

Eta Kappa Nu

# BRIDGE

Spring 1983







Electrical Engineering Honor Society  
Spring, 1983, Volume 79, Number 3

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# THE ALTON B. ZERBY AWARD

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|--|--|
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| 1966 THOMAS L. THOMAS<br>Ohio State University           | 1975 WILLIAM P. MUMFORD III<br>Oregon State University   |
| 1967 DOUGLAS F. JOHNSTONE<br>Purdue University           | 1976 ALLEN D. ELSTER<br>Vanderbilt University  |
| 1968 DONALD A. HANSON<br>University of Illinois          | 1977 DAVID D. WELTER<br>University of New Mexico   |
| 1969 THOMAS L. NIEMEYER<br>Ohio State University         | 1978 DOUGLAS R. KRAUL<br>Georgia Institute of Technology   |
| 1970 ROBERT W. ALFORD<br>University of Texas - Arlington | 1979 MAX WOLFF HAUSER<br>University of California at Berkeley<br>and<br>LOUISE A. VEILLEUX<br>University of Maine at Orono |
| 1971 ALAN M. USAS<br>Princeton University                | 1980 MARK DAVID VANSTRUM<br>Auburn University  |
| 1972 NOEL H. RUNYAN<br>University of New Mexico          | 1981 GARY LEE SONNIER<br>University of Southwestern Louisiana  |

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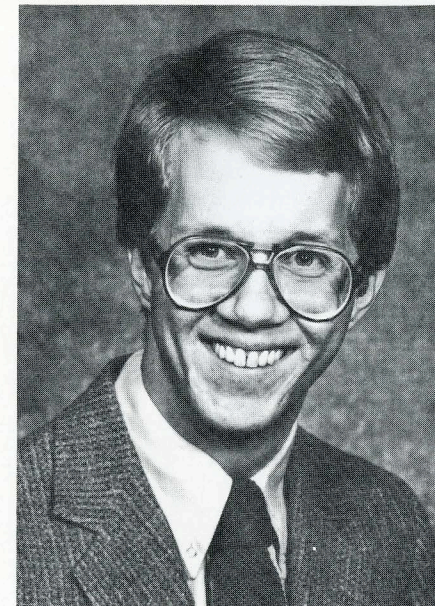
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# Student Award Winners

## THE ALTON B. ZERBY OUTSTANDING ELECTRICAL ENGINEERING STUDENT AWARD



**RICHARD LEE GOODSON  
WINNER 1982**

**RICHARD LEE GOODSON** was number one out of a class of 79 and was nominated by Delta Nu Chapter at the University of Alabama. He was honored with membership in Eta Kappa Nu, Tau Beta Pi, Pi Mu Epsilon, Phi Eta Sigma and is a member of the IEEE and the IEEE Computer Society.

Mr. Goodson served as Vice-President of Eta Kappa Nu, President of the IEEE Computer Society and Secretary of the IEEE. He won the Tau Beta Pi Sophomore Award. He has tutored Eta Kappa Nu students and organized the members into groups spreading the tutoring load to all members.

He took charge of engraving all the names of the new Eta Kappa Nu and Tau Beta Pi members on their respective plaques. He organized and designed "Micro Mouth", a voice synthesis aid for the non-vocal handicapped, enabling them to speak a vocabulary of 32 words. He has submitted a paper entitled "A Synthesized Speech Aid for the Non-Vocal, Severely Disabled" to the IEEE Southeastcon '82 Student Paper Contest. Mr. Goodson worked as a co-op student with SCI Systems and has written and hand-assembled the machine language monitor routine software.

Mr. Goodson won second place in the student competition of IEEE Southeastcon for his 1K Byte Black-Jack Playing Machine Language Program. The processor was designed so that anyone could operate it by reading the user manual. He won the Hardaway Foundation Academic Scholarship, Fred R. Maxwell Award and the Sesquicentennial Dean's Scholar.

Mr. Goodson worked for Southern Company Services, learned various aspects of the power industry and worked on the design of Vogtle Nuclear Plant, Georgia.

For relaxation he enjoys running and is an accomplished musician who plays trumpet in the University Jazz Ensemble.

Wins expense-paid trip to Disneyland and an Award Dinner in his honor, from the Alton B. Zerby Perpetual Memorial Trust established by the Eta Kappa Nu Official Family, and a gift of \$500 from the Carl T. Koerner Perpetual Memorial Trust established by Edith Ann Koerner.

Text by  
Colleen and  
Larry Hamilton

## JURY OF AWARD

S. Harold Gold  
Andrew S. Grove  
Stephen J. Kahne  
Russell E. Lueg  
Berthold Sheffield

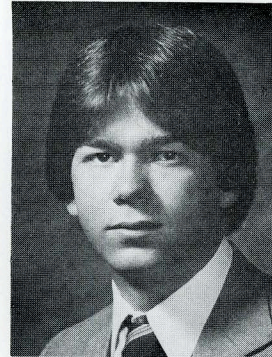
Fellow IEEE  
Fellow IEEE  
Fellow IEEE  
President HKN  
Publicity HKN



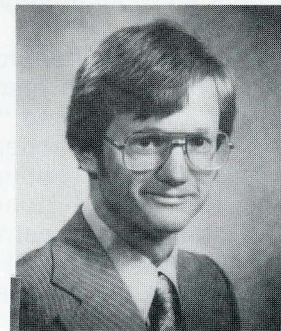
**THE ALTON B. ZERBY OUTSTANDING  
ELECTRICAL ENGINEERING STUDENT AWARD  
HONORABLE MENTION 1982**



