



The Voyageur's Companion

Newsletter of the Rocky Mountain Canoe Club
www.rockymountaincanoeclub.org

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December 2012 Jeanne Willson, editor

Special edition...

Beginnings and endings

This special issue of the Rocky Mountain Canoe Club newsletter includes an article from one of the founding members, who describes the club's first trip!

We are also publishing an article about our friend, Jim Baker-Jarvis, at his wife Karen's special request. Most of you know that Jim died last New Year's Eve in a tragic and freaky car accident. We miss him.

The rest of this issue is devoted to a small subset of the many beautiful photos taken by club members this year, to inspire memories, reflection, and remembrance.

Photo: Kathryn Mutz, Green River/Labyrinth Canyon 2012



Rocky Mountain Canoe Club: Founding and Early History

Jeff Keeler,
Boulder, Colorado
RMCC Founding member

The Rocky Mountain Canoe Club will be 38 years old in March! Where were you on March 23, 1975? That was the date of the first RMCC meeting – the Founding Meeting that gave the club its name, its mission and planned its first trip.

Let me back up a bit. About a week earlier I had been reading the Boulder Daily Camera and noted a small article inviting anyone interested in starting a canoe club to the National Bureau of Standards (now NIST) meeting room on March 23. I had purchased my 15' Grumman with a shoe keel a couple years earlier and had paddled in Boulder Creek, the South Platte and the Colorado with a friend and the Delores, Colorado and North Platte Rivers with the CU Rafting Outdoor Program. So I was keen to meet up with other canoeists and paddle some real rivers using the white water skills I had learned a few years earlier on the Lehigh River in Pennsylvania.

The first RMCC meeting had about a dozen folks there – mostly couples from Longmont who preferred fishing trips and knew the meeting organizer, Bob Mumford, a Longmont real estate developer who also wanted to get on the water. A few others at the meeting were looking for river experience, not necessarily fishing or whitewater, but just people to go canoeing with. Besides me, Bob McLaughlin and Bruce & Jeanne Waters attended. We wanted to go canoeing and had boats but needed a group for shuttles and paddling.

The strange discussion that occurred at this first meeting was the enthusiasm for a fishing trip in canoes on the Delores River between Cahone or Slick Rock and Bedrock! No one had scouted the river, just looked at access from a road map. Any of you that have done this stretch know the “River of Sorrows” isn’t called that because of the fishing! I had rafted the Delores the previous year and knew that Snaggle Tooth Rapid wasn’t what these folks had in mind for a long weekend fishing trip. After a little discussion the group realized that a milder St.Vrain River trip near Platteville on a sunny Sunday May 4th afternoon was likely to preserve these RMCC founders for trips in the decades to come. I have the original, hand-drawn trip map for the St.Vrain that Bob Mumford put together and it is shown below.

We all had aluminum boats, mostly Grumman 17' rock scrapers that worked just fine. Mine is still around to this day but now owned by John and Kathy Mullen. Bob and Linda McLaughlin still paddle theirs, but I believe a river ate Bruce and Jeanne Waters’ a few years later. The other folks on the trip seem to have moved on and I don’t have the early club roster. We didn’t consider dues, liability waivers or even membership at that point.

After that first very successful and enjoyable trip, we arranged several more informal trips with real trip leaders by sending out notices once a month much as we do today. The RMCC was off to a roaring start. The enthusiasm for new trips continued to grow. During the next couple of years we read whatever we could find about Colorado rivers, discovered places that we’d never heard about, made lots of new friends and learned all sorts of new paddling techniques from each other.



Cisco to Big Bend on the Colorado, Labor Day, 2012. Photo by Fred Nelson.

In the fall we elected officers for the next season. I was nominated as first elected president but declined so I could finish my CU degree. Bob McLaughlin became first RMCC President, Jeanne Waters the first RMCC Secretary, Don Walker the first RMCC “Program Chairman” in charge of meeting planning, and I was the first RMCC Trip Planning & Leader Coordinator (and President later). Our dues were \$3.00/year and we made posters to put up in local mountaineering and boating shops. We wrote a “mission statement” that describes the typical boating season, trip leaders, training opportunities and the year-end slide show. I was the “RMCC contact” for several years. I would get phone calls from both local boaters and visitors wondering how to go canoeing in Colorado when all they could see was the roaring water of Clear Creek Canyon. Many joined the RMCC and have made it the success it is today – we know them as the “old timers”.

