1865 THE UNIVERSITY OF MAINE

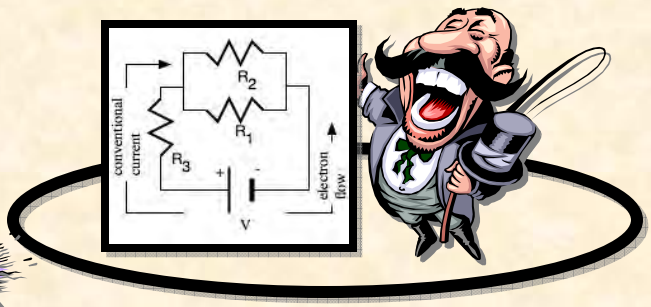
IS PROUD TO PRESENT

CARLETON BROWN'S THREE RING CIRCUITS

SHOCKING ELECTRIFING

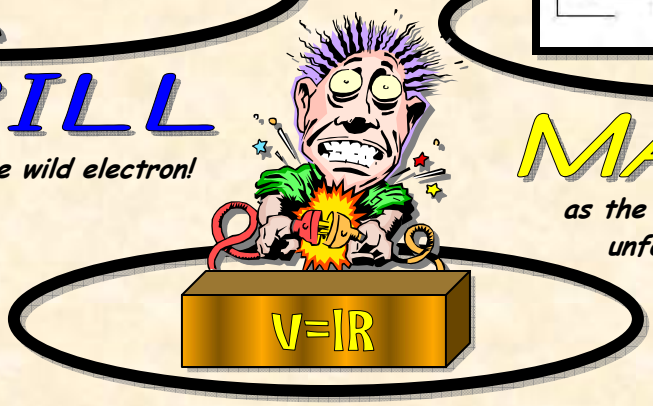
THRILL

to the taming of the wild electron!



MARVEL

as the mysteries of electronics unfold before your eyes!



AMAZE

At the stupendous feats of the "Human Resistor"!

ENGINEERING
Orono, Maine

THE MOST HIGHLY CHARGED SHOW AROUND!!!

One Date Only!

Saturday, October 21st 2006 11:00 am

WELCOME TO THE PARTY!

Seven years ago, UMaine Engineering began what has become one of our most enjoyable traditions. Every year during Homecoming weekend, we celebrate the career of a distinguished emeritus faculty member.

- 2000 – Mechanical Engineering -*Dick Hill Pajama Party*
- 2001 – Electrical Engineering - *Showtime with Mac Libbey*
- 2002 – Civil Engineering - *George Greenwood's Cowboy Roadshow*
- 2003 – Chemical engineering -*Bill Ceckler; Confessions of a Engineering Outdoorsman*
- 2004 – Engineering Physics – *Jerry Harmon, the Physics of Subjective Reality*
- 2005 – Mechanical Engineering – *John Lyman: No Jokes Required*

This year we return to Electrical Engineering by adding Prof. Carleton Brown to the ranks of our honorees. "*Three Ring Circuits*" was chosen as the theme for this year's event because of our experiences while collecting stories for this book.

UMaine Engineering has always viewed our emeritus luncheons as purely fun events that celebrate the numerous faculty members that have given our programs the life and character that is so fondly remembered by our alumni. With this in mind, every year when we send invitations to our alumni, we request humorous stories about our honoree.

Responses to Professor Brown's invitations started arriving almost immediately. All of the contributions were wonderful stories about Brownie and his impact on the lives of his students. However, the most common recollection of his former students dealt with his introductory circuit's class. Although this is certainly a core topic in the study of Electrical Engineering, is not a class that one would usually associate with humorous memories. Clearly, Brownie's teaching style must have contained a showman's style. Perhaps, even that of a ringmaster.

Like all of our emeritus faculty members, Brownie is remembered primarily as a great teacher. However, as you read the stories in this book, you will see just how great a role he also played as a college, mentor and friend. Every time I visit our alumni, I experience the true measure of Professor Brown's years spent teaching Electrical Engineering at UMaine. His students have become CEOs of major corporations, entrepreneurs and university faculty members. All of them credit their time at UMaine as a major factor in their success. Most importantly, all of our alumni remember their professors as a guiding influence that inspired them to reach their full potential in life.

We sincerely thank you for helping us to honor Brownie, and hope you enjoy the party!

Dana N. Humphrey, Ph.D., P.E.
Interim Dean of Engineering
Malcolm G. Long Professor of Civil Engineering

CARLETON BROWN'S THREE RING SHOCKING ELECTRIFING CIRCUITS

An Electrical Circuit

(excerpted from humorist Dave Barry's book *Dave Barry in Cyberspace*)

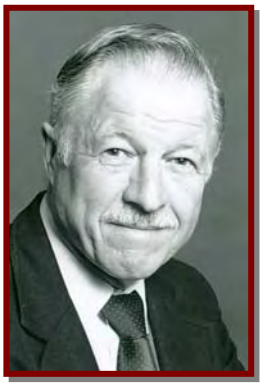
"Electricity is supplied by the wall socket, which is in turn connected to the electrical company via big overhead wires with squirrels running on them.

"A question many people ask ... is, 'How come the squirrels don't get electrocuted?' To answer that question, we need to understand exactly what an electrical circuit is.

"When you turn on a switch, electricity flows through the wire into the appliance, where it is converted via a process called electrolysis into tiny microwaves. These fly around inside the oven area until they locate the Hungry Hombre Heat 'n' Eat Hearty Burrito entree; they then signal the location to each other by slapping their tails in a distinctive pattern. The workers, or drones, then ... swarm around the queen; this causes the rapid warming that makes the entree edible and leads via amino acids, to digestion.