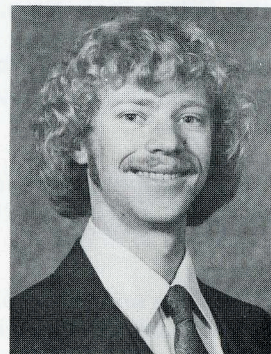
**JANET MARIE  
CARNETT**



**JAMES KENNETH  
HABERSTOCK**



**JERRELL PAUL  
HEIN**



**GREGORY STEVEN  
PARETS**



**WILLIAM PAUL  
RISK, III**

**JOHN WILLIAM BRADBURY  
DAVID ROBERT CLARK  
ROBERT GREGG MAJURE  
RICHARD DUANE MORRIS**

**FINALISTS 1982**

**Texas A & M University  
Cornell University  
Tennessee Technological University  
University of Utah**

**JANET MARIE CARNETT** with a G.P.A. of 4.0 was nominated by Zeta-Theta Chapter at California State Polytechnic University at Pomona. She has been honored with membership in Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi and is a member of the IEEE. She has served as Bridge Secretary and Treasurer for Eta Kappa Nu.

Miss Carnett worked as an Industrial Trainee in Electro-optics for General Dynamics. She has recorded technical books for the blind at the Claremont colleges. She is a regular blood donor and has donated one gallon to date.

For relaxation she writes poetry and is an accomplished clarinet player.

**JAMES KENNETH HABERSTOCK** with a G.P.A. of 4.00 was nominated by Gamma-Theta Chapter at the University of Missouri at Rolla. He was honored with membership in Eta Kappa Nu, Phi Kappa Phi, Tau Beta Pi, Phi Eta Sigma and is a member of the IEEE. He served as president of Eta Kappa Nu.

He was selected as the Outstanding Junior by the student chapter of the IEEE. Mr. Habersstock was involved in Wesley work projects which performed construction work for churches who could not afford to have the work done and has worked for the IBM Systems Division in Lexington, Kentucky.

For relaxation he enjoys jogging, spelunking and photography.

**JERRELL PAUL HEIN** with a G.P.A. of 3.99 was nominated by Epsilon Chapter at Pennsylvania State University. He has been honored with membership in Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi and Pi Mu Epsilon.

He has worked with handicapped children in the special olympics as a volunteer "hugger" and taught them sport skills. Mr. Hein designed, built a prototype and wrote a paper on "Portable Logarithmic Audio Intensity Meter for the Deaf and Hearing Impaired" for the Student Design Competition Conference on Rehabilitation Engineering. He won the Senatorial Scholarship, Outstanding Mathematics Student Award and the James Varnak Outstanding Senior Award.

For relaxation he plays the piano and is learning to play the guitar.

**GREGORY STEVEN PARETS** with a G.P.A. of 3.94 was nominated by Delta Omicron Chapter at the University of New Mexico. He has been honored with membership in Eta Kappa Nu, Tau Beta Pi, Kappa Mu Epsilon, Blue Key and is a member of IEEE. He has served as Secretary of Kappa Mu Epsilon and as a member of the Selections Committee for Blue Key.

As President of Eta Kappa Nu he was responsible for the operation of the Electronic Message Board to the UNM Basketball Sports Arena which in turn paid Eta Kappa Nu for this service. The fee was used for parts and the excess was given to the Arnold H. Koschmann Memorial Scholarship Fund. He developed an ultrasonic rangefinder component to be used with a microprocessor controlled robot for the 1982 Engineering Open House.

For relaxation he enjoys skiing and music.

**WILLIAM PAUL RISK III** with a G.P.A. of 4.00 was nominated by Epsilon Beta Chapter at Arizona State University. He has been honored with membership in Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi and he is a member of the National Society of Professional Engineers where he has served as Secretary and Vice President.

He has worked as a Student Research Participant at the Stanford Linear Accelerator Center. He has written papers entitled "Thevenin Equivalents of Ladder Networks", "The Analysis and Design of Tapped Delay Filters" for the 1982 IEEE Student Paper Contest.