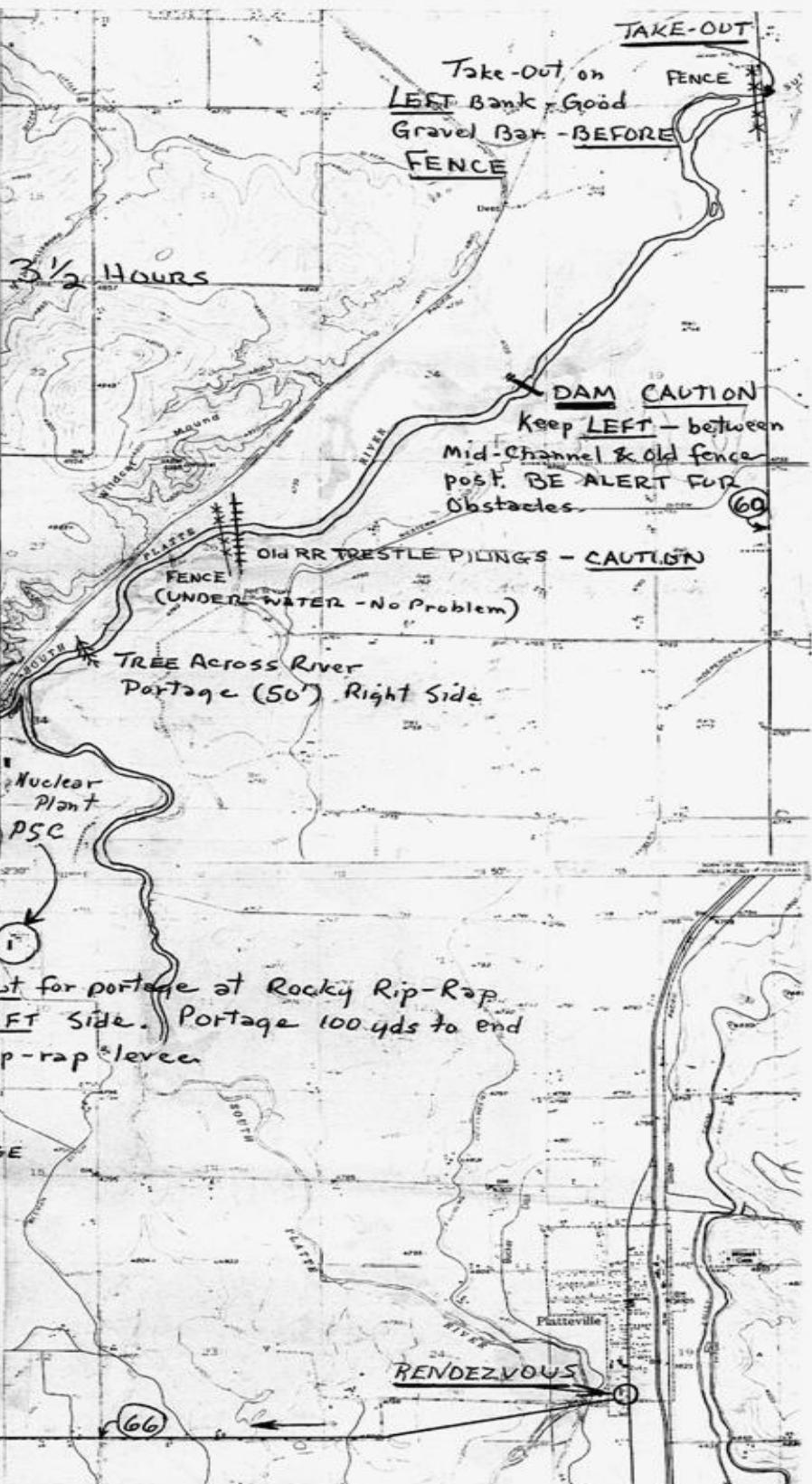
Although in the last 38 years the equipment has changed a lot and we still have a few members that routinely paddle whitewater much more extreme than what we did those early years, the RMCC has remained remarkably close to its founding principles and goals – to offer open canoeing trips, training, and camaraderie. We soon got into environmental issues, real newsletters, our present logo and all the other aspects and traditions that we love today. Thirty-eight years ago was a great time to go canoeing and it still is today! - Jeff Keeler

ROCKY MOUNTAIN CANOE CLUB

TRIP #1 MAY 4, 1975

All participants in this activity do so at their own risk and hereby waive the right to hold the Club or any of its Members liable for any loss or accident to persons or equipment.

