

Robert Paige (1947-1999)

Bob Paige, a professor of computer science and a leading researcher in the area of programming languages and transformational programming, died October 5, 1999, at his home in Manhattan. He was 52 years old.

Bob had mesothelioma, a type of cancer, which he fought courageously and successfully for several years.

For the last fourteen years of his life, he was a professor in the Department of Computer Science at New York University. He also served on the faculty at Rutgers, Purdue, Wisconsin, Yale, the University of Copenhagen and the University of Aarhus in Denmark.

Robert Paige was born in Brooklyn in 1947. He was an accomplished musician in his youth, showing great promise as a trumpet player, but turned down a professional orchestral career to attend Occidental College, where he earned his B.S. degree in 1968. His subsequent work in the emerging computer industry was followed by joining NYU in 1969 as a staff member, where he built one of the first time sharing systems for multi-user mainframe computers. This project led him to a research career in computer science; he became a graduate student at NYU, and earned his PhD in 1979.

The fundamental theme of Paige's research was automatic programming of complex computer systems. These systems typically include many clever "hand crafted" algorithms whose efficiency scientists try to optimize; in contrast, Paige worked on fundamental methodology for automating the creation of these algorithms, largely without human intervention. His thesis introduced the novel use of "finite differencing," usually used in numerical calculations, as a means of automatic program synthesis. He intended his technology to support the high productivity needed in software design, while minimizing human error. Paige's technology could synthesize programs involving hundreds of thousands of lines of code. This seminal research also produced the best known algorithms for many ubiquitous programming problems.

Dr. Paige was the author of many research papers, covering related topics in programming languages, compilers, algorithms, and database design. An invited speaker at conferences and university seminars around the world, he also served regularly as a reviewer of research projects for major government agencies. He was a devoted mentor of PhD students



who today hold research positions at leading universities and research centers.

Bob was more than a good scientist. More important, he was a lovely person. His students and many of his colleagues regarded him with an affection and respect that was far more than professional courtesy. His generosity and his encouragement were an inspiration to those around him. When I was a junior faculty member, and I knew him some but not well, he came up after a conference talk I gave and said, "I like your stuff and think it's really good—and I know a program officer who funds me, and would be very interested. Come on—let me introduce you to him!" The result was an invitation to a meeting of principal investigators, several of whom were friends and colleagues who had never uttered a word to me about this funding source—their expressions said, "how did you find out about this?" Years later, I am still stunned by the utterly unprofessional generosity that he showed me. I am sure that many other colleagues can tell similar stories.

The articles appearing in this long-awaited Festschrift are testament to the professional impact that Bob had on the research community around him, and also to the affection that members of that community had for him. As scientists, we all hope to have a lasting impact on our respective fields. Most of us must be satisfied with the knowledge that we put a couple of really good bricks in the foundational walls of our disciplines. More important is our inspiration to the colleagues and students around us, and the force of that inspiration which sustains the ongoing work of science. This Festschrift is also a testament to Bob's having done that so well. It is the hope of the Editors that this volume stands as witness of many gifts—gifts of the spirit, gifts of personal and professional inspiration, gifts of shared experience—that Bob Paige bestowed on his family, friends and colleagues. Bob is survived by his wife Nieba, and his children Jane and John, who are now 17 and 12 years old, respectively. As much as Bob is missed, those who we truly love never really leave us.

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