



THE UNIVERSITY OF
MAINE

College of Engineering

James and Maureen Gorman
Emeriti Faculty Brunch
honoring

Charles W. Smith

Emeritus Professor of Physics and
Cooperating Emeritus Professor of Engineering



Numismatic Relativity

A tribute to the remarkable and dedicated career
of a true master educator extraordinaire.

Saturday, October 17, 2015

Welcome to the 2015 James and Maureen Gorman
Emeriti Faculty Brunch
in honor of
Charles W. Smith

Numismatic Relativity

The College of Engineering is delighted to have this opportunity to honor Charles W. “Skip” Smith, Emeritus Professor of Physics and Cooperating Emeritus Professor of Engineering.

Charles’ successful career at the University of Maine spans from 1968 to 2008, where he has been lecturer and coordinator of the Introductory Physics for Engineers and Physical Scientists course sequence for 36 of his 40 years at UMaine, in addition to courses for Physics majors. In all, Charles Smith has been a great teacher for more than 9,500 University of Maine students.

Charles came to UMaine from Ohio University, where he earned his PhD in Experimental Physics. He has published more than 70 peer-reviewed papers, ranging from topics in condensed matter experimentation to numismatics. He has mentored sixteen graduate students in thesis work in experimental condensed matter physics.

A few of Charles’ hobbies include an interest in duck decoys, duck calls and numismatics. He is an expert on counterfitting of coins and paper money prior to the industrial revolution. His theme may very well have been titled “Duck Head” thanks to a his duck-related hobbies, a story from Tom Hess and a rather infamous sweaty T-shirt taken off a farmer’s back for Skip to wear.

We thank you for joining with us today to recognize, roast and celebrate Charles Smith for his service and dedication to the University of Maine and to the students of the College of Engineering.

Dana N. Humphrey, Ph.D., P.E.
Dean, College of Engineering
University of Maine



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Agenda

Brunch

Welcome

Dana Humphrey
Dean, College of Engineering

Michael Wittmann
Department Chair, Professor of Physics and
Cooperating Professor of Education

Charles W. Smith
Emeritus Professor of Physics and
Cooperating Emeritus Professor of Engineering

*Others are welcome to say
a few words at this time.*

The following is a copy of the well known "Bricklayer's Accident Report," which has made the Internet rounds in recent years. You could say that it is suspected that Skip Smith came up with this to use in the first-year physics classes as examples of the improper use of physical phenomena. Stories like this help to stress the need to better understand the role of physical laws in daily living.



This article will help people to pass the time while they are waiting for their turn in the food line.

- Fred Irons

Bricklayer's Accident Report

This is a bricklayer's accident report, which was printed in the newsletter of the Australian equivalent of the Workers' Compensation Board. This is a true story. Had this guy died, he'd have received a Darwin Award for sure....

Dear Sir:

I am writing in response to your request for additional information in Block 3 of the accident report form. I put "poor planning" as the cause of my accident. You asked for a fuller explanation and I trust the following details will be sufficient. I am a bricklayer by trade. On the day of the accident, I was working alone on the roof of a new six story building. When I completed my work, found that I had some bricks left over which, when weighed later, were found to be slightly in excess of 500 lbs.

Rather than carry the bricks down by hand, I decided to lower them in a barrel by using a pulley, which was attached to the side of the building on the sixth floor. Securing the rope at ground level, I went up to the roof, swung the barrel out and loaded the bricks into it. Then I went down and untied the rope, holding it tightly to ensure a slow descent of the bricks.

You will note in Block 11 of the accident report form that I weigh 175 lbs. Due to my surprise at being jerked off the ground so suddenly, I lost my presence of mind and forgot to let go of the rope. Needless to say, I proceeded at a rapid rate up the side of the building.

In the vicinity of the third floor, I met the barrel which was now proceeding downward at an equal, impressive speed. This explained the fractured skull, minor abrasions and the broken collar bone, as listed in section 3 of the accident report form.

Slowed only slightly, I continued my rapid ascent, not stopping until the fingers of my right hand were two knuckles deep into the pulley. Fortunately by this time I had regained my presence of mind and was able to hold tightly to the rope, in spite of beginning to experience a great deal of pain.