"This is followed by grunting and flushing, with the outflow traveling via underground pipes to the sewage treatment plant, which in turn releases purified water into the river, where it is used to form waterfalls, which rotate the giant turbines that produce the electricity that flows through wires back to your appliance, thereby completing the circuit.

"So we see that squirrels have nothing whatsoever to do with it. There is no need for you to worry about squirrels; believe me, they are not worrying about you."



Distinguished Elder Statesman of E.E.

CARLETON BROWN

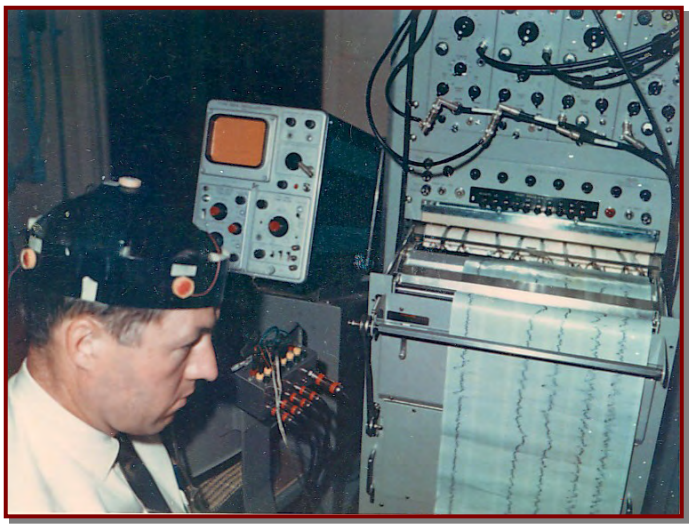
SCRAPBOOK

A young professor Brown in the lab

1963 Faculty ID Photo

6 Bangor Daily News, Friday, June 17, 1966 Tel. 942-4881

ENGINEERS' CONFERENCE — Elected to office Wednesday at the 11th annual Institute of Electrical and Electronic Engineers, left to right, were: Murray J. Gore of Augusta, chairman; Carleton M. Brown of Orono, vice chairman; Basil T. Payne of Hallowell, assistant secretary-treasurer; and Kenneth W. Bach of Camden, secretary - treasurer. (NEWS Photo by Webb)



Professor Brown conducting his groundbreaking research in the field of silly hat design. (Actually, he was researching EEGs)

Carleton in his role as UMaine's #1 Basketball Fan

ROWS HALL

Electronic Products Seminar

Representatives of some 12 small independent companies in Maine concerned with the manufacture of electrical or electronic products met this week at the University of Maine, Orono, to get acquainted and to exchange ideas for new products or improvement of existing lines. Among the participants were, from left to right, John West, Chapman Precision Products, Bangor; UMO Associate Professor of Electrical Engineering Carleton Brown, who coordinated the meeting; Henry F. Villaume, Howell Laboratories, Bridgton; and Douglas Makinen, VAST, South Bristol.

1989 Retirement dinner at the Lucerne Inn

Someone explained to Carleton that once you retire, it is mandatory that you buy a tractor.

Awards and Accolades

umo news

VOL. 86 NO.5 Editor: Avis M. Smith

UNIVERSITY OF MAINE AT ORONO BULLETIN

OCTOBER 1983

College of Engineering Recognizes its Best

An alumnus, a faculty member, and an administrative assistant were honored October 1 at the fourth annual College of Engineering and Science Recognition Banquet held at Hilltop Commons.

Under Secretary of the Army James R. Ambrose, a 1943 engineering physics graduate with high distinction from UMO, received the Distinguished Engineering and Science Award, which recognizes activities, achievements and scholarship which have brought distinction to the profession by someone outside the university community.

Professor Carleton M. Brown, who has been on the UMO faculty for 28 years, received the Ashley Campbell Award for distinction as a teacher, for achievements in engineering, research and public service, and professional and scholarly accomplishments. Brown is also a UMO alumnus.

Leila C. Lowell, administrative assistant in the College of Engineering and Science, was honored by having a new award, recognizing outstanding service to the college, named for her, and also by being named the award's first recipient.

All of the awards were presented by the College's dean, James L. Clapp.

Ambrose, one of the Army's top civilians, went to work for the Naval Research Laboratory in Washington after graduation from UMO, and was involved in early development of ship and airborne radar systems, semiconductors, and nuclear reactors. In

1955 he joined Lockheed Corporation in their missile systems division, and later on moved to a new firm which evolved into the Ford Aerospace and Communications Corporation. For the next 24 years he managed technical assignments including work on such projects as the NASA Mission Control Center, NORAD support services, and the U.S., NATO and Intelsat Communications satellites.

For the last 13 years before his retirement in 1979 from Ford Aerospace, Ambrose was vice president for technical affairs.

Carleton Brown's years of teaching are marked by a reputation as "a stern but fair and consistent taskmaster," according to the citation presented him at the banquet. As an active researcher, Brown has concentrated on electronic circuit design, probably the fastest changing area in engineering. His expertise is especially evident in his work on the "aphid monitor'" which has received wide attention, and in his contributions to bio-medical research projects.

Leila Lowell, known for her unstinting assistance to students, faculty, and everyone who asked for her help, has worked at the Orono campus for 31 years, beginning after graduation from Beal Business College with a position in the office of the director of admissions at UMO. For eleven years she was employed by the UMO Cooperative Extension Service and in 1964 accepted the post in the College of Engineering and Science.

(L to r) Leila Lowell, James Ambrose and Carleton Brown

History Professor Doubly Honored

UMO history professor Dr. Richard Blanke has been awarded a fellowship from the AmeriCan Council of Learned Societies and also a Fulbright grant to conduct research in West Germany from January to December, 1984.