RUNNING TIME:





Eagles watch the world from cottonwoods lining the desert Colorado River stretch downriver from Cisco Landing. By Fred Nelson

In Memoriam James Roger Baker-Jarvis

(reprinted for Rocky Mountain Canoe Club at the request of Karen Baker-Jarvis).

It is with great sadness and extreme feeling of loss that I assemble this Memoriam. Dr. James Baker-Jarvis was much loved and respected by those with whom he came in contact, most of all by his family members who can best describe their feelings of love for him. The following accolades are from the family blog created for Jim along with one from his wife, Karen, and an excerpt from his brother, Tom. Following those, there are many grateful accolades from ones who knew him.

—*Reza Zoughi*

A LIFE FULLY LIVED

James Roger Baker-Jarvis was born on February 8, 1950, the fourth son of Harold and Lucille Baker of Lauderdale, MN, in a family that eventually grew to include ten children. Jim was always full of life, humorous, and a person of action but also of reflection.

Jim graduated from Alexander Ramsey High School in Roseville, MN, received his undergraduate degree in Mathematics from the University of Minnesota-Twin Cities, his Master's degree in Physics from the

University of Minnesota-Duluth, and his Ph.D. in Theoretical Physics from the University of Wyoming in Laramie.

After stints teaching and doing research at the Universities of Wyoming and North Dakota State, the majority of Jim's career was spent as a Theoretical Physicist at the National Institute of Standards and Technology (NIST) in Boulder, CO, where he loved his work and was able to do groundbreaking work on a number of fronts. He was in the process of writing a book about his work.

Jim and his wife were blessed with two wonderful children, a son, Duff, born in 1986, and a daughter, Aquene, born in 1991. Besides his work and family, Jim had a lifelong love affair with the outdoors, as manifested in his activities of canoeing (including competitive whitewater canoeing), camping, fishing, biking, snowshoeing, and climbing.

Jim died in a tragic and improbable accident on December 31, 2011, when a high gust of wind blew a branch just 3 feet long and 3 inches in diameter through the windshield of his car, as he and his wife, Karen, were returning home to Longmont from Boulder. The branch slammed into his chest and he maintained consciousness only long enough to steer the car to the shoulder and stop, saving his wife and other motorists from a possible collision. To say that Jim is sorely missed by his family, colleagues, and many friends is an understatement. In the last several years, Jim had taken to signing off his emails to his siblings with "Jimmy B."

Long live the memory of Jimmy B!

—Anne Johnson, Jim's Sister



I have a photograph of Jim on my desk at work. It is a picture that I had taken circa 1971 and it shows Jim standing in the doorway of a boxcar, smoking a small cigar, his eyes focused distantly at the horizon where the fields of North Dakota meet the sky. Sometimes, when I look at it, it reminds me of another time and place. Jim was a deceptively strong performer in everything he did. Jim loved to tease our sisters. They seemed to take it so good naturally, I think because there was never any meanness involved. Anne, Rose, Barb, Mary and Patti all have their Jimmy stories that are just as significant as mine. He was a soft-spoken man with a delightful sense of humor. He was the humblest person that I ever knew. Jim was a great family

man who cherished his wife Karen. His two children, Duff and Aquene, meant the world to him. Jim's last act was entirely in his makeup. He saved his beloved Karen. Here's to you, Jim. We'll meet on another trail someday.