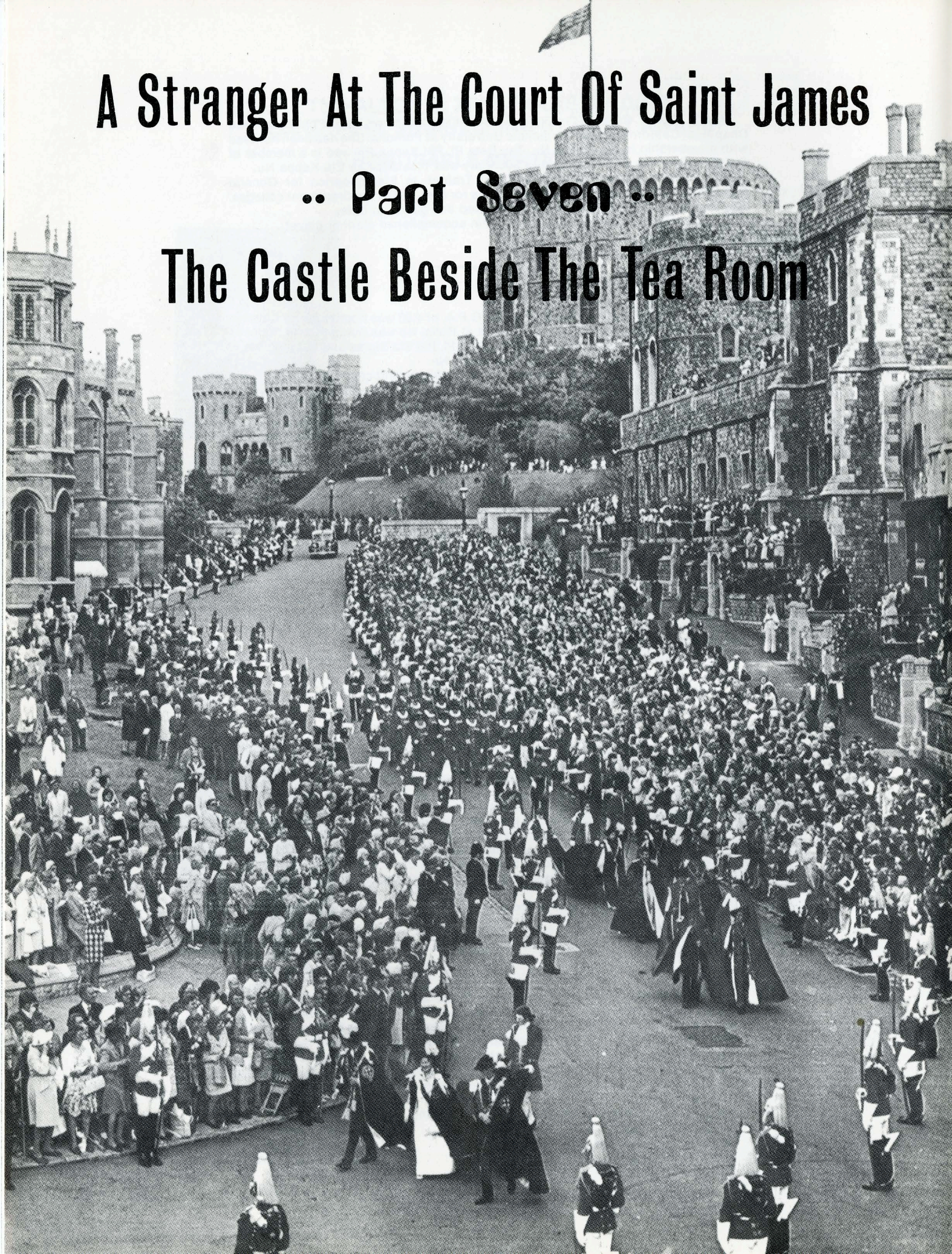
For relaxation he enjoys ham radio, music, reading and photography.



# A Stranger At The Court Of Saint James

## .. Part Seven ..

### The Castle Beside The Tea Room



In London we bought a half-day guided tour of Windsor Castle. When you are a stranger in a foreign land, that is about all you can do for a start. At least you find out where the place is so that you can later go back on your own.

The bus driver dumped us off at a corner near the Castle grounds and the lady tour guide immediately started telling us about a jolly little tea room about half way down the main street of town where we could get delicious cakes and tea. She suggested that the Castle was not all that much to see and that we would not miss much if we just spent the available time in the tea room. Several of the tour patrons took her up on it and departed. She then led the rest of us up through the Castle gate. On the way I asked her if we were going to visit Saint George's Chapel.

She replied, "No, there is no time for that."

"Just time for the tea room?" I asked.

She glared at me but did not answer.

To visit Windsor Castle without visiting Saint George's Chapel is unthinkable. I decided that I would take a fast tour of the Castle on my own and then go over to the Chapel.

Windsor Castle was built by William the Conqueror shortly after the affair at Hastings Hill in 1066, as a center of law and order. It is now one of the official residences of the Royal Family. The others are Buckingham Palace in London and Holyroodhouse in Edinburgh.

After taking a look at the outside and then wandering through the inside, I felt like I wanted to laugh. There was nothing laughable about the Castle—it was something else. It was a movie I had seen long ago. A rancher in the Pacific northwest was in the process of building a new house and, one day, a large number of his neighbors decided to help him. He invited them to have a hearty breakfast in his old house—a tiny run-down shack about fifteen by twenty feet—before they started the day's work. Then the camera took us inside the house where something like 50 people were being comfortably fed in a dining room about 50 by 75 feet.

I got the same impression from Windsor Castle. It looked to be ten times larger inside than outside. The outside looked rather small, but inside I wandered through room after room, each of which was large enough to accommodate a hockey rink. I could not say that I found one room more interesting than the others because I was fascinated by all of them. However, I will likely remember the Waterloo Chamber longer than the others. I have seen dozens of good portraits of Napoleon but this was the first time I had seen any portrait of Wellington. He certainly was a handsome soldier. The room could seat 65 people comfortably for lunch, when they celebrate the anniversary of the battle.



by **PAUL K. HUDSON**  
Editor — Bridge

It was a deep regret that I had to leave the place before I had time to go over it properly but I did want to see Saint George's.

The Chapel is just a few steps down the street from the castle. Close inside the door was an Information Desk, with a pleasant lady on duty. I walked over to her and asked,

"Will you please tell me where King Henry VIII is buried?"

She had heard the question so many times she replied with the mechanical automation of a computer.

"He is in the floor in the center of the Choir."

Then I looked very carefully into her eyes and asked,

"And can you also tell me where AIAMAYA is buried?"

Her eyes had a blank look as that question was processed through the computer circuits.

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Opposite page: A procession of the Royal Order Of The Garter, from the upper ward down to Saint George's Chapel at Windsor Castle.

Next two pages: The Choir of Saint George's Chapel. The sword, helmet, mantling, crest, and banner of each of the Knights of the Garter hang over the stalls. King Henry VIII is buried under the rectangular stone in the center of the floor.









**The painting of the Duke of Wellington that hangs on the far right wall of the Waterloo Chamber.**

"AIAMAYA?" she asked. I expect I did not pronounce it right.