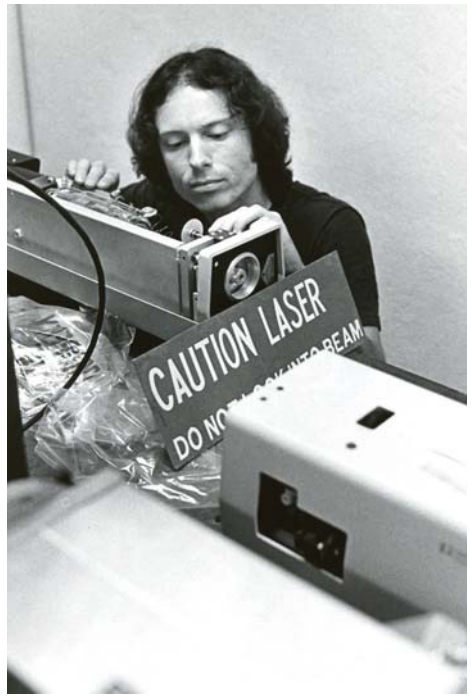
At approximately the same time, however, the barrel of bricks hit the ground and the bottom fell out of the barrel. Now devoid of the weight of the bricks, that barrel weighed approximately 50 lbs.

I refer you again to my weight. As you can imagine, I began a rapid descent, down the side of the building. In the vicinity of the third floor, I met the barrel coming up. This accounts for the two fractured ankles, broken tooth and several lacerations of my legs and lower body.

Here my luck began to change slightly. The encounter with the barrel seemed to slow me enough to lessen my injuries when I fell into the pile of bricks and fortunately only three vertebrae were cracked.

I am sorry to report, however, as I lay there on the pile of bricks, in pain unable to move, I again lost my composure and presence of mind and let go of the rope and I lay there watching the empty barrel begin its journey back down onto me. This explains the two broken legs.

I hope this answers your inquiry. ■



We are pleased to join many others in recognizing the contributions and accomplishments of Skip Smith at this year's Gorman Emeriti Brunch.

Skip and Al were in the class of four assistant professors who arrived at the Physics Department in the fall of 1968. We were privileged to begin our careers at Maine at a time when the physics program was about to begin an exciting growth phase under the leadership of Department Chair Dr. Paul Camp.

During the 13 years we lived in Orono, Donna and Skip's wife, Carolyn, became good friends. Telephone calls during long winter days helped pass the time and season. Birthday parties, September cook-outs at the Carrs', and other faculty gatherings were good times shared by the families.

Although we left Maine in 1981, we have stayed in touch with Carolyn and Skip and, in recent years, have enjoyed lovely annual dinners together at the Thistles Restaurant in Bangor.

During his years at Maine, Skip distinguished himself both in teaching and in research. Skip and Al each taught a lecture section of freshman physics together for several years. Skip was well known for his concise lecture notes, which boiled difficult concepts down into understandable segments. He was highly regarded by his students, as evidenced by his teaching awards. Skip also carried out a very

successful research program, centered on applications of cryogenics to superconductivity and ultrasonics.

Reflecting on carrying out research in the early seventies, our programs and facilities seem rather quaint by today's standards. A few hundred dollars here or there often made a big difference to success or failure. To help make ends meet, Skip collaborated with Al on some electron tunneling experiments, and with Charlie Tarr on studies of ordering mechanisms in liquid crystals. Those were good days!

We extend our best wishes to Skip and Carolyn and our congratulations to Skip on being the recipient of this year's Gorman Emeriti Faculty Award.

Alton Clark '61 and Donna Clark '61 ■



Alton Clark



L-R: Paul Dolan, Skip, Ken & Andrea Brownstein - July 1992

I was delighted when I learned that you would be the honoree for our annual Gorman Emeriti event this year. You have such a distinguished career for which you should be very proud. When you think of just how many engineering students you helped to gain a good solid basis for physics to enable them to advance their knowledge as they move through their engineering programs it must be very rewarding for you. Making a difference in the lives of so many is truly a blessing.

I must share with you that my husband and I had the pleasure of sharing a table with you at our College of Engineering banquet one year. This happened to be the year when so many of us had suffered a great loss in our retirements accounts and while we

were discussing the impact of this I remember you saying to all of us sitting at the table that the way things were going you had decided that your next statement from TIAA-CREF was probably going to be in the form of a bill rather than your account balance! That tickled my funny bone and I will always remember that. Luckily we all did recover but it was much needed humor for all of us at the time.

I shall always have a great deal of respect for you and your career. I wish you the best as you continue to enjoy your retirement years.