The A.C.L.S. grant and the Fulbright will enable Blanke to continue his research project, "The German Minority in Interwar Poland."' He will be associated with the Herder Institute in Marburg/Lahn.

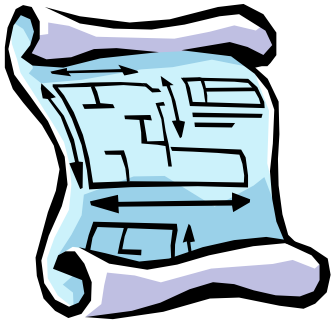
Author of numerous articles on Prussian Poland and German-Polish relations, Blanke held a Fulbright grant in 1966-68, studying in Germany just prior to coming to UMO in 1969.

Blanke's most recent book, *Prussian Poland in the German Empire*, was published two years ago by Columbia University Press.

A scholar of international note, Blanke holds M.A. and Ph.D. degrees from the University of California at Berkeley.

In 2000, Carleton (right) was asked by Dean Larryl Matthews (left) to present the *Edward T. Bryand Distinguished Engineering Award* to his former student, Heather Blease (center).

CARLETON BROWN STORIES



As a former colleague and friend of "Brownie," a few related anecdotes do come to mind, and so I am pleased to share them. I am sure he will be able to clarify any misconceptions that I may make in my presentation. An appropriate title for these thoughts would be as follows.

The Importance of Being Well Grounded

Brownie always stressed the practical aspects of anything he taught, or would support. He was very firm about the need for keeping the application in mind and not getting carried away with attractive abstractions and generalizations that "hardly ever lead to anything useful." A good engineer should be well grounded in fundamentals, have meaningful laboratory experiences, and know how to write clearly and correctly. Whenever we could manage to do these things, we had to have faith that we were giving the student all they would need for whatever problems they would ever have to face. So, define your courses carefully and keep out the tempting frilly diversions. Typical Brownie advice.

Over his career it was interesting how he was able to help make major contributions to the success of several interdisciplinary projects through just the use of one concept from electrical circuits—namely the proper grounding of circuits and signals. Every engineer, including non-EEs, is required to take an introductory electrical engineering course, and knows that every electrical signal requires a closed conductive path to send energy from a source to a load. Current flows around a closed path just like water through a hot water heater circuit. You would be surprised at how often Brownie was able to use this simplest of facts to make failing projects work! Just one simple little fact! It always amazed me how often he would get away with being considered an expert, and all he was doing was cleaning up poor circuit layouts that were not being properly grounded, i.e., providing return paths for all electrical signals...including the measuring circuitry.

One such project I recall was the potato project. Some scientist from Ag Extension came to him for help on a project to measure and electrically observe the eating habits of aphids. In accordance with published papers they had put together a collection of expensive

equipment to duplicate experiments that they wanted to apply to the Maine potato problem. Their problem was that when they tried to attach the scope probe to the aphid, all they ever got was a lot of noise, mostly 60 Hz from the AC power network in their building. They could not detect any signal on top of this noise whenever the aphid would eat. Brownie studied the problem carefully and came back to them with a proposal and also probably a lecture on the value of being well grounded. In any event, he was able to show them how to make a circuit through the bug by bonding fine gold wires (thinner than a single strand of hair) to make a closed circuit path from a source through the bug and the plant. All the noise went away in their observations. It was magic as far as the Ag engineers were concerned, and Brownie gracefully accepted all compliments. They actually took that show on the road and demonstrated wire bonding of aphids at several professional meetings around the country. They consistently produced some of the "cleanest" (noise-free) measurements of aphid eating cycles that were published at that time. It was a neat show.

Never one to rest on his laurels, Brownie was able to pull a similar stunt with the psychology department. They had been reading papers about measuring human behavior responses through observing brain waves, so they purchased a lot of equipment to duplicate the experiment, hired a grad assistant (in psychology) to design and build an amplifier to process the very weak signals. They obtained results similar to the Ag engineers. All they got was noise that did not correlate as expected in response to different stimuli. Eventually they hooked up with Brownie and had a meeting to explain their problem to him. It turns out that the papers they were studying used conceptual "block diagrams" to describe the test circuitry. These diagrams only indicated the "flow" of signals through the system and so there were no return wires, or grounding, in the diagrams. Needless to say, being psychologists, they did not think to put them into the circuit! So another lecture on being well grounded was given, and then Brownie reorganized their test circuitry to give the required integrity to all signals, he designed them an amplifier to have sufficient gain and the proper bandwidth, and Voila!, they started getting clean signals that correlated very well with the given stimuli. Another success through basically keeping the circuit paths properly grounded.

There are other similar stories. You might get him to tell you about the one at Sanders in NH where they wanted to measure signals from animals and were having problems with too much noise...even in a shielded screen room! I don't think he lectured them, since it was a summer job, and he did not want to alienate anyone for being so silly about applying electrical theory, but he cleaned up the mess and they ended up getting good data. If you let Brownie tell this, you will find that the blow-by-blow story is actually quite entertaining...as are most

stories that he tells...especially if you have not heard them before.

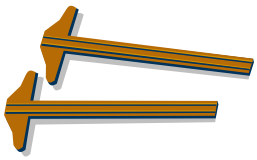
In pursuit of producing well-grounded students, I understand that Brownie was instrumental in convincing the department to start the "senior project" program. It was very unique at the time, being the first on campus, and even in the country. The idea was for each student to have to experience an actual engineering project. First, a proposal stage to sell the idea and negotiate specs required to obtain a certain grade; second, develop and demonstrate a prototype that meets the specs; third, package the product and present both a written and oral report along with a demonstration of operation. This program spanned three semesters and the student had to pass the course in order to graduate. We were assured this would produce well grounded students and indeed it has. There are many stories fed back to the department where this experience made a difference in our graduates being able to out-compete other new engineers and get early promotions because of their apparent experience in engineering. Now everyone on campus is following this creative idea through what is elsewhere called the "Capstone Project." More glamor in those "ungrounded courses."

