Obituary of: Professor Carl M. Harris

In Memoriam: Carl M. Harris, 1940 – 2000∗

Carl M. Harris, BDM International Professor of Operations Research at George Mason University, who died suddenly of a heart attack on April 25, 2000, was an outstanding OR academic and practitioner. A dear colleague and friend to many, all will miss his friendship and sage counsel. His paper, “Internet-Type Queues with Power-Tailed Interarrival Times and Computational Methods for their Solution,” co-authored with Martin Fischer and Percy Brill and submitted by Carl to this journal a few days before he died, appears as the lead paper in this issue. Born in Brooklyn, New York, on March 29, 1940, Carl grew up in Queens, where he attended P.S. 164, Halsey Junior High, and graduated from Forrest Hills High School. He received his Bachelor of Arts in mathematics from Queens College, and his Master of Arts and Ph.D., both in mathematics, with minors in industrial engineering and operations research, from The Polytechnic Institute of Brooklyn. His dissertation on queues with state-dependent service was a pioneering work in the field. After receiving his doctorate in 1966, Carl worked as a senior research mathematician at the Western Electric Engineering Research Center in Princeton, NJ, and in 1967 joined the Research Analysis Corporation in McLean, Virginia, as a technical staff member of its Advanced Research Department. Carl became a member of the faculty of the Operations Research Department at George Washington University in 1970, and in 1975, accepted the chairmanship of the Department of Industrial Engineering and Operations Research at Syracuse University. Three years later he returned to the Washington, DC, area to form the Harris–Smith Research Company, in Arlington, VA, with Wray Smith. In 1981 he joined the faculty of the Systems Engineering Department at the University of Virginia, leaving in 1985, to become the founding chair of the Department of Systems Engineering in the newly formed School of Information Technology and Engineering at George Mason University in Fairfax, VA. Carl also served the School as Associate Dean for Research and Graduate Studies from 1996 to 1998. Believing that OR is a hands-on profession, Carl combined his academic career with an active practitioner agenda by consulting for the National Institute of Standards and Technology, Bureau


Thanks are also due to Candita Gerzevitz at INFORMS and Professors David Kelton, Saul Gass, and Donald Gross.
of Census, NASA, US General Accounting Office, Department of Treasury, Department of Justice, IRS, and other organizations, especially in the public sector.

Carl’s interest in applied probability modeling covered a large spectrum of applications, ranging from queueing analyses for the IRS taxpayer information telephone network to epidemiological modeling of HIV/AIDS. Most recently, Carl received an NSF grant to analyze the internet using queueing models with heavy-tailed distributions (the subject of his paper in this issue). In addition to more than 80 publications in professional journals, Carl co-authored Fundamentals of Queueing Theory and co-edited the Encyclopedia of Operations Research and Management Science. Carl was an outstanding professional, with creative ideas, who was always easy and pleasant to work with. Don Gross, Carl’s co-author of the queueing text, relates the following anecdotes. “People seem surprised that we collaborated on three editions of this book over a span of almost a quarter of a century. They say that most co-authors of books end their relationship after the first edition and, in many cases, even before the first edition hits the streets. But this never happened to us. The biggest arguments Carl and I ever had were over things like, should we use above or aforementioned to refer to text that was cited previously. On hyphens, Carl was undoubtedly the world’s hyphen maven (expert). Heaven help me if I wrote two adjectives before a noun without a hyphen between them. But I learned quickly. “Through this collaboration, we shared many interesting professional adventures. Just to recount one, in 1973 during the gas crisis with the long lines at gas stations, the late Claude Pepper, then a congressman from Florida, had a committee studying this problem. Carl and I were called to his office on the Hill to see if we could offer suggestions to alleviate the long queues. The problem was really not solvable by queueing theory, since there was simply not enough gasoline. But we did say that every-other-day rationing was not going to help much since most people did not fill up that often anyway, but this kind of rationing might help marginally by keeping folks from topping off. Also, it was not necessarily the shortest line one wanted to join, but things like number of pump islands were important too (one might be better off in a longer line at a station with more pump islands operating). But as we were leaving, Carl did offer one final comment: ‘Congressman Pepper, if you can, pick a station at the bottom of a hill so you can turn off your engine and coast to the pumps, you’ll save some fuel.’ As theoretical as Carl was, he never lost sight of the practical.”