Best wishes,
Laurie A. Fullerton
College of Engineering ■

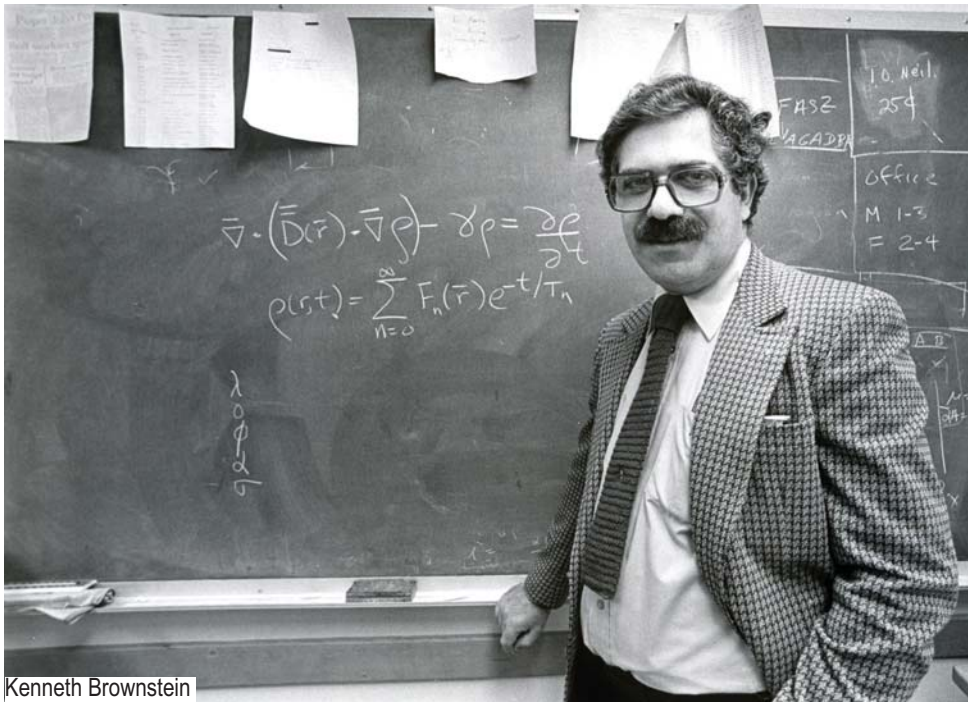
I first met Charles “Skip” Smith in graduate school at Ohio University, where we were assigned to the same office in Super Hall, the home of the Physics Department. Super Hall was named for Prof. Super, who discovered X-rays about a month after Roentgen.

Skip is from Pennsylvania, the son of an engineer at Westinghouse who invented torpedoes and clock radios. Skip and I found that we had similar interests in fishing, especially fly fishing, which we did whenever we had time and good weather. He helped me learn to drive in his Jeep, noted for having a “Psi*Psi” on its bumper.

We both took a neutron lab course in grad school, taught by his future advisor Prof. Sanford. This qualified Skip to teach nuclear physics and

nuclear lab in his first year as an Asst. Professor at University of Maine. Once I arrived at Orono a year later, he began teaching the introductory physics course while I assumed responsibility for the nuclear courses as well as another large lecture course.

Skip undertook research in low-temperature physics and superconductivity, collaborating with Profs. Ken Brownstein and Bill Unertl. A friendly rivalry developed between Skip and Ken, resulting in frequent pranks, such as wine corks over the door, open sardine tins under the desk and strategically-placed urinal cakes. They also dressed up like Groucho Marx to tease Brownstein about his resemblance to the famous comic. During that time, also, amusing alterations to the faculty pictures and