"Yes, the young son of the Emperor Theodore of Ethiopia."

Her eyes then sparkled and she gave me a big smile. I think she did not get that question very often and was proud that she could answer.

"Yes, he is at the back of the Chapel and to the right. You will find a plaque in the wall."

I was pleased that she felt no hesitation. It answered a question that I had wondered about for a long time. After I had walked away she left her station and came over to me and said,

"I presume you know that he was cremated and that he is not inside the wall but outside."

That chilled me for a brief moment. I thought that she was saying to me,

"It is okay. He isn't really buried here after all."

I am sure that I was wrong about that. I am sure she was just glad to find a tourist who knew something about the place and enjoyed it more than the jolly little tea room.

I found the plaque and noticed that it was badly in need of polishing. But I could make out the word THEODORE and some other things. I cannot remember (if I ever knew) how AIAMAYA happened to be buried in that classy place. What makes the question interesting is the fact that his



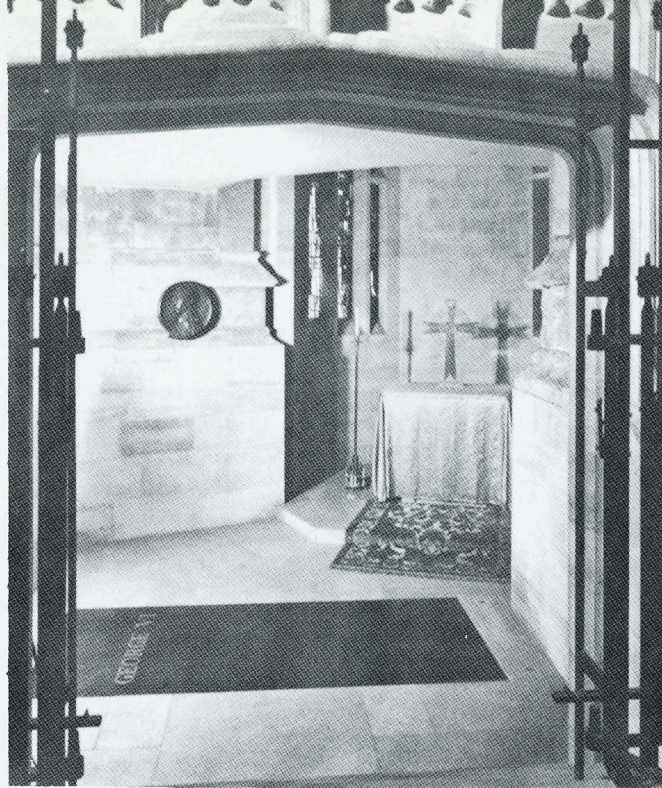
father gave the British a hellish hard time. He captured an important (but not very courageous) Englishman and held him captive for a very long time. England had to send an army expedition to Africa to get him back. Theodore was a bit flakey and was killed unnecessarily on the battlefield when the British arrived. AIAMAYA's mother then brought him to England where he soon died. Or maybe he was dead on arrival. But there was no reason for the English to feel any guilt and I am sure that is not the reason he was buried in Saint George's.

There was no problem in finding Henry VIII in the Choir as there is a large stone in the center of the floor. He is buried with his favorite wife, Jane Seymour, Charles 1st, and a child of Queen Ann. Henry always gets a very bad press and I suppose some of it is justified. After all, a gentleman never

**The Waterloo Chamber. This banquet hall seats 60 comfortably. The paintings, mainly by Lawrence, are of people who were important in the defeat of the Emperor at Waterloo.**

kills a person and especially not a woman. But those were different times—cruel times. Anyway he executed Queens Ann Boleyn and Catherine Howard (for his own comfort) and that was not a bit nice. I asked a guard if he knew where the two ladies were buried. He replied that when they were working over a part of the Tower of London recently they found two remains that were unaccounted for. One had deformed bones in one hand. Ann Boleyn had a deformed hand and it is presumed that the two remains were those of the unfortunate Queens.





**The lovely King George VI Chapel. The King's body rests under the black ledger stone in the floor.**

It is now largely forgotten that Henry was an intelligent, thoughtful and cultured man. He was definitely not all glutton and glands. He was a patron of what arts there were at the time and wrote a great deal of poetry. His *Green Groweth the Holly* was pretty good poetry for the sixteenth century:

Green groweth the holly, so doth the ivy,  
Though winter blasts blow never so high,  
Green groweth the holly.

As the holly groweth green  
And never changeth hue,  
So I am, and ever hath been,  
Unto my lady true.  
*Green groweth the holly.*

Now unto my lady  
Promise to her I make  
From all other only  
To her I betake  
*Green groweth the holly.*

Adieu, mine own lady  
Adieu my special  
Who hath my heart truly  
Be sure, and ever shall,  
*Green groweth the holly.*

Green groweth the holly, so doth the ivy,  
Though winter blasts blow never so high,  
Green groweth the holly.

The King George VI Memorial Chapel in the north choir aisle is very small, simple and modern, and yet I found it to be the most beautiful and comfortable

royal tomb I have ever seen. Its loveliness derives from simplicity instead of pretentiousness. If I were a King I would want my tomb to look like that. He is the only English King that I remember and I always considered him to be a beautiful person. His tomb was dedicated in 1969.

There is an old saying that "every sinner will have a future just as every saint has had a past." Be that as it may, I am pleased to report that the lady tour guide completely redeemed herself on the ride back to London. She told me many things about English History, London, etc. that I never knew. For example she told me the meaning of many of the nursery rhymes that I had learned as a small child, and had accepted without thinking much about them. The rhyme:

Up and down the country lane  
In and out of the Eagle  
That's the way the money goes  
Pop goes the weasel.

has the following meaning: The Eagle was the name of a Saloon that was on the country lane, where people did lots of drinking. Weasel is the cockney word for a woman's fur coat, and to pop it meant putting it in a pawn shop—to get money for the Eagle.