Brownie was always a fair, but very firm teacher. His classes were legendary and caused much trepidation in the hearts of many students, but almost all students actually survived and grew under his patient guidance. Brownie along with a couple of colleagues decided to present this novel senior project teaching idea to the annual ASEE convention and their paper was accepted for presentation. I think they all got to go to Texas, or someplace like that, and had a great time. However, the idea was not received unanimously as several faculty from other institutions thought it was unnecessarily harsh to withhold a degree if the student failed to pass the course. Brownie handled that question by giving his "well grounded" talk by pointing out that the course let the student know what life in engineering was going to actually be like, and so it was better for our reputation to send out engineers who could successfully engineer what they negotiated they could do. It did not satisfy the audience entirely, but eventually the senior project in electrical engineering did pick up around the country. Once again, Brownie was able to apply the grounding concept to carry the day.

It's interesting that Brownie did not tell that audience, at the ASEE meeting, about how EE students at UMaine did not get their diplomas if they did not complete ALL the requirements for their degree. I mentioned earlier that Brownie believed engineers should learn how to write. He was a stickler on that and so all lab reports had to pass technical and grammatical accuracy. He would grade the report, return it to the student, and then the student was required to make all corrections and resubmit the report in order to complete each experiment. I was not here when this happened, but it is legend in the department that one student never got his degree because he

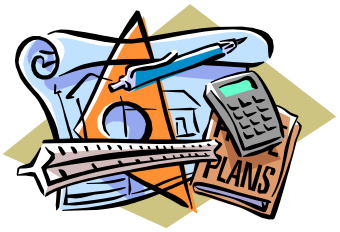
did not complete the return cycle on one lab report. The student had a high grade for technical content so he figured he did not have time to bother with the re-write and would just take a lower grade for the report. What a surprise when he got an INCOMPLETE in the course! The student finished all other course requirements and then petitioned the department to get a passing grade from Brownie's course. Apparently he thought he would get around Brownie that way. But Brown remained firm that all the student had to do was complete the rewrite of the lab and he would get a very good grade. The student was too stubborn, at this point, to do this and so he did not get the degree. So those folks at ASEE had no idea who they were dealing with when they were talking about the senior project pass requirement as being too harsh. They were talking to a "well grounded" engineer.

Fred Irons
Professor Emeritus
U



One of my disappointments as an EE student at Maine was that I never had Carleton Brown as an instructor.

Dr. Ronald O. Brown EE'63



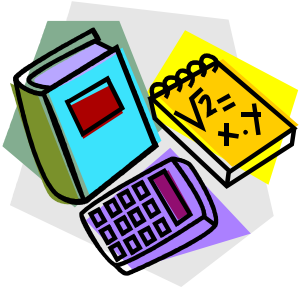
Glad to add my best wishes to Prof Brown and all those at U of Maine EE department who provided me with excellent memories and a great education. I greatly enjoyed Prof Brown's courses on circuit design and learned a great deal from him. Give my best wishes to him and the many past professors but especially to Fred Irons and John Vetelino - great educators! Hopefully they are still in touch with university.

I am originally from Maine but have worked in MA all my professional life due to limited opportunities in Maine. A few years after I left U of Maine Prof Brown and Prof Sheppard (I think) visited me in Boston area and I was complaining about the lack of good EE jobs in Maine at which Prof Brown asserted " That there are only a few good engineering jobs in Maine and he was not about to quit.". Please pass my best wishes and sincere thanks to Prof Brown and the entire EE department - I have had a wonderful career built on the foundation received from U of Maine.

Jim Blanchard
BSEE 1976
MSEE 1978

I did my undergraduate work in EE at UMO from 1970-1974, and then moved on to Cornell for my Master's work. I recall Professor Brown's course on Digital Logic and Switching Theory in which he helped me understand not only the theory behind the subject matter, but he also brought in lots of practical examples of Logic Design from Industry to broaden my understanding of the relevance. Microprocessors were just making their debut into the college curriculum at Cornell when I arrived, and I often went back to my class notes and the text from Professor Brown's course to fill in the needed background for the Microprocessor course. I used Professor Brown's lecture notes as well for a course in Microelectronics of Semiconductor Devices, in which we fabricated simple logic gates in Cornell's clean-room facilities. Although I lost track of Professor Brown after I left Maine in 1974, I recall him to have been very approachable during office hours, and a teacher who had a special grasp of the Art of Teaching. Professor Brown is a deserving recipient of the Homecoming Weekend honor in 2006, and I'd add my Congratulations as well.

Jack Sutherland, Senior Engineering Manager
Harris RF Communications
1680 University Avenue
Rochester, NY 14610
(BSEE UMO 1974)



Brownie was both my professor during my undergraduate days, then later my mentor and colleague on the ECE faculty for several years. He was a tremendous teacher, who played a major role, not only in my personal career, but more importantly in developing and maintaining the department's high reputation throughout industry.

A few specifics for what they're worth;

The arrival of solid state in the undergraduate program, in particular bipolar transistors (BJT)s, occurred during my student days. During my Junior year the department became the proud owner of
FOUR BJTs and Brownie became their guardian. Getting permission to use one of these in the laboratory was somewhat akin to the Spanish Inquisition. Should you inadvertently make a mistake and destroy one of those amazing devices just quietly packing up and leaving the University forever would probably be the best thing to do.