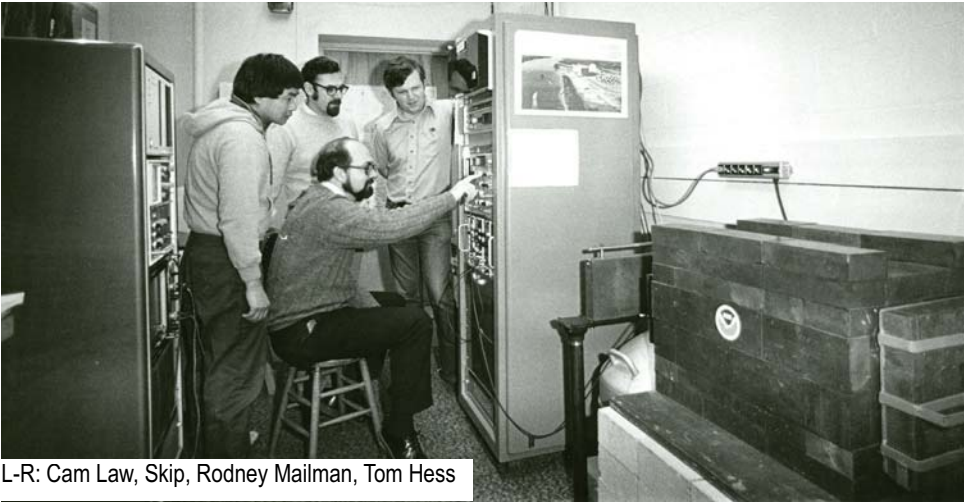
Kenneth Brownstein

office-door signs would mysteriously appear. Nonetheless, they and their families became great friends.

Skip and I were both interested in environmental issues, so it was natural to propose a study of Maine Yankee Atomic plant in Wiscasset before it went online, as well as shortly after it started. This allowed the purchase of some important pieces of equipment (including the pulse height analyzer shown in the picture below), summer salaries for ourselves and support for graduate students.

ultimately provided continuing support. The research design and results of those studies were praised by Sea Grant officials in Washington, D.C., which helped the University of Maine obtain Sea Grant status separate from the University of New Hampshire.

Skip continued his work in low-temperature physics, taking a sabbatical year of study and research at IBM, and guiding several students through their PhDs including Ali Kashkooli who is now teaching physics at Husson.



L-R: Cam Law, Skip, Rodney Mailman, Tom Hess

Our proposal was endorsed by Sen. Ed Muskie, one of the founders of the EPA. The project included collaborator Herb Hidu from Darling Center, who provided expertise on shellfish. The study revealed radioactivity in the shellfish (oysters), which were grown in the hot water outflow from the power plant, at which point both Central Maine Power Company and USEPA became interested and

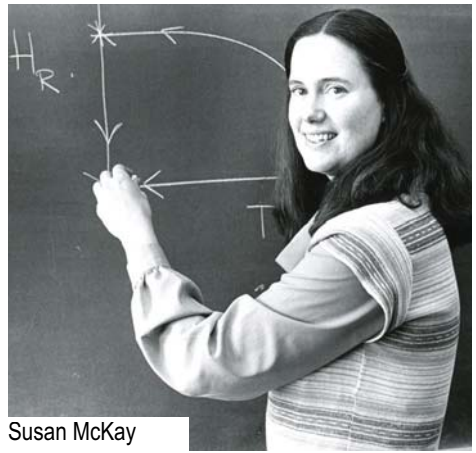


Tom Hess

Even after formal retirement, he has continued his collaboration with Paul Dolan, Ph.D., at Northern Illinois University. In the natural course of things academic, Skip had his turn at being department chairman. During that tenure, he hired several new faculty including Profs. Neil Comins and Susan McKay.

After he retired, Skip returned to his hobby of fishing, and further developed his interest in duck decoys and duck calls. While I was traveling in North Carolina a few years ago, I came across a farmer wearing a “Duck Head” T-shirt. He was willing to part with his shirt, and thus it was gifted to Skip in honor of his new-found calling.

by C.T. Hess ■



Susan McKay

I am so pleased that Charles “Skip” Smith is being honored in this way and want to share a couple of the lessons I learned (or tried to learn) being a faculty member in the Department of Physics and Astronomy with him for several decades.

The first was the importance of tapping into the expertise of a previous chair. When I took over as department chair in 1998, Skip was an incredible resource and helped in so many ways, but by far the greatest one was taking charge of the ABET reaccreditation process. As anyone who has been through it knows, ABET requires not just running an excellent program, but documented the ongoing work that continues to guide improvements. Skip had been through reaccreditation before, and it was a huge gift to me that he was willing to take the lead in preparing all of the required reports! After that experience, I called on him and the other previous chairs in the department often for assistance, and they were all ready to lend their aid to make the ABET process successful.