Another rhyme:

Ba ba black sheep, have you any wool?  
Yes sir, yes sir, three bags full.  
One for my master and one for my dame  
And one for the little boy who lives in the lane.

had a pastoral background. Tenant farmers had to divide their crops into three parts. One was for the master who was the person owning the land, and one was for the dame who was the wife who managed the household. The little boy who lived in the lane was the tax collector.

I was surprised by how many of the rhymes had grim meanings. For example this one:

Ring around the rosie  
Pocket full of posie  
One, two, three  
And we all fall down.

involves the bubonic plague that swept the country in the middle ages. When a person got the plague, red spots would appear on his face, and when other people saw them they would put a handful of flowers in his pocket to comfort him in his last hours. Falling down, of course, was dying.

Another thing I learned, which was not surprising, is that tour guides are not very well paid, especially in consideration of the high cost of living in London. By the time we reached town I was looking at the lady in a different light, and when I got off the bus I gave her a substantial tip. She gave me a "bless you sir, now my kids can eat," smile. Maybe sometime I will even go back to the tea room. Maybe she was right after all.

# MERRY MOMENTS WITH MARCIA

In the small dim room pungent with incense, the old wrinkled gypsy looked up from her crystal ball at the gentleman before her. "I'll answer any two questions you ask me" said the gypsy, "for one hundred dollars."

"Isn't that a rather high price?" the man asked.  
"Yes, it is" the gypsy said. "Now, what is your second question?"

Ed and Dan were playing golf for money—ten dollars a hole. After the first, Ed asked Dan how many strokes he had taken. Dan said, "Five." "I was home in four," said Ed, pleased, "so that's my hole." When they finished the second, Ed asked the same question. "Wait a minute," Dan objected. "It's my turn to ask first."

"Never put off until tomorrow what you can do today" the wise man said, "because if you enjoy it today, you can do it again tomorrow."

A minister forgot the name of a couple he was to marry, so he said from his pulpit, "will those wishing to be united in holy matrimony please come forward after the service."

Following the service twelve old maids came forward.

The Federal Government worries about the growing number of unemployed—but business executives have an even greater worry of the growing number of unemployed still on their payroll.

It takes about 3,000 bolts to put an automobile together, but only one nut to scatter it all over the highway.



Professor: "Class, we're going to have a half day of school this morning."

Class: "Wonderful!"

Professor: "And we'll have the other half this afternoon."

"You shouldn't worry like that—it doesn't do any good."

"It does for me! Ninety percent of the things I worry about never happen!"

## RECIPE FOR A HAPPY DAY

1 cup friendly words  
2 heaping cups of understanding  
4 heaping teaspoons time and patience  
pinch of warm personality  
dash of humor

Measure words carefully, add heaping amounts of understanding, use generous amounts of time and patience. Cook with gas on front burner, keep temperature low. Do not boil. Add dash of humor and pinch of warm personality. Season to taste with spice of life. Serve in individual molds. Guaranteed never to fail.

If you're traveling in Scandinavia and you come to the last Lapp—you must be near the Finish line.

I've heard a farmer was teaching his wife to drive their new car so she could help with the driving. She seemed to be doing fine, so he sat silently and observed.

The dirt road they were on was ending as they came up to a stretch of blacktop, so she shoved the gear shift lever and the car crunched to a sudden stop.

Crawling out from beneath the dashboard the man asked, "What in the world did you do?"

"I just shifed gears," she answered.

"With an automatic transmission?" he asked.

"Sure. I shifted from 'D' for dirt to 'P' for pavement!"

by **MARCIA PETERMAN**



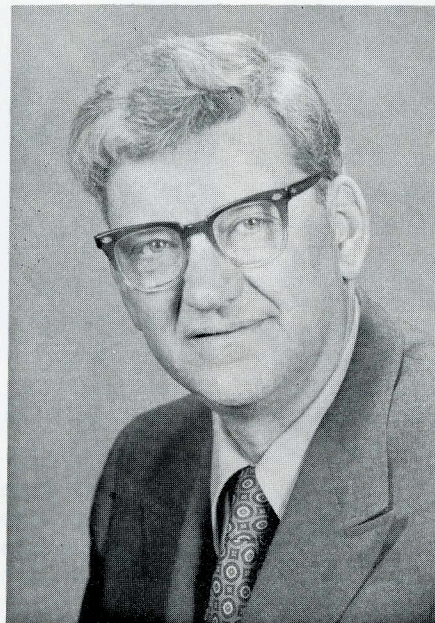
# PADDLING DOWN THE ALBANY

## part one

All through the winter and spring of 1976 I'd been day-dreaming about it, studying topographic maps, talking it up with old friends and colleagues at professional meetings. It had been forcing itself upon me all year, the idea that if I ever were to make a major canoeing expedition into the Canadian wilderness it would have to be soon. The years were slipping by. The annual canoe trips with Janice simply didn't satisfy the craving for raw, stark, exciting adventure. Granted, it's very pleasant to paddle the peaceful, lovely bays of Isle Royale with one's favorite companion. But once in awhile one needs to satisfy some primeval urge, to face the elemental forces of nature with only one's personal resources.

Oddly, most of my hiking, backpacking and mountaineering friends over the years had been fellow radio-astronomers or electrical engineers. Most, like me, were getting gray of head and cautious of step. Few had had much canoeing experience, and none were available for the summer of 1976. My stalwart son was busy with career and bread-winning, my grandson still too small.

