system. This exhibits in sensory terms brain power is something many people are aware of in the because visual research children, such as graphic books. The project is ongoing and should be completed by the following academic year.

Academic and Career Endorsement
HKN Tutoring
Every Tuesday, every fall and spring, two HKN members volunteer their expertise to the following educational groups: anything from elementary school to university-level students. Students who have been helped describe the tutoring sessions as "beneficial" in understanding course material. Similarly, these sessions often gave the same view of the tutor's input, and are particularly high regarding the interest and enthusiasm most needed for the HKN members who themselves value education. Some who have chosen to take up the previous courses and perhaps even become something new.

Engineering Field Trips
Each semester the Delta Pi chapter arrange engineering field trips for the department of electrical engineering. This field trip is attended by the students who are interested in electrical engineering, such as Motor Controls, primarily aimed for students operating a variable, or one of the largest manufacturing plants in Cardinal State Park in Ft. Collins. The field trip provides an opportunity to orient themselves within an engineering career. It includes a visit to the factory, a tour of the facility, and a chance to meet with engineers and learn about their work.

Social Activities (i.e. Having Fun!)
On the lighter side, the Delta Pi has seen an all work and no play. Numerous social activities have been planned throughout the year to include the annual Halloween banquet of an engineering student society. "Why aren't you there?" Next time we call for both fall and spring semesters, a group of students assembled in the main room of the 400 building. In lieu of the traditional "15th" party, the Delta Pi chapter has been known to throw a "15th" party at the Clancy Hotel in Ft. Collins. These parties have been known to include dancing, games, and beer. The Clancy Hotel is a popular local bar and club.

Funding Activities
The Phil Machine
The single most significant contributor to the Delta Pi fund is the "Phil Machine." The "Phil Machine" is a box sitting in the main office of the HKN-IEEE Student Center. The "Phil Machine" is set at the beginning of each year at 99 cents per year. After 99 cents, the box begins to fill with student contributions, which are typically between 25 and 100 cents per year. The proceeds are then used for Phil-related activities such as buying beer, pizza, or other social events.

Tech Week Competition HP Calculator Accessories Give Away
During the annual Engineering Days event at Cardinal State, the Delta Pi chapter provided a giveaway for students who attended the event. The giveaway included HP calculator accessories such as a calculator, wrist watch, and calculator case. For 15 minutes per entry, a person could play a game and then choose from four entries into a drawing for a calculator. It was a popular event and a great way to get students excited about engineers.

Eta Kappa Nu Awards
Norman R. Carson Outstanding Junior Award: Tracy Walker.
Mr. Tracy Walker was the recipient of the prestigious Norman R. Carson Outstanding Junior Award. The award annually recognizes a student who demonstrates the highest scholastic achievement, leadership, and service. He is recognized by his accomplishments, the engineers who will be impressed with his broad knowledge of engineering expertise, and the first-hand knowledge of each engineer's work.

Delta Pi's Financial Report (1990-91)

Beginning Balance $945.00
Income
Payroll taxes $125.00
HKN and IEEE Thanksgiving Drive $150.00
Engineering Essay competition $250.00
TOTAL $330.00
Expenditures
Field trips $40.00
Field trips and Fringe Benefits $150.00
Recreation of student club $100.00
Thanksgiving dinner costs $140.00
Induction Banquet (catering) $75.00
Professional Awards $100.00
Outstanding members awards $60.00
Book gifts for student awards $10.00
Photography $30.00
Other $100.00
TOTAL $2015.00
Balance Carried Over $1455.00
Drifting Around the Kingdom
Part Five
Southampton

by
Paul K. Hudson

EDITOR'S NOTE: This article was prepared by Paul Hudson, just before his death. We felt it appropriate to include it in this issue.

Any one who has never been to Southampton might be inclined to dismiss the place as very likely a dreary maritime town. That would be a big mistake. We found the city to be beautiful, prosperous and thriving. In the business district there were many new or refurbished stores and the waves of shoppers were cheerful and alert. Probably one of the reasons for the vigor of the town is the presence of a large and excellent university—the University of Southampton.