Carl was co-editor with Saul Gass of the Encyclopedia of Operations Research and Management. Saul comments on some of their editorial adventures and personal relations:

“Carl was the computer guy who kept the files and backups in order. His organizational and editorial skills kept the flow of manuscripts between the two of us and the many authors on track and on schedule. But, things were not always under our control. Somehow, we managed to end up with a batch of page proofs in which each ‘and’ was joined to the following word to make some ‘new internet-like’ words such as andmeta and andoil. (The cause was attributed to how the typography program translated our WordPerfect files.) “As one can imagine, Carl was keeper of the queues. When it came to q-u-e-u-i-n-g, he always managed to find an extra “e” to make it q-u-e-u-e-i-n-g. Thus, wherever you go in the Encyclopedia, you will find queueing with the second “e”. No dictionary has queueing as its first choice, no word-processor spell-checker will let it go by, but Carl, in his humorous, but professional approach to the world, insisted on having the only English ‘word’ that has five vowels in a row.

“We finished the text for the second edition of the Encyclopedia a few months ago. Carl recognized early on the importance of the intersection of OR and information technology. He
made sure that the second edition reflected this synergistic relationship. He saw to it that the new and previous articles were up-to-date and that they were written by key researchers and practitioners. It was a personal and professional pleasure working with Carl – designing and editing the first Encyclopedia in OR/MS, writing joint papers, and collaborating in many professional society activities. “The OR world has benefited greatly from Carl’s contributions. In their conversations and e-mails lamenting his passing, members of the global OR community have emphasized that he was not only a professional associate, but a personal friend as well. We cherish his friendship and his companionship. We honor his work and his memory.”

Carl was extremely active in professional-society endeavors, having served as Secretary of ORSA from 1986–89 and president from 1990–91. He took great pleasure in his professional–society activities. He was justifiably proud of his efforts as program chair of the TIMS/ORSA Spring 1988 meeting. That meeting was (and still is) the Societies’ largest meeting ever, with over 1900 papers and 2637 attendees. He was Captain of the winning team of the first East vs. West OR Knowledge Bowl, and a knowledgeable and wise-cracking member of all the succeeding East teams. More recently, he had been actively involved in the INFORMS Public Awareness Committee’s Teachers Workshops held at the national meetings, and projects of the History and Traditions Committee. In addition, he served on the Practice of OR Committee, where he was instrumental in establishing the President’s Award for Exemplary Practice of Operations Research and on the Publications Committee, where he helped establish the ORSA Journal on Computing (now this journal). Other INFORMS activities included chair of the Applied Probability Group (now the Applied Probability Society), Visiting Lecture Program, and Lanchester prize committee. In 1999, Carl received the INFORMS George E. Kimball Medal for distinguished service to the society and the profession of operations research. He was elected to Tau Beta Pi, the engineering honor society; Sigma Xi, the scientific research honor society; and to Omega Rho, the operations research international honor society.

Carl was also an active member of the American Society of Engineering Education, American Statistical Association, Institute of Industrial Engineers, International Statistical Institute, and the Mathematical Association of America. He was chair of the DC chapter of TIMS and served as a trustee of the DC chapter of ORSA/TIMS. Carl served in editorial capacities for Operations Research, Naval Research Logistics, Socio-Economic Planning Sciences, Computational Probability, the INFORMS Journal on Computing, Queueing Systems, and International Abstracts of Operations Research. Hiking, sports and photography were major activities of Carl’s broad outlook on life. He was an avid fan of the New York Yankees. A month before he died, he rented a van and traveled with friends to the Bronx to see the New York Yankees defeat the Kansas City Royals, 7-1. He was proud of his extensive collection of old cameras, Native American art, as well as a large collection of coffee mugs, many acquired as a result of professional lectures and visits abroad.

Carl is survived by his wife of over 30 years, Alice Follender Harris of Rockville, MD; two daughters, Naomi Harris of Arlington, Virginia, and Margo Harris of College Park, Maryland; and a brother, Paul Harris of Rockville. Since Carl's death, the outpouring of messages of love and caring have been overwhelming. We close by citing a message from Beau Beauregard, a former student, and a quote by the historian and teacher Henry Adams, that capture the essence of Carl and the feelings expressed by all: “Dr. Harris was my teacher, a teacher who kept a sense of humor, and somehow got his night students through, week after week. Whenever I look at my
class ring, and think back on my nights at George Mason. I always picture dear Carl. He even made graduation ceremonies fun. I recall on stage that evening, and for only a second, he smiled at me and tugged at my diploma as I reached out to take custody. It was as if to say with a twinkle in his eye, ‘not so fast old man’. Then he shook my hand, and again didn’t let go. He was wishing me well, and it meant as much to me as the diploma itself. There is a very special bond that grows between faculty and grad students after years of night school. I’m living in Texas now, but I suspect I’ll always wear my GMU class ring, remember Fairfax, VA, and think of Professor Carl handing out kudos and critiques in class. He was a Teacher . . .” “A teacher affects eternity; he can never tell where his influence stops.” The Education of Henry Adams

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