Still, I continued to plan, searching the maps for a route that would be well off the beaten path, would not involve much portaging, (in deference to my intolerant lumbar discs) and would be accessible at start and finish by automobile or public transport. Between times I'd phone across the country to another old trail companion, to see if he'd be interested. Some of them were surprised to hear from me after all the years, surprised I hadn't yet settled into a saner mode of life. None could make it. Most wished they could.



**George W. Swenson, Jr. Professor of Electrical Engineering and Astronomy and Head of the Department of Electrical Engineering at the University of Illinois - Urbana.**

Finally, I spotted a route that seemed nearly ideal. Drive to Hearst, Ontario on the Trans-Canada Highway. Paddle down the Kabinakagami River to the Kenogami and thence to the Albany. Down the Albany to Fort Albany on James Bay. From there a plane ride to Moosonee, a train ride to Cochrane, and a bus back to Hearst and the car. A total of 385 kilometers (240 miles) to paddle, and as the trip starts at the fall line between the Lake Superior Highland and the Hudson Bay Lowland there should be few rapids and no waterfalls. There are no towns or roads along the river route, and only one Indian village, marked "abandoned" on the map. It ought to take about nine days, say, and it ought to be sensational.

I'd flown over the area in light planes several times and knew it to be lonely, wild, and beautiful.

Now all I needed was a companion. Without a partner of the right sort it couldn't be done, but all my searching had proved fruitless. My anxiety and restlessness grew as the summer approached, and Janice began making suggestions: "Have you talked with Bob J.? How about Charlie M.?" Finally, "How about Dan?" I hadn't asked Dan. He was a local writer, environmental activist, and sometime school teacher, with whom I'd made one or two short trips on neighborhood streams. We hadn't really tested each other for compatibility on a long, hard trip, and that can make or break the whole project. We had in common our concern for the environment and our love of nature; maybe that would be enough. I phoned him, we spent a long evening poring over maps and calculating schedules and costs, and then we shook hands. "Let's do it!"

On July 29, we set out from Champaign, Illinois with Dan's 17-foot aluminum canoe atop my ancient, yellow Camaro. A long but uneventful drive brought us to Calstock, an Indian village 400 kilometers (250 miles) north of Sault Ste. Marie. At a nearby youth conservation corps camp an official directed us to a suitable launching point on the Kabinakagami River, just downstream from Limestone Rapids, and promised to pick up our car and drive it the fifty miles to Hearst. It would save him a bus ride on his day off, and it would be safe at the forest-fire warden's office in town.

At 4:00 p.m. on July 30, we started down the river. A short first-day stint is always best, while

the paddling muscles limber up. It was raining a bit that afternoon and we worried that this might be the forerunner of things to come. The river was swift but not turbulent and we made good time while we scanned the densely forested banks for wildlife, possible campsites, and landmarks against which to check our progress. We appeared to be making about 7.4 kilometers an hour (4.6 m.p.h.). After three hours we began looking in earnest for a camping place, and encountered a problem that would be with us the entire trip. The banks are so thickly grown with scrubby spruce trees that there's no place to pitch our two-man backpacker's tent. Finally, we spotted a tiny clearing, which turned out to be an unoccupied Indian camp, complete with a raised frame of poles to help keep our food supplies away from the mice, and a primitive privy. We

appropriated the place for the night, pitched our tent, cooked supper, and slept the sleep of the just, the fatigued, and the contented.

Next morning the sky was clear, but the river and the forest were covered with mist. Visibility was only a stone's throw as we breakfasted on tea, Tang, and oatmeal. There wasn't a sound except for a faint gurgling from the river; the external world might have ceased to exist, for all we knew. Such an intense silence is almost unknown in our everyday life, and it's a sensation almost beyond description. Our muscles are a bit sore this morning but we set off confidently at 8:00, determined to make a good showing this day.

Within an hour the mist has evaporated and we have a gorgeous day, briskly cool and nearly calm.

A few ospreys circle over the water, indicating the presence of fish. Some beaver-chewed sticks drift by. We pass an Indian family camped on the bank, their husky, motor-driven canoe pulled up on a gravel bar. They wave, and a teenage boy shouts "You're going fast!" then we're out of sight around a bend.

Our shoulders and arms are feeling better now, after a couple of hours' workout. We paddle on opposite sides, Dan in the stern, George in the bow. We exchange places on alternate days. On this day we paddle on our respective sides for thirty minutes, then switch. Eventually, we extend the time to an hour by the wristwatch, switching on the even hour. We fall into a regular routine, taking pride in our steady progress.

Another Indian family motors upstream in their freight canoe.

**The first night out, on the Kabinakagami River**







Another camp on the Albany River.

They call a greeting; we didn't know it then but this would be our last human contact for five days. These people are fishing, we suppose, or just traveling for pleasure. The freight canoe, 20 to 25 feet long, and of traditional shape except for a squared-off stern for an outboard motor, is the "family car" of the Canadian North. There's an Indian-operated factory in northern Quebec where they're made, very rugged, seaworthy craft with 2 x 4s for gunwales and thwarts, capable of carrying large loads of furs, fish, supplies, or kids. Our canoe, of course, is much smaller and more fragile. It has to be light enough to carry around dangerous rapids, and of course we purists would never so abase ourselves as to use mechanical propulsion. We can't carry much weight; an overloaded canoe is dangerous in white water. Thus, our camping outfit is as light as we can make it, benefiting from

our backpacking experiences: dehydrated food, minimal tentage, down-filled sleeping bags, and a strict limit on the weight of such non-essentials as cameras, bird-watching binoculars, fishing gear, extra clothing, and the like. We have ten days' food at 4000 calories per man per day. As the trip progresses, if it becomes evident that it will take longer, we'll have to ration ourselves.