The city has many museums, galleries, theaters and points of interest. For me, one of them was more interesting than all the others. When I went to school here in America we often talked about Plymouth Rock and the landing of the Pilgrims from the Mayflower. Now that I think about it I find it very surprising that we never talked about where the Pilgrims sailed from. Well—they came from Southampton. There is a large and impressive memorial located at the spot where the Pilgrims boarded the Mayflower. A plaque tells about Pricilla Mullins, John Alden (Why don't you speak for yourself, John?) and all the gang. I was also surprised to learn that there were two ships instead of one. However, one of them—the Speedwell—became disabled and had to turn back after only one day at sea. The Pilgrims walked down a sea ramp to board the Mayflower, and the ramp is still there. However, it does not now go down to the sea. The sea is something like a mile away. To get more land area for the town, Southampton dumped sand into the ocean and moved it back.

Another memorial that I found interesting was in a city park. It is a memorial to the Engineers on the Titanic who stayed at their posts and lost their lives so that they could keep the engines running and the ship would have lights until the very moment that it went under the ocean. (see photo) The Titanic disas-

Author, Paul Hudson

Photos: At top, Aerial View of Southampton; At bottom left, Monument to Engineers of the Titanic; At bottom right, Monument Inscription.
The hotel where we stayed—the Polygon—was astonishing. It is the only four-star hotel in town which means that it is supposed to have real class, and it did. However, it was only fifty years old and it looked like it was three hundred. I had never before seen a building so new look so old. The dining rooms served excellent food and the service was perfect but the rooms had no windows and I had the feeling that I was being served in the back room of a warehouse.

But I have to be fair and admit that whatever the place lacked in physical plant, it more than made up for in cordiality and effort. When I registered at the desk I asked the clerk if there was a Coffee Shop where we could have tea. He answered, "No, we do not have a Coffee Shop but if you will find a comfortable place in the lobby we will serve you tea there." I was really impressed by that. I doubt if there is a hotel anywhere in America that would do that. I remember several years ago when my daughter and I went into the main dining room of the New York Hilton at 11:00 PM for an after-theater supper and the waiter told us that if we did not want a full meal we should leave and go downstairs to the Coffee Shop. That was the last time I ever went to their dining room.

There are two major Cathedrals close to Southampton. We decided to spend some time at Salisbury. It can not compare with many other English Cathedrals such as Winchester or St. Paul’s in historical significance, nor is it rich in tombs of Kings or national heroes. However it is a very beautiful cathedral and has the loveliest setting of any Cathedral in the country. I became interested in Salisbury a long time ago and in a rather back-handed way, I bought the Cathedral, done by John Constable, hangs in the Metropolitan in New York, and I enjoyed it over the years. Then one day I visited the Prick Collection and found the painting there. I couldn’t believe it. The Metropolitan would never loan their paintings for anything except a special exhibit. When I got back home I wrote to the Metropolitan and to the Frick Collection asking them for a photographic print of the painting. When they sent the photos I discovered that there were two paintings done by Constable that are so identical that it is very difficult to tell them apart. I can not possibly imagine why an artist would paint two pictures almost exactly alike.

About eight miles north of the Cathedral is one of the most interesting places in England—Stonehenge. One of the things that makes it interesting is the fact that we know so little about it. It took over a thousand years to build and it did not have a masterplan, as it is supposed by the fact that there was a lot of building up and tear-down over the centuries. Only two things are certain—it was used as an open air cathedral and as an astronomical observatory. There are many people buried there and this no doubt was related to its use as a Cathedral. It was begun about 5,000 B.C.

When we arrived we were greeted by something we did not expect. It was the time of the Summer solstice and there were something like 10,000 people in the valley beside the monument. They were not astronomers but the very druids of the English nation, and perhaps some others as well. They did not know what the solstice was—they just knew it was the time to come there and leave. They could get drinking water from the tourist center. They did not need any water for washing as they never did that. When a family with little children showed up the government took them in to London and gave them housing for a while.

Southampton has one large claim to fame—it is the port of registry for the Queen Elizabeth II. There were two previous Queens—the Queen Mary and the Queen Elizabeth I. Apparently there will be no more, as economies will not permit it. In order to stay in business, Cunard has purchased some ships that no longer could survive, and then rebuilt them. There is an interesting story about the Queen Mary that I presume is true because it is told by the Cunard people. When the ship was built Cunard intended to name it the Queen Victoria. Of course they had to get the permission of the King in office—King George.