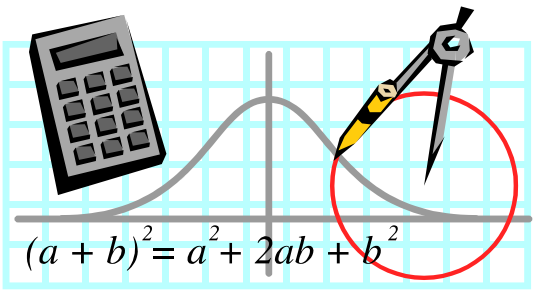
Brownie was a very enthusiastic basketball nut - fan, supporter and player - he played for several amateur teams Downeast and in the Maritimes. He was a regular at pickup games in The Pit

(Memorial Gym). About a year ago I was talking to Skip Chappelle, former Maine Head Coach and Brownie's name came up. His recollection: "Brownie was just short of crazy. He always was looking for a piece of us in any informal game on The Pit. I used to get some of the football players to keep him under control."

A personal story: As a student in one of Brownie's senior electronic labs I was assigned a particular project whose instructions specified the use of a "Tea-Wagon Oscillator". Now I was familiar with several different types of oscillators - Wien Bridge, Colpitts, Hartly, etc. but had never heard of a Tea-Wagon Oscillator. My textbooks didn't mention any such circuit, I couldn't find anything at the library and, of course, the Internet wasn't even in science fiction yet. Finally giving up I went to Prof. Brown's office and asked if he had any references to the Tea-Wagon Oscillator. After nearly falling out of his chair laughing he explained that the reference was to an oscillator that the department had designed and built for experimental use in the lab. To make it portable they constructed it on what the English would use to serve their tea and crumpets on at a lawn party; hence the reference to a tea-wagon. For you younger folks in those days such oscillators were based on vacuum tubes and 3-inch diameter air core coils, thus requiring much more space than today's ICs would need. As I sheepishly left the office and went off down the corridor I heard Brownie go into the office next door saying "You won't believe what that Whitney kid just asked me!"

Prof. Brown was and is a great engineer, a great teacher, a great community member but most of all a great person. I am proud and humble to call Brownie and his equally fabulous wife, Iris, friends.

Allison "Al" Whitney
Professor Emeritus of Electrical Engineering

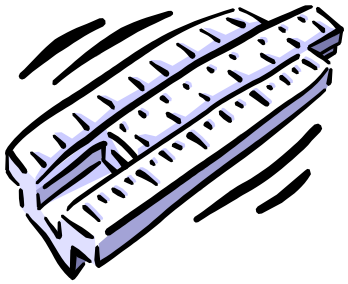


Growing up in Orono I knew Professor Brown as a father of a friend before I knew him as a teacher. It was, I guess, both a blessing and a curse to go to the University that was in the same town that you lived. I remember getting into class early and seeing my father, a zoology professor at UMO, talking to Professor Brown. I wondered what they were talking about and later found out. My father was making sure that the other professors didn't take it easy on me, and if there was any trouble from me, he wanted to be the first to know. I knew I should have gone out of state! Anyway, as a teacher, Professor Brown was easily one of the best. I'm not saying that because he was easy, actually, I think I got a B- from him,

one of my lower grades. Yes, I thought he was tough, but fair. I appreciated his style of teaching because it brought in practical knowledge. Sometimes professors can get caught up in the study of the theory and lose track of how it applies to real life situations. Professor Brown did not let that happen. I believe I learned more in his course, because of his teaching style, than I learned in any other course, both undergrad and graduate. As most of you know, Professor Brown was not always in academia, he was for a time an engineer at Sanders Associates in Nashua, New Hampshire. If I remember the story correctly, one incident at Sanders Associates involved his visit to a classified facility. I believe he was with a customer, went inside a classified room. Apparently, he was approached by a guard, with a gun drawn and pointed in his direction, who informed him in no uncertain terms that he was not authorized to be in the area. I guess Professor Brown didn't take too highly to having a gun toting security guard coming after him, since he left Sanders shortly after that incident. Having worked for Sanders or rather Lockheed Martin… or is it BAE Systems for the past 20+ years I can assure you that the guards no longer act in that manner. Still, I guess, in a way we are all fortunate, because if it weren't for that guard, Professor Brown may still be working in Nashua, New Hampshire. Perhaps, he would have even become my boss!

Thank you Professor Brown for all that you taught me and the hundreds that came before and after me.

Kam Mun
Senior Principal Electrical/DSP Engineer
BAE Systems (Sanders Associates)
BS Electrical Engineering Class of 1985



Circuits with Brownie

Back in the days when radios glowed in the dark and kept you warm in the winter, I was a student in Professor Carleton Brown's circuit course. We had recently moved over from Lord Hall into our new digs at Barrows, and the modern classrooms and labs seemed palatial by comparison. They also smelled a lot better. Professor Brown (we called him "Brownie" among ourselves, but that still seems overly familiar) was already a legend, and I looked forward to the opportunity to take his class. At the time, the internet, cell phones, hand-held calculators and PCs were yet to appear; the only computer on campus was an IBM 1620, and we lugged punch cards back and forth to learn a prehistoric Fortran. In that setting, Brownie's electronics course was the top-gun class for those interested in building hi-tech stuff, and that included me.