We're now on the Kenogami River, having left the Kabinakagami in the afternoon. We've passed some smaller tributaries, too, and late in the day we explored one of them on foot to see if there might be a suitable campsite, only to learn a surprising fact. The river banks are the only dry land around. The spring ice flows scour the river and heap the alluvium onto the banks, where it forms the base for a belt of trees only about 50 meters wide. All the rest is bog. Here and there is a drier patch

with a few trees, but it would be impossible to walk anywhere. This has a very grim implication for us if we should lose our canoe or damage it beyond repair. The geomorphology is accurately described on the topographic maps, but its true impact is strongest when it's seen in person.

We camp the night of August 1 at another Indian campsite, this one on a ledge scoured out of the river bank by the rampaging ice during the spring breakup. We are lucky to find it; the spruce forest is so thick and unbroken a house cat could hardly sneak through it.

Our camp this night is comfortable. Firewood is plentiful on the entire route and we never had to use our little gasoline stove. An open fire adds so much to a camp, it's a great pity that most of our few remaining wilderness areas are now so heavily used that wood fires can't be permitted. It's almost worth the trip just for the freedom



Swenson on the Albany.

to gaze into the coals for an hour at twilight each evening. It satisfies some primal instinct, it adds a sense of security, and it's a good way to dry out wet socks.

The second and third days we averaged 64 kilometers (40 miles). The current was brisk and there had been no major rapids, shoals or other obstructions. Could we keep this up? During the trip's planning phase the Ontario forest wardens had sent me a description of a trip some college students had made in a motorized canoe, under a government assignment to explore the route. They'd made it in six days from Limestone Rapids to Fort Albany. If we continued at our current pace we'd equal that, paddling by hand. So we began a sort of competition, man versus machine, that motivated me for the rest of the trip. I'm not sure Dan really approved of that aspect of things, because it didn't leave much time for fishing. In any event

we adopted a rather rigorous schedule, paddling from 8:00 a.m. to 7:00 p.m., depending on the time needed to find a campsite. We'd take 30 to 45 minutes rest while we ate lunch; otherwise we worked continuously, pausing only momentarily to consult the map or dip a drink of water from the river.

The scenery was enjoyable in a peaceful, restrained way, not overpowering like a rugged mountain range or a cliff-girded seashore but a more intimately beautiful concordance of blue water and sky, white clouds, green forests, and rosy sunsets, the whole effect emphasized by absolute solitude. Only at the Albany Forks, the juncture of the Albany and the Kenogami, did massive, spruce-shrouded cliffs significantly interrupt the lowland terrain. Here the river increased in width from one- or two-hundred meters to several hundred. At its mouth

the Albany is over a kilometer across.

And so it went for four days, some intermittently rainy, some beautifully clear, some with nasty headwinds and choppy waves, some calm and placid. In retrospect all were enjoyable and memorable, though at the time we cursed the contrary winds and the wettings. Time eases one's perceptions.

Campsites continued to be a problem. Once we were lucky enough to find a high, dry sandbar in the river, with plenty of level space and dry firewood. Twice we had to settle for narrow, wet beaches right at the water's edge, where we had to dig with our paddles to level platforms for our little tent. We took pains each night to drag the canoe as high as possible and to tie it securely, as its loss would have been catastrophic. Dan fished some in the evenings and on lunch breaks, but caught





Dan lining the canoe down the rapids on the lower Albany



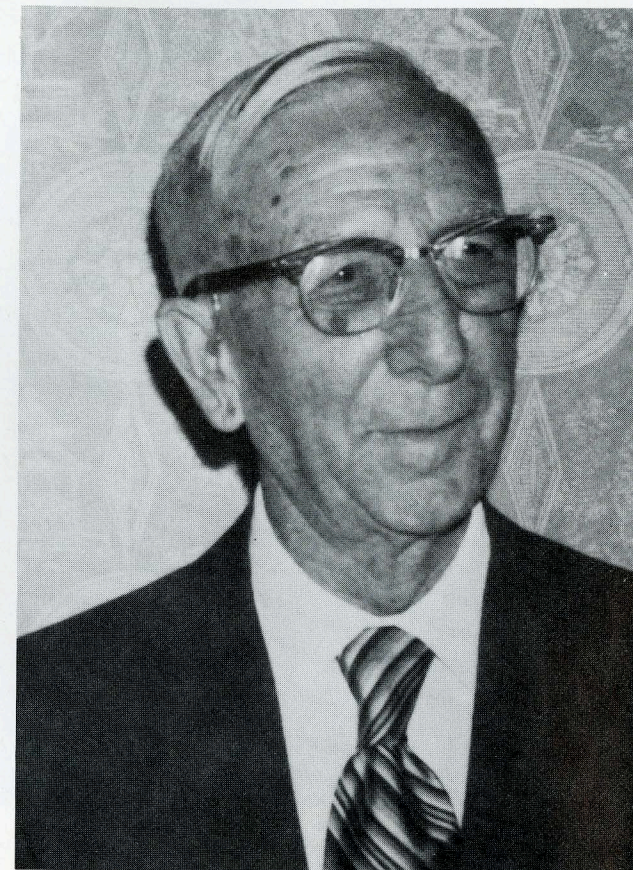
Swenson at a lunch break on the Albany.

nothing. The ospreys were no longer present and we saw no signs of mink or otter; apparently the river was barren. There were no beaver or moose in evidence, either, though we saw bear tracks on the beach at one lunch break and wolf tracks at another. For all its isolation and wildness, the country seemed to support little animal life. Except mosquitoes—as always, they were abundant in the morning and evening though they didn't bother us on the river in the daytime. Our well-screened mountain tent was essential; without it we'd have been utterly miserable.