But Cunard made a blunder. Why they went to the King they said, "We wish to name this ship for the greatest Queen that ever lived." King George replied, "I am delighted that you wish to name your ship for my wife." So—the Queen Victoria became the Queen Mary. It is now parked in Long Beach, and used as a tourist attraction. The Queen Elizabeth I burned in foreign waters.

When we boarded the Queen Elizabeth II, I was a bit sad. I knew that I had visited England for the last time and also this voyage on the Queen would be my last. It was my sixth voyage and I had learned to love the ship. I stood on the boat deck and listened to the military band of the 16/2 Lancers play a concert for the departing passengers. Just as we slipped quietly away from the dock the hand broke out into the lovely English song Land of Hope and Glory. It was a very sweet good-by and especially for people like me who would never return. I might have had a couple of tears, as I had learned to love England very deeply.

I could not go to sleep that first night on the ship. Awake in my bed I thought about the ship. I thought about the Chinese people who run the laundry down in the belly of the ship and how they never see the light of day. They have to wash something like 5,000 towels each day and about that many sheets and...
Queen Elizabeth II

pillow cases. I do not know how many table cloths, napkins and other things. I don't see how they do it all. They are the only people on the ship who cook their own food and I suppose there are several reasons for that. I thought about the amount of fuel needed to push the ship across the ocean. One gallon of fuel pushes it 12 feet. Twelve feet goes into 3,000 miles a lot of times. Finally just as I was going to sleep I thought of something that shook me awake again. The water!!! The Queen buys drinking water in the ports and purifies sea water for washing, etc. But the water in the toilets in the bathrooms is raw sea water. I jumped up and went into the bathroom and shut the door without turning on the light. It was completely dark. I then flushed the stool and what happened was what I thought might happen. For a brief moment the bowl of the stool flashed a bright green light with shooting stars and pinwheels all over. It was a real nice show. I flushed it again six or eight times and got the same result. The sea is full of plankton and it is phosphorescent when it is disturbed. I thought about the fact that plankton is about the lowest form of life and humans are supposed to be the highest. Yet people are destroying the earth with their over-population and plankton is trying to save it by stabilizing the sea life and, in turn, the land. I wouldn't want to make a guess as to which form of life the Lord loves best.

Moshe Kam Wins
C. Holmes MacDonald
Outstanding Teacher Award

Dr. Moshe Kam, Associate Professor at Drexel University is the Winner of the 1991 HKN C. Holmes MacDonald Outstanding Teaching Award. It was a happy occasion that took me as Chairman of the HKN C. Holmes MacDonald Outstanding Teaching Award Program to the campus of my alma mater, Drexel University, on January 25, 1992. The occasion was very meaningful for two reasons. One was the dedication of an electrical engineering student lounge in memory of P. C. “Scotty” Powell, a much beloved professor who served many years at Drexel. In fact he was serving as assistant head of the Electrical Engineering Department when I attended Drexel after the war in the late 1940’s. The other reason of course was to present the Outstanding Teaching Award to Dr. Kam.

The 1991 Outstanding Young Electrical Engineering Professor was chosen from among all of the nation’s Colleges and Universities who submitted candidate names and biographies for consideration in the 1991 program. In making the presentation, I took the opportunity to inform those students and faculty gathered to honor Dr. Kam, that the Outstanding Teaching Award is one of five awards presented annually by HKN. This particular award was initiated in 1972 and is administered by the HKN Philadelphia Alumni Chapter. One of those in Philadelphia who was instrumental in starting the award and very interested in honoring young electrical engineering professors was C. Holmes MacDonald. Holmes was not only a member of the Philadelphia Alumni Chapter, but he had served on the HKN National Board of Directors.

Shortly after Holmes’ death in 1974, the Outstanding Teaching Award took his name to honor his great love and respect for the teaching profession. Edward H. MacDonald, son of Holmes, attended the award presentation along with other members of the Philadelphia Alumni Chapter.

