



Robert Louis Kustom

July 11, 1934 - July 28, 2019

Robert L Kustom age 85 of Dixon died Sunday July 28, 2019 at CGH Medical Center in Sterling. He was born July 11, 1934 in Chicago the son of Louis and Mary (Henek) Kuskowski. He had worked at Argonne National Laboratory in Lemont from 1958 until his retirement in 2018.

Robert earned his Bachelor and Master Degrees in Electrical Engineering from IIT in Chicago and his PhD from the University of Wisconsin in Madison. View his additional professional biography below.

He was a member of St Luke Episcopal Church in Dixon. He was a patron of the arts, enjoyed fishing and the outdoors, and woodworking.

Robert married Dolores Smith Payette March 31, 1986 in Chicago. He is preceded in death by his parents, sister Mary Lou Namowicz and step grandson Michael Strutz.

Robert is survived by his wife Dolores, children Brittan (Rebecca) Kustom of Crofton, MD, Todd (Julie) Kustom of Panama City, FL, Jill (Gary) Smith of Stow, MA, grandchildren Madison Kustom, Robert Kustom, Samantha (Casey) Flanagan, Jacqueline Smith, Spencer Smith and Tessa Smith; stepchildren Joseph (Alicia) Payette of Shannon, IL, Mary Concepcion of Las Vegas, NV, Denise Kilbourne of Converse, TX, Sharon Payette of Tinley Park, IL, Michelle (Anton) Graff of Yorkville, IL, Rebecca (Michael Nilles) Payette of Charlotte, NC, Matthew Payette of Tucson, AZ, Luke (Traci) Payette of Naperville, IL, step grandchildren Daniel Payette, Aaron Payette, Connor Concepcion, Christopher (Kristin) Kilbourne, Mariah Kilbourne, Steven (Yana) Strutz, Jessica Graff, Justin Graff, Laura Graff, Anneke Nilles, Katrina Nilles, Madelin Payette, Luke Payette Jr and four step great grandchildren.

At Roberts request his body has been donated for scientific study through the Anatomical Gift Association of Illinois. Memorial donations in the donors choice can be made to organizations of Robert's interests, in the arts or science. A private family service will be held at a later date. Arrangements by the Jones Funeral Home in Dixon, IL.

Dr. Robert Kustom, Distinguished Argonne Scientist, Passes Away

It is with heavy heart we note the passing of Dr. Robert Kustom, founding member and past Acting Director of the Accelerator Systems Division and an integral part of accelerator

achievements at Argonne. Bob's career at Argonne spanned over 60 years as an employee and as an Argonne Associate, during which he served in numerous leadership capacities and earned a world-wide reputation for his groundbreaking work in accelerator radio-frequency (rf) systems. His outstanding technical expertise and sound judgement were sought by accelerator facilities around the world, and his role as a mentor to new engineers and physicists helped launch many careers. He will be sorely missed.

Robert Kustom received a B.S. (1956) and M.S. (1958) in electrical engineering from the Illinois Institute of Technology, and a Ph.D. in electrical engineering (1969) from the University of Wisconsin-Madison. Bob came to Argonne in 1958 from an industrial research firm.

His long, illustrious career at Argonne included positions as Electrical Engineer; Associate Group Leader of the Electrical Engineering and Electronics Group; Group Leader of the Zero Gradient Synchrotron Operations Group; Associate Director of the Accelerator Research Facilities Division (ARFD); Director of the ARFD and, at the same time, Manager of Accelerator Systems for the Intense Pulsed Neutron Source; Associate Project Director of the 2-GeV Electron Accelerator Project; Acting Division Director of the newly-formed Accelerator Systems Division, responsible for forming the Division that would design, build, and commission the storage ring for what became the Advanced Photon Source (APS); and then Group Leader of the ASD Radio Frequency (RF) Group in the APS.

Bob also devoted part of his time to teaching and supervising graduate students at the University of Wisconsin as an Adjunct Professor since 1985.

As noted in a letter nominating him for the University of Chicago Distinguished Performance Award, "In the period from 1968 to 1970, his experiment on electrical breakdown in vacuum and the published results are still a classic and are frequently used for reference. Calculations based on electron emission from electron protrusions have provided the best theoretical comparison to actual data. At the same time, he was performing Monte Carlo calculations to predict the particle fluxes in a high energy particle beam which used magnetic dipole and quadrupole focusing elements and two rf particle separators. The beam was built on these calculations and operated successfully.

"During 1969-1976, he developed the traveling wave particle separator concept using dielectric loaded waveguides and the microwave discharge chamber for detection of high energy charged particles. He was one of the principal designers of the GEM CW electron microtron.