It was not until the fifth day that we had any real excitement in the shape of a series of rapids, generated by islands constricting the river's flow and by broad, shallow reaches where the water ran over horizontal limestone beds. A sharp lookout by the bow paddler was necessary, and evasive maneuvers, "draws" and "back-ferries," to avoid jutting boulders and churning eddies. We negotiated them all safely, though there were tense moments when we would ship a barrel full of water or come down with a bang on a rocky ledge. The canoe acquired more dents and scrapes, honorable battle scars useful for impressing the folks back in Illinois. On the sixth day, within 40 kilometers of our goal on James Bay, we came to a labyrinth of shallow channels separated by wooded islands. We lost our way, and blundered into passages too shallow to paddle, where we had to leap overboard and lower the craft down swifts and over ledges for hours at a stretch. This was very fatiguing work and we were greatly relieved at last to emerge into a deep, fast channel which led to the village of Fort Albany.

Our time enroute was six days plus one hour. We'll assume that the earlier party actually took an hour or so longer than the six days they reported, so we tied the canonical time for an outboard motor. A moral victory, surely.

The first phase of our adventure was over, and we felt great satisfaction at having pulled it off.



## William T. Burnett 1882-1983

William T. Burnett, the last living Founder of Eta Kappa Nu passed away on April 19th, 1983. He celebrated his 100th birthday on June 29th, 1982. Mr. Burnett, along with the other Charter Members, founded Eta Kappa Nu on October 28th, 1904. He had a life-long interest in the Association and attended the Alpha Chapter 75th anniversary celebration in November 1979.

Mr. Burnett married Ethel Phenicie. She died in 1976. Surviving are three daughters, seven grandchildren, nine great-grandchildren, and a great-great grandson.

He was employed by the Sangamo Electric Co, where he retired in 1947.

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## OKLAHOMA STATE UNIVERSITY



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Field \_\_\_\_\_

School \_\_\_\_\_



### Winston E. Kock

It is with deep sorrow that we record the passing of Assistant BRIDGE Editor Winston E. Kock. Dr. Kock was well known to BRIDGE readers through his special series of articles entitled MEMORIES ARE MADE OF THIS.

Dr. Kock was named by Eta Kappa Nu as the Outstanding Young Electrical Engineer in the U.S. in 1938. He served as President in 1945 and in 1966 was elected to Eminent Membership.

Dr. Kock had a varied and distinguished career in electrical engineering. For a number of years he was Vice President and Director of Research of the Bendix Corporation. He held several hundred patents and was perhaps best known for his invention of the electric organ.

He was initiated into Eta Kappa Nu as an undergraduate by Tau Chapter at the University of Cincinnati, and his last position was Director of the Herman Schneider Laboratory at that university.

BRIDGE will present a Memorial Tribute to Dr. Kock in the next issue.

**EPSILON SIGMA, University of Florida** — The Epsilon Sigma Chapter congratulates the twenty-four new members initiated during the fall 1981 semester. Congratualtions also goes to the new officers: Gerry Benedict, President; Mike Gach, V.P.; Jorge Azzi, Treasurer; Roger Westphal, Corresponding Secretary; Jude DePalma, Recording Secretary; Robert Meyer, Electee Chairman; and Tom Frenock, Bridge Correspondent.

During the fall semester members and electees painted the IEEE coffee shop as the electee group project. This is the first time this room has been painted in "too many years to remember." Other important changes occurred in HKN's computerized Teacher Evaluation, which polls all EE students for remarks concerning the professors, textbooks, and labs. The improvements to this data reduction program were in the readability of the output. Now students seeking pre-registration advice and opinions on courses will have this information presented in a more efficient manner.

Looking into the near future, we expect to receive our bronze HKN key and install it in a prestigious location. This purchase was made possible by the contributions from Dr. Blake Cherrington and the EE department here at UF.

Finally we are looking forward to a great time at our annual HKN/EE awards banquet to be held in the Holiday Inn East this year. With promises of great food and guest speakers, this might be the best banquet ever.

*by Tom Frenock*

**GAMMA XI CHAPTER, University of Maryland** — The recently completed fall semester was one of the most successful in the history of the Gamma Xi Chapter here at the University of Maryland. The semester was kicked off on September 14, with the active members hosting a smoker to inform interested students about Eta Kappa Nu. Out of this, 28 students were identified as being eligible for membership. This represented our largest electee class ever. Far and above the greatest service provided by the electees this past semester was grading of homework for the Electrical Engineering Department. Approximately half of all course sections taught in the fall received graders courtesy of the Gamma Xi Chapter. Through these efforts the quality of education received by the students at Maryland was undeniably enhanced. Additionally, it is estimated that the Electrical Engineering Department was able to save several thousand dollars by having the electees perform this volunteer effort.

The members and electees also provided tutoring for the sophomore and junior electrical engineering courses. Work continued on the design and fabrication of a 24-hour symbolic clock to aid the mentally handicapped. Finally as the semester drew to a close, the chapter selected Larry Younkens for the prestigious Outstanding Senior in Electrical Engineering Award. Then in a fitting climax to the semester, the initiation ceremony was held for the 28 electees. Following the initiation a party, given to honor the new Eta Kappa Nu members, was attended by nearly 100 members, guests and faculty.

*by Clifford Sayre and Douglas Himes*