The second type of lesson I learned falls into the gardening category, and actually many lessons could be listed here. Skip was full of advice for me as a new gardener in Maine. In fact, I think he was the first one to tell me the joke about locking your car in August in Maine to prevent people from putting spare zucchini in it, an experience that actually happened to me once in the Bennett parking lot, although I have never been able to definitely pin the source of the bumper crop on him. I really knew that Skip was a serious and creative Maine gardener when he told me that he puts bags of sand in the back of his car for the winter, and then uses them to grow his carrots once it is time to plant. This strategy is just one tip that I picked up in our many summer lunch conversations typically including Skip, Tom Hess and Paul Dolan, Skip's visiting research colleague for so many summers. Each brought in produce to show off, Paul's typically from the Farmer's Market, but Skip definitely had the abundance of vegetables that we all envied. help.

I am truly grateful for all of the ideas, experiences, and humor that have come during our decades of overlap as faculty members.

Susan R. McKay
Professor of Physics
Director, Maine Center for Research in
STEM Education
University of Maine ■

Dr. Charles W. Smith became the Physics Department Chairperson in 1986. He would be the fourth department chair I have had the pleasure to work with!

The best memories I have of working with Dr. Smith (I never have called him Skip) are as follows:

Typing PHY 121/122 Grade Cards — these cards have been kept since 1934. Recorded on cardboard stock cards, were: student name, recitation and library section, major, prelim 1, 2, and 3 grades, homework and lab grade, final exam grade, total number grade, and final letter grade. Sadly, in Spring 2008, the recording of grades ceased when Dr. Smith retired. The successor instructor used a more modern way of recording grades — Excel sheets!

During June, July, and August, the yearly visit of Dr. Paul J. Dolan occurred. Paul was a former post doc and continued his research in room 13 Bennett Hall and wrote up the results for the March meeting of the American Physical Society. Both were to attend and present their work at the meeting.

At lunch in the conference room during the summer months with visiting Professor Dolan, Dr. Smith would always have fresh sliced tomato sandwiches and cucumber. Paul would have a variety of vegetables he purchased at the Orono Farmer's Market. The garlic scapes were the most memorable!

Shop talk, sitting in room four at 7:30 a.m. and listening to the “guys” talk politics and world events. Many lively discussions happened in the early mornings! Each Spring, Dr. Smith updated me with the news of nesting bald eagles in the trees along the river behind his home. Receiving some leftover garden vegetables from his garden — zucchini and hot peppers wer the best!

Dr. Smith was a great chairperson. He had the leadership skills, was very well organized and interacted with colleagues professionally. He also had the easiest signature to forget!

Thanks for the memories, Dr. Smith. Wishing you many more years of gardening and good health.

Fondly,
Patricia L. Byard
Department of Physics ■



L-R: Carolyn Smith, Betty Carr, Ed Carr, Charles Smith



L-R: Carolyn, Paul Dolan, Randy Resisterston, Skip, Eugene Slobodzian...



Clarence & Ruth Bennett (of Bennett Hall)

Should we cook up the duck?



L-R: Ross Brody, Skip, Matt Robinson, Ellie Sayer

Dear Skip-

Congratulations on being the honored celebrity at the 2015 Gorman Emeriti Brunch. It is a wonderful time to reflect on the many impacts that you have had on faculty, staff, and students at the University of Maine over your distinguished career.

The first time I met you was in New Orleans at the 1988 March Meeting of the American Physical Society, where you were recruiting new faculty members and presenting your latest results with your students on the properties of nanometer sized superconductor contacts at cryogenic temperatures. I came to learn that you routinely took an annual trek with your students to the APS March Meeting to present the latest research results that came out of your group and to have them experience their first international meeting where they could interact with over 5,000 physicists. The year 1988 was an exciting time with the introduction of high temperature oxide superconductors into the field and your group was one of the first to explore point contact spectroscopy with these new “high Tc materials.”

Another important aspect of your career that should be acknowledged is your long time in teaching PHY 121/PHY 122 – Introductory Physics for Scientists and Engineers. The many students that I encountered over the years spoke of the rigor and clarity with which you presented physics

concepts to these large classes of students – you did it in a manner that would have made Clarence “Squeaky” Bennett proud! I also enjoyed the many discussions we had over the years about the “Physics of Materials” course.

