

# An Appreciation of Bob Paige

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As a senior faculty member of the Courant Institute at NYU since 1965 and a charter member of its Computer Science Department, founded in 1969, I knew Bob Paige as a graduate student and later as a colleague. My own area of expertise is mathematical logic, and so was only very peripherally connected with Bob's work. But being directly involved with decisions about Bob's faculty appointment and his promotions, it was important that I understand what he was doing.

It became clear that Bob was not looking for easy problems. Keenly aware of the problems associated with the development and maintenance of reliable and efficient software systems, and following up on his dissertation work with Jack Schwartz, he devoted himself to transformational methods. His work required not only that he build and maintain elaborate systems, but also that he be able to think in an abstract and theoretical manner. His important insight that loop invariants are related to the classical notion of differencing is really striking. I loved his demonstration in which his system transformed a simple  $n^2$  sorting program into an efficient  $n \log n$  program.

When I retired to emeritus status in 1996, Bob was already struggling with his fatal disease. Although I moved to California, I kept getting reports of his courageous stance and of his continuing to work while his strength ebbed. His tragic very premature death is a great loss to the Courant Institute and to computer science. He is very much missed.



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