Well, it was a tough row to hoe, and it seriously impaired my social life that semester, but in the end it turned out all right. I remember a literal all-nighter preparing for the final. I still have the book somewhere, full of scribbled notes and anxious underlining, the pages yellowed by hi-lighters. I think one of the questions on the exam dealt with Colpitts oscillators. To this day I can picture the schematic showing the capacitive voltage divider that provides the feedback, no doubt testimony to Professor Brown's blackboard skills and the obvious reminder provided by the "C" in the name of the circuit.

Of course in class we also studied the other alternative, the Hartley oscillator, which uses an inductive divider. The name is less convenient to jog the memory, but as I recall, or maybe would like to recall, Professor Brown kindly pointed out that the "H" should be helpful. That story may be apocryphal, but it is a shame that Hartley's first name was Ralph and not Henry (or Leroy, even better).

After leaving U. Maine, my professional path moved toward the physical ocean sciences, a field that is heavily dependent on instruments and technology. For that reason I have always been thankful for an engineering background, which has served me well for many years. We've certainly moved beyond glow-in-the-dark radios, but the solid background and appreciation for learning we received provided the necessary base for expansion. We had many good teachers at U. Maine, and Professor Carlton W. Brown was one of the best. Most people can recall a few teachers who influenced their lives in important ways, and in my case Brownie was one of those. Can I call him that now?

Best wishes, Professor Brown, and thank you.

David A. Brooks, BSEE '65
Professor of Oceanography
Texas A&M University
College Station, Texas

Well, how strange is this? Here I am writing a letter to someone it seems I just met. Only it was 37 years ago when I arrived at UMaine as a new faculty member. And yet both of us are now retired! Where did the years go?

The request for letters emphasized trying to make them humorous. Well, I don't think I can do that with such a serious fellow like you. However, I will recount some of the memories that come to mind as I write this.

During the early years it was common for some of the faculty to go to the annual IEEE meeting. I recall a road trip to one meeting in New York City that a group of

us took. You were pretty much the tour guide when it came to the non-technical activities¬including a visit to Radio City Music Radio Hall. That is the only time I have been there and I thank you for suggesting it. I also thank you for not smoking cigars in the car on the way to New York!

Your emphasis on basics always impressed me. As one example, I remember a seminar we attended about a new type of high-frequency amplifier. The talk was full of equations that I was struggling to follow (with limited success) when you asked the insightful question "Where does the power come from that provides the amplification?" (I am sure you phrased it better but that is the gist.) It got the talk out of the clouds and was just the kind of "cutting to the chase" that made you such a help to seniors working on their projects. And such a scary guy if students tried to bluff their way through a presentation!

I appreciated your support and counsel when I first became ECE Chair. Those were challenging times and it was great to have your advice and experience to count on. Do you recall the meeting you arranged with Jack Cashman and John Martin when USM was proposing to offer an EE program? I guess the die was cast but that was a great move. If only President Lick had been on our side. This USM topic is starting to bring back lots of negative feelings so I am going to move on!

When you decided to take early retirement it left a big hole in the Department. Certainly one loss was in institutional memory. I don't know how many times you said "we did that 20 (or 15 or ...) years ago"!

Well, if this is going to fit on one page I better wind this up. I hope you and Iris continue to enjoy a great retirement.

All the best

John Field
Professor Emeritus of Electrical Engineering

My first meeting with Brownie took place when he was still a college student. I was a new member of the faculty, working as an assistant in nutrition research, and renting a room in Orono. My evening meals were, for the most part, taken at a small Main Street Restaurant in Orono called the "Home Plate." Brownie and some of his friends also ate there, at least part of the time, as did my future husband, Walter Turner.

Walter had Brownie as a E.E student and later as a fellow colleague on the E.E. faculty. After Walter's death in 2003, I received several letters from former

students telling me that one of the most important things they learned was how to write about engineering – a lesson "emphasized by both Prof. Brown and Prof. Turner."

Brownie and Iris were dear friends over the years, and much loved by our children as well. Brownie always took time to joke with them and to play tricks on and for them. In return, when our children visited Walt's office at UM, they would also pay a visit to Brownie's office. If he didn't happen to be there, they left messages on his blackboare – "Hi, Silly Mr. Brown!" Who knows what Brownie's students made of that!

Dorothy Turner

My earliest memories of Brownie include sharing an office in Lord Hall and several adventures in the form of business trips. Among these was a trip to Philadelphia with a stop in Boston. As we glided towards the airport on final approach, the lights went out and our plane was diverted to nearby Hanscom Air Force Base. As we made the short journey we had a chance to observe the great east coast blackout from above as the lights flickered back and forth across the city and finally died out completely.

There were trips to California which included investigations of the San Francisco bars and a late night trip to Tijuana. We hardly crossed the border when Brownie announced that he had seen enough and wished to return to the USA at once, which we did.

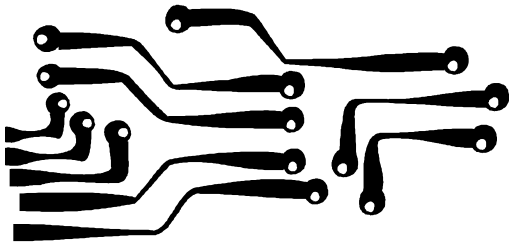
Most vividly I remember a trip to New York to the IEEE annual convention. This trip was a budding tradition enthusiastically promoted by department head Ralph E. Armington. At least six of us squeezed into the trusty old '56 Imperial all gassed up with regular gas and one dollars worth of high-test. We took off with high hopes – each of us clutching little green books in which to record our expenses. One of our lot who sat in front drew the duty of making notes in Ralph's book of such noteworthy events as recording the date, time and mileage when we passed under the Cat Moussam Road Bridge over the turnpike.