When I arrived at UMaine, you were the Chair of the Department of Physics & Astronomy. This is a role that you admirably performed to benefit all constituents including undergrads, grad students, staff and faculty with exquisite organization and leadership. An impressive accomplishment was your ability to get four Assistant Professor tenure-track positions approved for the Physics Department within a two-year time frame — McKay and McClymer in 1987 and Batuski and myself in 1988. With the current status of the decline in the number of tenure-track faculty positions, I think all department chairs would be willing to hire you as a consultant to find out how you accomplished this feat! Your efforts and commitment to the Physics Dept. and College of Engineering have had an enormous impact and are appreciated by all.

Again, congratulations on being honored at the 2015 Gorman Emeriti Faculty Brunch, and I extend continued best wishes to you in your retirement.

Best regards,
Robert J. Lad ■

Skip was teaching PHY 121, the physics course for beginning engineering students, when I arrived on campus in 1970. He was still teaching it when he retired years later. This was a course he clearly enjoyed. I imagine that by now he understands introductory physics reasonably well.

At some time in the intervening years I worked for Skip in that course as a recitation instructor and saw close up how he ran the course. If you know Skip you will not be surprised to learn that he was extremely well organized. His lectures were carefully developed and masterfully presented. As with large lecture courses good organization and coordination of the various pieces — course outlines, weekly assignments, prelims, finals, grading sessions, grade recording, lecture/lab meshing — was vital. He was adept at all of this, which made for a smoothly running experience for students and staff.

Two particular recollections from my experience as a soldier in PHY 121 stand out. These may even be close to being true.

When developing an exam Skip would pull a significant percentage of the questions from a past exam and add new questions to complete it. This he claimed would establish continuity from year to year. I never knew if students caught on to this scheme. It certainly prevented grade inflation. After the exams were graded some students would come to Skip with complaints about the grading, arguing



Richard Morrow

that they should have received more credit than they did. This was a tough sell to make but occasionally was successful. Skip would hand the exam paper with the higher grade back to the student with the question, “Do you feel any smarter now?” thus imparting his view that knowledge was more important than grades.

Skip maintained his high standards in research as well as teaching. This was recognized by faculty and students in 1978 when he received the University of Maine Distinguished Professor award and was selected as the University of Maine Commencement Speaker.

Congratulations, Skip, for this well-deserved current honor.

Richard Morrow
Professor Emeritus of Physics ■

I have very fond memories of working with Dr. Smith during and after my graduate education.

I could not have found a better thesis advisor. Even though he had a significant workload as the department chair at the time, he made certain that my thesis work was progressing at a good pace. I and his other graduate students benefitted a great deal from his advice and guidance regarding both teaching and lab work.

Geetha and I immediately felt at home when we first arrived in Maine and became part of the physics department “family.” The summer lobster dinner on the porch was a wonderful annual gathering at the Smith house and we often think about that now that we are enduring summers in Texas. We both wish Dr. Smith well and regret that we cannot attend.

Randal Reinertson
Ph.D. – May 1991 ■



May 1991 – Prof. Smith in the shop (basement of Bennett Hall) with Dr. Hess



May 2008 – Prof. Smith with Randy Reinertson and daughter in Old Town, ME



May 1991 – Prof. Smith with Randy and his parents Dr. Odell & Mrs. Reinertson

When I was hired, Skip had returned to the faculty after being Chair for several years. I remember thinking of Skip as the Institutional Memory of the department — he could provide historical commentary for items in faculty meetings that were always relevant and helpful. From my perspective, the entire faculty looked up to Skip as a senior statesman of the department. His presence and input gave me much stronger insights into the Department, the Colleges of Engineering and of Liberal Arts and Sciences, and the University, which I appreciated greatly.

The other comment I want to make is that Skip was one of the senior faculty when I arrived whose presence, collegiality, and often slightly mischievous demeanor made me wish I was part of this department when he and his colleagues were my age. I heard many stories told of pranks (corks above doors) played by faculty on each other as well as long-time friendships that have helped shape my perspective on what it means to be a faculty member. I thank Skip for those vicarious memories and for setting that example.

John Thompson
Associate Professor of Physics ■



The Coffee Cup of Confidence

Clearly, Skip Smith was an outstanding “regular” faculty member well before he became Chair, as shown by his being presented the University Excellence in Teaching Award in the Physical Sciences 1975, then being named Distinguished Maine Professor in 1978, and later being honored as a Wolfson Scholar at Oxford for a year. Skip also lectured and managed the overall delivery of the large Introductory Physics for Engineers and Physical Scientists courses for many years, very positively impacting hundreds of students each year for over 30 years, as well as teaching many upper-level courses for majors and guiding 16 graduate students through their research theses work.