—**Tom Baker, Jim's Brother**

From the Family Blog:

“Let us go then you and I as the evening is stretched out against the sky.” - T.S. Eliot

Jim and I met in the fall of 1976 at a Minnesota Rovers meeting when he had just returned from a six month Volkswagen micro-bus trek through South America. The Minnesota Rovers is an outing group once affiliated with the University of Minnesota. Jim and I were attracted to each other from the first glance. His red beard, his shoulder length tousled reddish blonde hair, and his straight nose had me wondering whether he had Scottish roots. He wore a faded striped Nicaraguan poncho and widely spaced hand-stitched green wool army pants. I remember many canoe trips down the Snake and Kettle rivers, some treacherous, and Rover excursions to the Boundary Waters Canoe Area, surveying and building the Border Lakes Trail. Our relationship grew like a Ponderosa Pine, slow and strong, forced out of the moss rocks. Early in our relationship, Jim lived in the upper half of a dilapidated red house near Franklin Avenue in Minneapolis. Entering the house for the first time, through the cracked front door and peering through the open rooms, I felt as if I was delving into the mind of a creative and philosophical individual. Strewn about the room were hap-hazard stacks of physics and math books, folk albums, and ragged volumes of Nietzsche, T.S. Eliot, and Kafka. The center piece of the room was a 1960's Volkswagen engine in some stage of repair. I have fond memories of that old red house.

After 2 years in the Red House, we moved to Duluth, Minnesota, and married at the Unitarian church in 1979. During the following summers, we snow and ice climbed in Alaska and Canada, canoed wild rivers in northern Canada, and rode freight trains. After earning his masters degree in Physics, we moved to Laramie, Wyoming where he earned his doctorate in Physics. While going to school, we renovated a 1910 house. Our son Duff was born in 1986, and five years later, our daughter Aquene was born in Lyons, Colorado. Coming from an intimate family of 9 siblings, Jim learned at an early age the art of goofing around. He made faces to scare his sisters and talked in strange and fictitious dialects. He played with our children in the same light hearted manner. From his example, our children soon shared his enjoyment of nature and the outdoors. Jim displayed those qualities that many of us strive for: the discipline to persist against all odds, boldly explore new frontiers, and to quietly reflect on life's mysteries. Jim continued to grow as a father as well as excelling in his career as a theoretical physicist at NIST.

Visiting his family in Minnesota and the family cabin on Silver Lake in Wisconsin was paramount to his life. When I reflect on Jim's life, my thoughts flicker like the soft wings of the night owl under the full moon.

—**Karen Baker-Jarvis**

An Overview of Jim's Career

Jim's scientific and technical accomplishments, through his own efforts, those of his collaborators and those whom he mentored into becoming skillful and successful scientists, are too numerous to list here. Jim's background and expertise in materials was diverse. He co-authored over 140 papers, presentations and technical reports. Jim is specifically credited for his long-standing works in RF/ microwave dielectric metrology and is internationally renowned as a leading scientist in this field. Significant among his works with respect to dielectric and electromagnetic materials, is the development of fundamental models for

coaxial probes, reentrant cavities, split cylinder resonators, open-circuit holders, and transmission lines. The development of a novel algorithm for evaluating complex permittivity in transmission lines in 1989 resulted in him being awarded the *Commerce Bronze Medal*. Also, in 1990 and 2006, Jim was awarded the *NIST Bronze Medal*. ASTM Standard 5568 is based on his groundbreaking coaxial line measurement development, which was later adopted by Hewlett Packard in the HP85071C Materials Measurement Software. The transmission line dielectric software he helped develop is called the NIST Precision Software and is often referred to as the “*Baker-Jarvis Algorithm*.” Jim collaborated with many scientists both nationally and internationally. In 2010, Jim was elevated to the grade of IEEE Fellow through the IEEE Instrumentation and Measurement Society.