Our trip started Saturday so that we could make an overnight stop just north of Boston. Being a new member of the group, I was persuaded to stay at the Malden Arms while Brown and the others insisted on alternate accommodations. They had "been there and done that". However we did all dine together at a restaurant whose name I can not remember, but whale steak was prominently featured on the menu.

The next day we proceeded on to New York where we stayed at the Taft all week. Lucky me, I got to share a room with Ralph – much to the amused sympathy of Brown and Company.

The convention lasted through Thursday, and Friday we went out to Bell Labs in Holmdel, New Jersey, and spent a very enjoyable day touring the facilities.

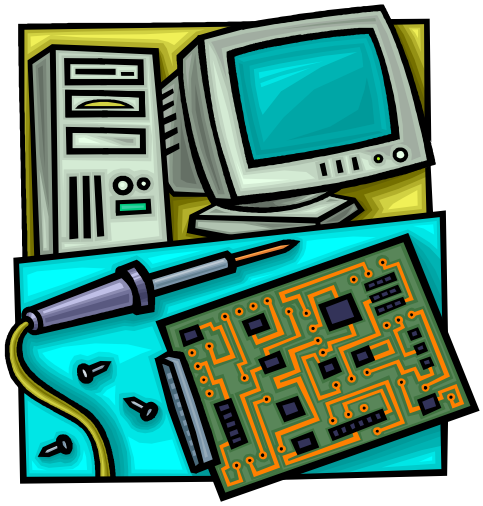
Saturday morning we all wedged ourselves back into Old Faithful and made a straight-thru run for Orono. As we approached Hermon on the Interstate, Ralph suggested that we extend this week of bonding by dinner at Baldacci's in Bangor "Under the Bridge". There was a brief silence in the car, and then Brownie went ballistic! Ralph backed off and we traveled the remaining 10 miles in silence, with occasional muffled snickers coming from the backseat.

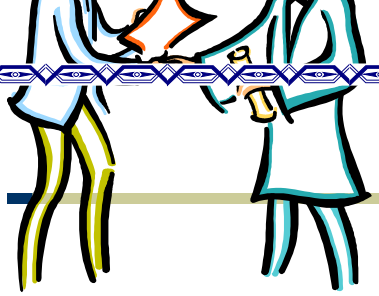


I have many fond memories of the years that I spent at UMO, majoring in Electrical Engineering. These years represented a lot of effort, but a most rewarding experience overall. I was blessed with the presence of excellent professors at UMO. These dedicated professionals were always ready to lend a hand, to provide more detailed explanations, and to offer practical advice to us in the final years of study. I am certain that not all students in EE and other Engineering disciplines at other educational institutions were as fortunate. The excellent education I received at UMO prepared me well for my future endeavors, and for that I will be forever grateful. Professor Carlton Brown was no exception to the above rule, and I wish to offer my sincere thanks and greetings to him on this special day.

I also offer my greetings and gratitude to all UMO Engineering faculty present at Professor Brown's luncheon – those who were there at the time of my graduation in 1972 and those who have arrives since to provide continuity. My salutations as well to all EE alumni present.

Carl M. Cyr, P. Eng.
Electrical Engineering (1972)





When asked who was the most influential person in my Electrical Engineering ("EE") career, I have to give credit equally to two people. First, my father for directing me to enroll as an EE student and secondly, to Carlton Brown for keeping me in the EE program.

Slightly over twenty years ago, I vividly remember a crisis moment in my life. I was a junior EE major suffering through the third round of prelims that fall. My roommate, the other female EE, had dropped all her EE courses the prior week. I felt stranded because she was my only study partner, slightly older than me and much smarter - in my view. We lived together off campus and as I was studying for finals, she flaunted her free time and happiness. Finally, I broke under the pressure and headed to campus to fill out my add/drop form with the intention of dropping all of my EE courses.

Timidly, I knocked on Professor Brown's stuffy, second floor office in Barrow's Hall. "Yes, Ms. Deveau, what can I do for you today?" (I was surprised he knew my name.)

In a whisper, I asked if he could please sign my add/drop form. I truly did not want to engage in conversation. I wanted out. I was close to a nervous breakdown.

I spent nearly an hour listening to Professor Brown gently imparting what turned out to be the greatest gift of a lifetime. He implored me to persevere. "What is the worst thing that could happen to you by staying with the program? Fail a course? So what...just take it again. You are not a quitter!"

Until that moment, I didn't feel that any one in the department really cared whether or not I continued.

I learned from Professor Brown to stick it out when the going gets tough, to persevere, to accept that failure is going to happen occasionally and when it does, to stand up and try again. Most of all, I realized that he cared.

These life lessons have stayed with me all of these years and have had great impact on how I approach life – the "ups" and the "downs".

Most interesting is that Professor Brown probably paid little thought to how much of an influence he was in my life. For him, it was all in a days work. For me, his words and caring made all the difference in my world.

Thank you Professor Brown!

Sincerely,
Heather Blease (Deveau)
BSEE '86
Recipient of UMaine Distinguished Engineering Award

I got the wonderful invitation from Prof Humphrey to the luncheon on Saturday, Oct 21, 2006 in Soderberg Center in honor of Prof. Carleton Brown.

I'm terribly sorry that I cannot attend. If there is a last-minute change in plans, I will let you know.

I very much appreciate being invited and would like you to extend my fond regards to Prof. Brown and the many other distinguished, avuncular gentlemen that he served with on the faculty. They drove many hard lessons into the sometimes

unwilling brains of me and my classmates for which I, at least, have been grateful ever since. Only much later did I figure out what a good job they had done.

If Ed Fairfield shows up, please give him and his wife my special regards. He still has many chits that he can call in. He, our profs and all my other classmates are invited to call me for a lunch if they are in the DC area.