But when I arrived at UMaine in 1988 as a new assistant professor, Department Chair Skip welcomed and guided this fledgling with such insight and flair that I was sure he had always been the quintessential Chair. I was deeply impressed with the collegiality and commitment to excellence that pervaded the Department, and I saw his leadership contributing greatly to that atmosphere.

He ran the Department and presided over faculty meetings with great effectiveness, insight, and sensitivity. Naturally, when I became Department Chair years later, I looked to him for coaching in this scary new role, and he freely gave great advice. I very much appreciated that invaluable support.

I particularly want to point out that a subtle tool that Skip used in his management of the Department was his coffee cup. He would often be seen cup-in-hand, in the hall between meetings, or catching up with activities of a faculty member — chatting in that person's office or lab. I strongly suspect that the ubiquitous coffee cup was a conscious way for Skip to convey to us all that “All is well. Relax and have confidence that the Department is running smoothly.”

Congratulations to Skip for many jobs so well done!

David Batuski
Professor of Physics and Astronomy ■

I have missed your presence in the department since your retirement and hope that you are enjoying your copious free time away from the lunatic asylum of Bennett Hall (ha).

I think others are better able to capture all that you've done since coming to UMaine, since I only came here in 2001 and had much less time to spend with you, but I want to capture a few stories and ways in which you've influenced my career here at Maine, stories that are quite meaningful to me.

When I arrived at UMaine, I was told that you would be my faculty mentor. While I had no idea what exactly was expected here, I had been in academic setting for decades, having a step-parent who'd been a physics department chair when I was a teenager.

That said, every department is different, and the times we went to lunch together, the conversations and advice you gave me during those first few years, and the guidance you provided were very helpful in letting me understand UMaine and our department culture.

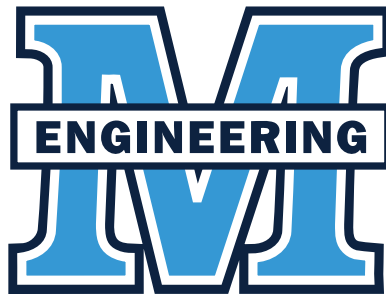
More importantly, your actions taught me something that is a lasting lesson. Your long collaboration with Paul Dolan showed a genuine friendship that truly enriched both your lives. Every year, I would see you two working together, laughing at lunch, carrying on, all while doing good physics. That lesson has lasted, and I have sought collaborators for whom the same could be said, people with whom I simply enjoy working, where the results of the interaction are natural because of the pleasure of the collaboration.

Thank you for what you've given to the department, thank you for the many efforts you've made to strengthen what we do and allow us to do our best work in whatever area is our calling, and thank you for your ongoing dedication to living a curious life fully and truly. It's a pleasure to know you.

Michael Wittmann
Department Chair, Professor of
Physics and Cooperating Professor of
Education ■

Since 2000, the College of Engineering at the University of Maine began what has become one of our most enjoyable traditions where we celebrate the career of a distinguished emeriti faculty member at the James and Maureen Gorman Emeriti Faculty Brunch — thanks to the generous support from James and Maureen Gorman.

2000	Dick Hill (Pajama Party)	Mechanical Engineering
2001	Waldo Mac Libbey (Showtime)	Electrical Engineering
2002	George Greenwood (Cowboy Roadshow)	Civil Engineering
2003	Bill Ceckler (Confessions of an Outdoorsman)	Chemical Engineering
2004	Jerry Harmon (Physics of Subjective Reality)	Engineering Physics
2005	John Lyman (No Jokes Required)	Mechanical Engineering
2006	Carleton Brown (Three Ringed Circus)	Electrical Engineering
2007	Karl Webster (Super Engineer)	Engineering Technology
2008	Wayne Hamilton (First Associate Dean)	College of Engineering
2009	Kim Mumme (The Renaissance Man)	Chemical Engineering
2010	Paul Camp (World of Ice & Snow)	Engineering Physics
2011	Claude Westfall (Professor Fisherman)	Engineering Technology
2012	Donald Grant (The Cal Ripken of Academia)	Mechanical Engineering
2013	Fred Irons (The Mystery Hour)	Electrical Engineering
2014	John Alexander (Canoe Rules)	Civil Engineering
2015	Charles W. Smith (Numismatic Relativity)	Engineering Physics



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