The Outstanding Teaching Award is intended to recognize the central and crucial role of college pro-
Mr. Robert Arehart Presents Award Certificate to Dr. Moshe Kam.

Dr. Kam is a sophisticated and multi-footed individual, but, probably, his most valuable attribute is his ability to achieve excellence in both teaching and research and to fuse the two to enhance the education process. This is truly a difficult accomplishment for which most faculty members strive, but too few succeed so extensively. He has become a leading and recognized authority in his research area of neural networks while receiving teaching awards from students in undergraduate courses. He has also served his Department and University on key committees to improve the quality of teaching and research, as well as in professional societies by actively organizing and participating in seminars and conferences. His accomplishments are impressive and have been widely recognized by his colleagues, students and objective reviewers. His diversity, competence and numerous accomplishments have been instrumental in his appointment as the Chairman of the Electrical and Computer Engineering Recruiting Committee. In this capacity, he serves the Department in a very crucial role: determining the areas where new faculty are most needed and accordingly recruiting the appropriate candidates. Such an important task would ordinarily be assigned to a more senior faculty member, but Dr. Kam has proven himself worthy of such high-level expectations.

In addition to his professional accomplishments, Dr. Kam has an intellectual and artistic side to his personality which is noteworthy but often goes unnoticed since he attracts so much attention and praise in his academic and professional endeavors. He enjoys literature and poetry, and is currently translating Walt Whitman's 'Leaves of Grass into Hebrew' ("Aley Asev"). He is a member of the Arbor Chorale (second base) and plays saxophone. He is also a member of Amenity International Natural Resource Defense Council, Checkout for Israel, Foundation and the Committee on Campus projects.

"Finally, it is important to note that Dr. Kam complements the other professors with a fine personality. He is a confident individual who takes pride in his work, yet has a modest and very easy-going approach that is always willing to help his students and colleagues. It is believed that Dr. Kam's recent accomplishments are only the beginning of an outstanding career in education. Given his vast talents, motivation, productivity, and extreme dedication to his profession, it is clear that he will continue to experiment with new ideas, research and assume leadership roles both within the Department and nationally. Dr. Kam is an outstanding young Electrical Engineering Professor who typifies the excellence in teaching and research. He has the ability to motivate students and colleagues alike to attain their maximum potential."

"Dr. Kam truly exhibits all qualities of an outstanding young engineering educator: respect and recognition from his students, his colleagues, and his peers. He has been an inspiration to his students, a well recognized research developer, a very active contributor, and a dynamic leader of his profession. He is an exemplary role model."
Kappa Gamma Chapter Installed
University of Alaska
by Gerald Walker

The Chapter Charter was presented to Dr. John Aspnes (Electrical Engineering Department Head at right) by Dr. Endrik Noges (representing Eta Kappa Nu national headquarters at left) as Dr. Gerald Walker (faculty advisor) looks on.

The University of Alaska Fairbanks Kappa Gamma chapter of Eta Kappa Nu was installed on March 3, 1992. The ceremony was held in room 533 of the Duckering Building on campus. A reception for members, families and guests was held at the Copper House on campus following the ceremony. The Kappa Gamma Chapter is proud to uphold the traditions and high standards of Eta Kappa Nu. Kappa Gamma expresses its appreciation to Dr. Endrik Noges, EE Department Chair, University of Washington at Seattle, who served as installing officer.

The Spring 1992 Charter Members of Kappa Gamma chapter of Eta Kappa Nu (from left to right) are: Thomas Ziestlow, Afroz Khan, Mathew Peterson, Jeremy Rehmerr, James Baker, Chris Carter, Ken Brune, Thomas Clark, Brian Chouinard, Alex Smith, Duane Risse, Jason Williams, Richard Reimers, Mark Schett, and Priyan Ganuillake.

The officers and faculty advisor for the Kappa Gamma Chapter (from left) are: James Baker (Treasurer), Dr. Gerald Walker (Faculty Advisor), Afroz Khan (Recording Secretary), Chris Carter (Bridge Correspondent), Brian Chouinard (Vice President), Duane Risse (President), and Thomas Clark (Corresponding Secretary).
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