I am a consultant here in the Washington, DC area specializing in electric utility rates, contracts, technical issues and negotiation and expert testimony thereon, mostly before FERC and State regulatory agencies.

Best regards,

Whit

Whitfield A. Russell, BSEE, February 1968
Whitfield Russell Associates
Alexandria, VA

THAT'S ALL FOLKS...

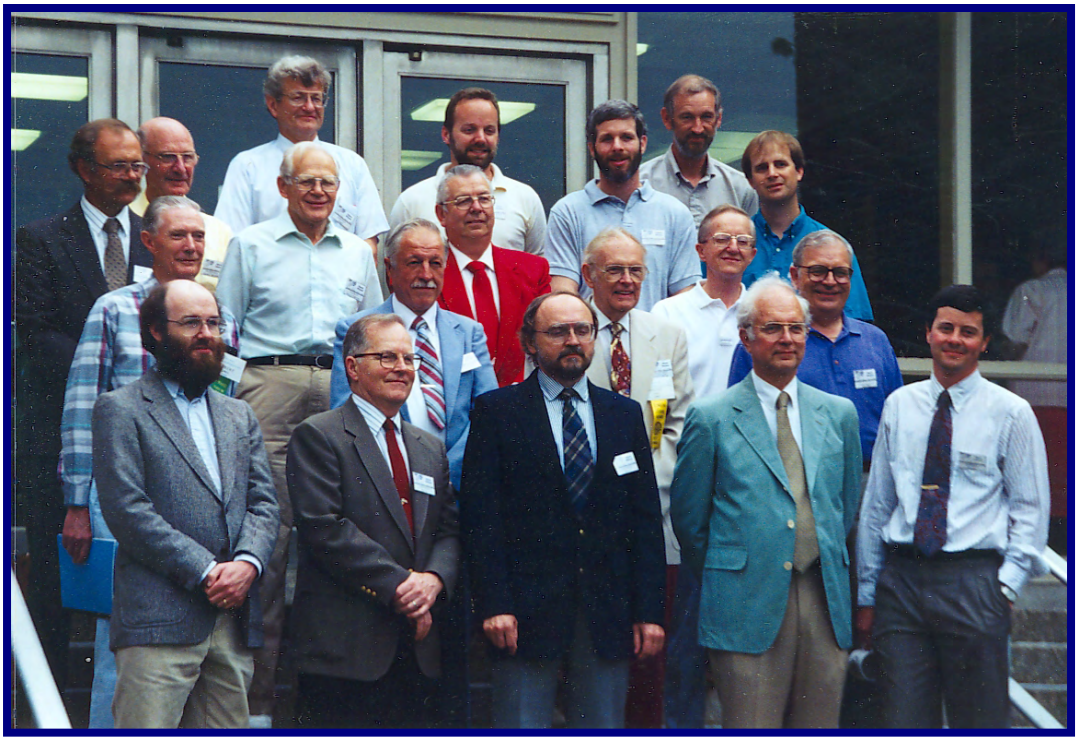
THANKS FOR COMING TO OUR SHOW!

CARLETON BROWN

PICTURES FROM THE PARTY

Thank You Carleton!

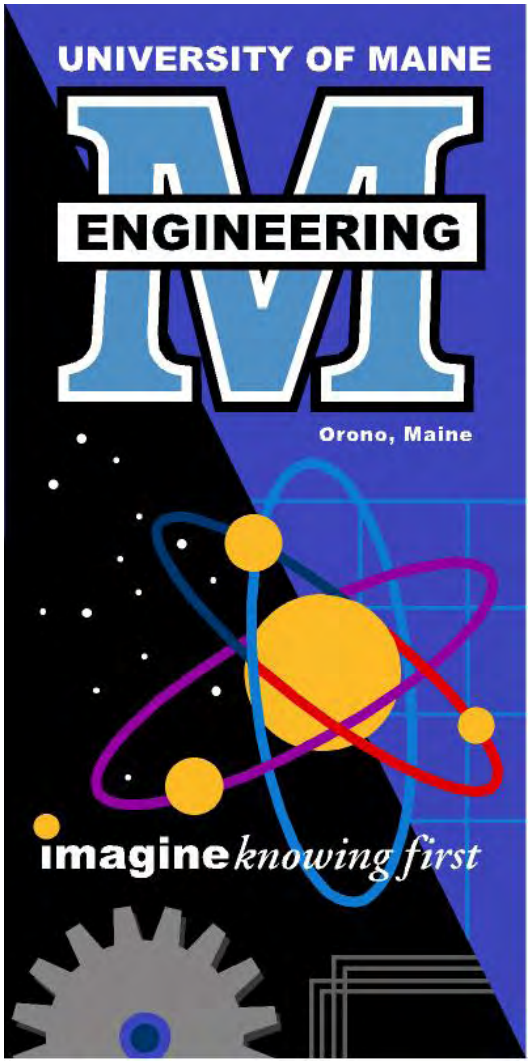
For thirty-four years you taught generations of UMaine electrical engineers to the highest standards of the profession. Your service and dedication to your students helped establish the tradition of UMaine Engineering Excellence that will continue to guide and inspire us for many years to come.



Carleton Brown with the rest of the circus performers at the ECE department's 100th anniversary celebration in 1998.

1865 THE UNIVERSITY OF MAINE

The alumni, faculty and emeriti of the UMaine College of Engineering that had the privilege of knowing Professor Carleton Brown provided the memories in this book.



This book was compiled, formatted and assembled by:

Dana Humphrey, Interim Dean of Engineering
and
Steve Adam, Engineering Advancement Officer

October 19, 2006