

Barry W. Boehm, TRW Professor of Software Engineering and Director, Center for Software Engineering, University of Southern California

Barry Boehm received his B.A. degree from Harvard in 1957, and his M.S. and Ph.D. degrees from UCLA in 1961 and 1964, all in Mathematics. Between 1989 and 1992, he served within the U.S. Department of Defense (DoD) as Director of the DARPA Information Science and Technology Office, and as Director of the DDR&E Software and Computer Technology Office. He worked at TRW from 1973 to 1989, culminating as Chief Scientist of the Defense Systems Group, and at the Rand Corporation from 1959 to 1973, culminating as Head of the Information Sciences Department. He was a Programmer-Analyst at General Dynamics between 1955 and 1959.

His current research interests include software process modeling, software requirements engineering, software architectures, software metrics and cost models, software engineering environments, and knowledge-based software engineering. His contributions to the field include the Constructive Cost Model (COCOMO), the Spiral Model of the software process, the Theory W (win-win) approach to software management and requirements determination, and two advanced software engineering environments: the TRW Software Productivity System and Quantum Leap Environment.

He has served on the board of several scientific journals, including the IEEE Transactions on Software Engineering, IEEE Computer, IEEE Software, ACM Computing Reviews, Automated Software Engineering, Software Process, and Information and Software Technology. He has served as Chair of the AIAA Technical Committee on Computer Systems, Chair of the IEEE Technical Committee on Software Engineering, and as a member of the Governing Board of the IEEE Computer Society. He currently serves as Chair of the Air Force Scientific Advisory Board's Information Technology Panel, and Chair of the Board of Visitors for the CMU Software Engineering Institute.

His honors and awards include Guest Lecturer of the USSR Academy of Sciences (1970), the AIAA Information Systems Award (1979), the J.D. Warnier Prize for Excellence in Information Sciences (1984), the ISPA Freiman Award for Parametric Analysis (1988), the NSIA Grace Murray Hopper Award (1989), the Office of the Secretary of Defense Award for Excellence (1992), the ASQC Lifetime Achievement Award (1994), and the ACM Distinguished Research Award in Software Engineering (1997). He is an AIAA Fellow, an ACM Fellow, an IEEE Fellow, and a member of the National Academy of Engineering.

Selected Publications

1. *Characteristics of Software Quality*, North Holland, with J.R. Brown, H. Kaspar, M. Lipow, G. McLeod, and M. Merritt, 1978.
2. *Software Engineering Economics*, Prentice Hall, 1981.
3. *Software Risk Management*, IEEE Computer Society Press, 1989.
4. *Ada and Beyond: Software Policies for the Department of Defense* (study chair), National Academy Press, 1996.
5. "Anchoring the Software Process", *IEEE Software*, July 1996.
6. "Developing Multimedia Applications with the WinWin Spiral Model," with A. Egyed, J. Kwan, and R. Madachy, *Proceedings, ESEC/FSE 97 and ACM Software Engineering Notes*, November 1997.