Personal Notes

Throughout my career, I have had the pleasure and good fortune of knowing and interacting with many capable scientists. I knew of Jim and his works before I started my career at Colorado State University in Ft. Collins, CO. Jim’s dielectric metrology works using transmission line techniques have been instrumental in my students’ and my research activities. What is most striking and commonly stated about Jim is how generous, humble, wise and talented he was. In 1999, I had the distinct pleasure of inviting Jim to a workshop in Paris where he delivered a presentation on microwave materials characterization techniques. Having spent some personal time together there, I experienced his warm and wonderful side. Jim’s quiet and unassuming demeanor was his personality trademark, which spoke volumes to those who knew him and were aware of his numerous significant technical contributions to the field. Last time I saw Jim was in June of 2010, and while sitting across from him around a large conference table, I distinctly recall his warm smile (just like his picture above) and thoughtfulness towards others. Although we did not interact on a daily basis, I cannot help but to feel the large void created by his loss. Through recent contacts with Jim’s wife Karen, I have come to learn a lot more about Jim’s wonderful traits and hobbies. Regrettably, I now wish I had gotten to know Jim more on a personal basis when I lived in Ft. Collins. The thoughtful and heartfelt comments in this Memoriam by people who knew Jim are testaments to his character and technical accomplishments. He will forever live in our hearts and minds. Rest in peace my friend.

—Reza Zoughi

Missouri University of Science and Technology, Rolla, Missouri

I first encountered Jim around 1988-89 when we were both newly assigned to the Electromagnetic Properties of Materials (EPM) Project at the then NBS-Boulder (now NIST). Jim and Karen were very happy to have recently relocated to Boulder from the wilds of North Dakota (which they did not like)! At the time, I was a very green Project Leader who was trying to learn how to manage a scientific team. When I had been hired on at NBS two years earlier, I recall being asked by the then Division Chief, Chuck Miller, whether I was a “measurement” guy or a “theory” guy. When I hesitated to give him a firm answer, Chuck suggested I might be a “bridge man” instead. I still don’t know if that definition fits me, but it definitely fit Jim! Some of Jim’s best contributions were in improving the mathematical solutions for many of the measurement techniques used for characterizing materials, thereby leading to much improved measurement accuracies. I was privileged to document many of these accomplishments in support of Jim’s advancement to IEEE Fellow in 2010. Specifically, Jim greatly improved the stability of the Nicolson-Ross-Weir solution used in transmission-line measurements and also developed significantly improved, multi-modal solutions for the open-ended coax probe technique that included the unavoidable presence of an air gap. Jim also made very significant contributions to the electrodynamic theory of materials that frankly were largely Greek to me (I will leave it to somebody else to summarize these accomplishments). In addition, there was a very practical and down-to-earth side to Jim that I greatly admired. Such qualities were much needed when Jim and Karen built a house on top of Indian Mountain, near Lyons CO, about 15 miles north of Boulder. I

recall that I had been trying to sell a set of large-size sockets and wrenches that I had inherited from my father-in-law. Much to my surprise, Jim offered to buy them; I learned that he wanted them to maintain an old Wyoming Highway Department truck that he used to clear the winter snows off their access road on the mountain. I subsequently heard many other stories from Jim relating to the many problems involved in keeping their property running. In fact, the last time I saw Jim, just a few days before his tragic accident, we had all arranged to meet for lunch in Boulder. Sadly, Jim was unable to stay and eat with us because he had to return to their property to fix a blocked septic system.

Jim also had a very adventurous side. I remember him regaling me about his youthful travels as a modern-day hobo riding freight trains between Minneapolis and Seattle, many accompanied by Karen, and sometimes in temperatures of -20 °F. He and his companions would always try to find a particular type of grain car to ride (the “Cadillac” of hobo riding, they called it) due to its greater comfort! He and a high-school friend also toured Mexico and parts of South America in a Volkswagen bus. Jim and his family were also huge canoeing enthusiasts and, every year, went off to explore new rivers and lakes in the US and Canada. He liked to recount the time he and a companion were shot at because they inadvertently trespassed on a native reservation in Canada (fortunately, nobody was hurt, and they got the message to leave)!

I know that Jim was very much looking forward to retirement in three years or so. He had talked with me about completing a book on electrodynamics; Karen, Mike Janezic and I are currently trying to find somebody with knowledge of this area who could take Jim’s unfinished text and turn it into a publishable document. And last but not least, Jim greatly valued his family, including wife Karen, son Duff and daughter Aquene, and looked forward to spending more quality time with them. We have all been greatly enriched by knowing Jim during his all-too-brief life that was rudely cut short by a very bizarre and freak accident.