"From 1984 on, he was one of the original members of the design team of the APS synchrotron and storage ring. Later as the RF Group Leader, he designed, tested, and planned the rf systems for the APS synchrotron and storage ring. His theoretical design of the single-cell storage ring cavity and theoretical predictions of the high-order modes were subsequently verified by meticulous measurements and successfully damped by the

absorbers he designed. With this successful design, one of the most worrisome problems of the APS was solved.

“In addition to his distinguished scientific and engineering contributions, Dr. Kustom's major management activities have provided the Laboratory many times over with distinguished leadership. For instance, as Associate Director of the Accelerator Research Facilities Division or Division Director of the Accelerator Research Division, he supervised research and development of the Intense Pulse Neutron Source Accelerator, the Heavy Ion Fusion Accelerator System, and ANL Plasma Engineering Experimental Tokamak, the Superconducting Magnet Development, etc.

“After all, it was because Argonne had a few people like Bob that formed the Advanced Photon Source nucleus and did the conceptual design that brought this big prize to Argonne National Laboratory.”

Comments



“ I'm truly devastated that Bob is no longer with us and that I missed a chance to see him after many years since I left Argonne. I have some wonderful memories of him as a great mentor, perfect boss, world class scientist, wonderful human being. Let me share few of them.

1. He gave me the best leadership advice ever to delegate. He approached me at the copy machine when I was copying journal articles and said " you should work on RF Engineering design you were hired for and leave copying to our secretary, she has to feed her children too.

2. He hired me (shy with an heavy accent, introvert, young engineer) after my graduation with MS in EE and I'll be thankful for that forever, because the job at ANL/APS shaped my life...you are what you do.

3. He gave me a chance to pursue my PhD in EE at IIT and was my adviser from Argonne side.

Wish I was listening more to his brilliant suggestions though....

RIP Dear Dr. Robert L Kustom. You will be missed and live in my memory forever!

Dorothy Morris - August 15, 2019 at 05:27 PM



“ My prayers are with you and your family during this very difficult time. Bob always had a smile on his face and was always so kind to me. He will be missed greatly!
Becki Gagnon

Becki MacMillan-Gagnon - August 05, 2019 at 01:17 PM



“ My deepest sympathy to the Bob's family. Prayers are offered for you all. My heart is sad that the world has lost a great scientist, good soul, good man and his quick dry humor.

Bob gave me my first job at Argonne. He interviewed me for a secretary job at ARF. He asked me one question. "Can you spell?" I replied "Do you have dictionaries here, if you do I'll be fine." I regretted it the minute it came out of my mouth. He didn't say a word but got up and walked me down the hall. I thought oh wow he is showing me out. But we went to another office and he showed me a massive dictionary, like I had never seen. Then he asked one more question, "Think you can manage this one?" I looked at it and said, "Yes, it seems to be in English." He smiled, laughed, and left me to interview with one more person. I left the site thinking, well I won't hear from them, should have just said yes I can spell. By the time I got home, ANL had called to offer me the job. After about a month of working there, Bob asked me one day, if I thought after the interview, I would get the job? I replied, actually I was surprised to get the call. He responded, "Kid, we create words here, this is science! You HAVE to know how to use a dictionary here. I interviewed lots of people for your job, they all said they were excellent spellers, you were the only one who wanted a dictionary." Then he smirked.

We crossed paths many times while at ANL. I have wonderful memories of that time but, the memory Bob gave that kid, at that interview, has remained with me always. I have repeated it many times to encourage others. Thanks for the memory.

Anita Bakke

Anita Bakke - August 02, 2019 at 04:23 PM



“ It is hard to believe that I will no longer be able to have my bi-weekly chats with Bob mainly around noontime when he would knock at my office door with a smile. I always looked forward to it since we were able to happily discuss as many topics as possible in thirty minutes while Bob cracking few jokes along the way. As a dear friend and mentor, I learned a lot from him and always valued his advice. I was very fortunate to work with him on few projects where his technical abilities, sharp mental skills, and out-of-the-box ideas shined through time and again. I will miss him.

Ali Nassiri - August 01, 2019 at 04:19 PM



“ I am very thankful to a providence that Bob’s and my scientific careers crossed at one point of my life. Bob is this giant thinker that you immediately recognize and want to stick to. I was very happy learning from Bob and talking to him. And the more I talked, the more I discovered how much he knows literally about everything. I will miss him deeply.

Alexander Zholents

Alexander Zholents - August 01, 2019 at 12:06 PM



“ My prayers are with Bob and Delores’s family in this difficult time. Bob was such a good friend to me and always had a kindness about him that made you feel better about yourself. He was a special person, too soon gone and will be greatly missed. May God keep you all close. Eris Lightner. (Will never forget the Phoenix plant)

Eris Lightner - July 31, 2019 at 01:17 PM



“ My deepest sympathy to the Kustom family at this time of great sorrow at the passing of a wonderful, accomplished, brilliant, and caring person and father. You are in my prayers. Hugs.

Mary Fedor - July 30, 2019 at 08:56 PM