—**Claude M. Weil**

Guest Scientist and former EPM Project Leader NIST, Boulder, Colorado

I became aware of Dr. Baker-Jarvis’ work in the spring 1994 when performing literature searches on rigorous dielectric metrology which was scant at the time. His work, namely the Baker-Jarvis method, was an invaluable help to my graduate degrees. Through the years, Dr. Baker-Jarvis became Jim; incredibly humble for such a brilliant and accomplished scientist. Jim, if legacies are built on pillars of patents and papers, let me highlight a more significant one. In the spring of 1999, while considering a post-doctoral position in your lab, you surprised me with one statement. It wasn’t the interest that I had for open-ended waveguide inverse problems, but the joy of having another avid canoeing partner. In the too brief moments that we shared, you provided me with a valuable lesson: everything in its own time. It might be a least-squares solution with causality constraints on one day, or “what do you think the better line would be in these rapids.” You will be missed.

—**Karl Bois**

Hewlett-Packard, Fort Collins, Colorado

It was my privilege to know Jim for almost 20 years, and I was aware of his excellent work at NIST in electromagnetic measurements before that. Jim made many important contributions to the measurement techniques and improvement of dielectric measurements accuracy with network analyzers and other measurement systems. His excellent background in mathematics and physics enabled him to apply new techniques that advanced the theory and practice of electromagnetic measurements in the RF and microwave fields. I considered Jim one of the most capable and important contributors to the dielectric properties measurement field in which I have worked for 60 years. We sought his advice on several occasions, and his

suggestions, offered sincerely and generously, were always most helpful. I had the pleasure of meeting Jim at numerous national and international meetings, where he presented important information on measurements with authority that was highly respected by his colleagues. We will all miss him and his expert knowledge in the field of electromagnetic measurements.

—**Stuart Nelson**

U.S. Department of Agriculture, Athens, Georgia

Jim was my opposite number at NIST - we were both running microwave dielectrics groups at National Measurement Institutes, and, naturally, I received the news of his death with shock, horror and a deep sadness that I would not be able to work with him again in the future. He was a marvelous host - I always felt at home and very welcome when visiting NIST and when I visited him socially. Over the many years that I have known him, we faced many of the same measurement problems, and during that time, what came across to me most of all about Jim was his generosity in involving my colleagues and myself in his work. He readily invited us to discuss issues of interest with him, whether theoretical, practical, or indeed philosophical. He was genuinely interested in what we had to say, and very often, long dialogues ensued, whether on the best approaches to certain types of dielectric measurement or to the theoretical understanding of dielectric behavior. Although we could not meet face to face very frequently, I shall miss these fascinating discussions. Through them I realized that Jim's broad range of interests and open-mindedness really added to his effectiveness and importance as a scientist and metrologist. I learned a lot from him. The world of dielectric metrology has lost a true leader in the field. I can only imagine how his family and close colleagues felt about his death - we have all lost a great guy and a true friend.

—**Bob Clarke**

Microwave Dielectrics Team, Materials Division

National Physical Laboratory (NPL), UK

Although I had visited briefly some 10 years earlier, I came to work with Jim in the Advanced RF Materials Characterization Project here at NIST back in 2008. Over the last several years, I got to know him. We would often take walks and discuss everything from physics to politics, collaborations inside and outside of the NIST, mutual efforts in gardening and his desire to take an elk that year. Jim was a good family man, clearly proud of his children and worried about their futures. He enjoyed a stop at the Goodwill to rekindle fascinations of boyhood retreats to and treasures found at the dump. While he was well established before I got here, as the author of many NIST technical notes that taught a generation how to do electromagnetic materials metrology, he still strived to do more. A theoretical physicist who taught at the University of Wyoming 20 years earlier, he thought about materials broadly and about electromagnetic waves interacting with these materials. He was particularly interested in the interrelations between statistical mechanics and electromagnetic measurements. His passion in this was to explore the use of entropy in electromagnetic metrology, and we often considered experiments to measure this elusive variable.

—**Jack Surek**

NIST, Boulder, Colorado

I came to know Jim first through his papers and finally met him in person during the ISEMA conference which was held in 1999 in Athens, Georgia, USA. Since then, we kept in touch exchanging advice and expertise in the field of electromagnetic and materials characterization. On several occasions, I called on Jim to contribute to scientific sessions I organized at different IEEE conferences, and he always graciously accepted the invitation. The last one was in 2010 in Denver, Colorado where I asked him to be the keynote speaker for an IMPI Symposium. Jim's contributions to the field of measurements are unique, in particular those pertinent to the field of materials characterization. His background in mathematics and physics gave

him the leverage to tackle challenging electromagnetic problems and propose original solutions. Above all, Jim will always be remembered as a humble and kind world-class scientist who did not hesitate to share his expertise and knowledge with his peers. We will all miss him and miss his “magic” touch to crack those difficult electromagnetic problems.

—*Samir Trabelsi*

U.S. Department of Agriculture, Athens, Georgia

I have known Jim since I first came to NIST Laboratories about 20 years ago. He was very friendly open-minded man with a great sense of humor, and we were often joking during lunches at NIST. We shared joint interest in wildlife and nature, and Jim and Karen had such a wonderful house in the mountains where we occasionally spent afternoons. On the other hand, Jim was renowned physicist with very deep knowledge of solid-state matter - especially dielectrics. We had performed a lot of experiments together and we published several joint papers on that topic. With Karen, Jim visited Poland a few years ago, and we had good time together in my homeland. I did not suspect that I would not see him again. It was too early for Jim to leave us alone. I will miss you Jim.

—*Jerzy Krupka,*

Warsaw University of Technology, Warsaw, Poland

Over twenty years ago, and within a few months of each other, Jim and I joined the Electromagnetic Properties of Materials Project at the National Institute of Standards and Technology (NIST) in Boulder, Colorado. Jim, of course, was already an established researcher, while I was a student intern who was also attending the University of Colorado. Even in those early days at NIST, Jim was a natural mentor and always made time for me and others in the project as we were learning the finer details of the theoretical models that he had developed for various dielectric measurement techniques.

Jim, who always had an aversion to formal project meetings, would take many of us on hikes up Enchanted Mesa or Skunk Canyon behind NIST’s Boulder campus to answer any of our questions or to speculate on the latest publication he had seen in the literature. Given that Jim was in better shape than most, he usually got the last word in as we breathlessly followed him up the trail! His unassuming manner, enthusiasm, and natural curiosity led to many interesting and productive collaborations with those at NIST, as well as other around the world, on a variety of topics. Although many in the scientific community will remember Jim primarily for his impressive contributions to the area of dielectric measurements, those of us who had the privilege of working closely with him at NIST will always remember him as a wonderful friend.

—*Michael Janezic*

National Institute of Standards and Technology (NIST) Boulder, Colorado

I worked with Jim fresh out of school with my Bachelor’s degree. The thing I remember most about Jim is his integrity. He always made me feel as though I was on equal footing with him even though he had many more years of research and understanding than I did. He always respected each person he talked and interacted with, and he taught me a lot about research and questioning. I left Jim’s project for a number of years, and when I went back to work with him, it was as though we were old friends and no time had passed. In my time away from his project, I found myself working with a lot of statistics, and it made me understand Jim’s quest for entropy and its place in the physics of the properties of materials. I will greatly miss his easy nature and his great smile and the talks of statistical thermodynamics and its place in the world.

—*Chriss Hammerschmidt, NTIA*

The family has made the blog website available: www.jamesbakerjarvis.blogspot.com.

Rocky Mountain Canoe Club Information

CLUB CONTACTS

President	Bill Ashworth
Treasurer	Kathryn Mutz
Newsletter	Jeanne Willson
Schedule, Web	Carol Duecker
Membership	Gene Ehlers
Website	Kaj Toivonen
Conservation News Roundup /Jerry Nolan	
Quartermaster	Doug Hurcomb



In This Issue: Special issue celebrating the beginning of the canoe club and the loss of our friend, Jim Baker-Jarvis

Website: <http://www.rockymountaincanooclub.org>

Membership: \$10 per year, per household. See Membership section of our website for forms and information.

ROCKY MOUNTAIN CANOE CLUB c/o Kathryn Mutz, [REDACTED], Boulder, CO 80308-1064



Returning to Moab on the Colorado River in Canyonlands.

Photo by Jeanne Willson