Geoffrey Charles Fox

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Citizen Status: Permanent Resident Alien; Citizen of United Kingdom

Education: B.A. in Mathematics from Cambridge Univ., Cambridge, England (1961-1964); Ph.D. in Theoretical Physics from Cambridge University (1964-1967); M.A. from Cambridge University (1968)

Professional Experience:

1990-	Professor of Computer Science, Syracuse University
1990-	Professor of Physics, Syracuse University
1990-	Director of Northeast Parallel Architectures Center
1979-1990	Professor of Physics, California Inst. of Tech.
1986-1988	Associate Provost for Computing, California Inst. of Tech.
1983-1985	Dean for Educational Computing, California Inst. of Tech.
1981-1983	Executive Officer of Physics, California Inst. of Tech.
1974-1979	Associate Professor of Physics, California Inst. of Tech.
1971-1974	Assistant Professor of Physics, California Inst. of Tech.
1970-1971	Millikan Research Fellow in Theoretical Physics, Caltech
1970	Visiting Scientist (April-May), Brookhaven National Laboratory
1969-1970	Research Fellow at Peterhouse College, Cavendish

Awards and Honors

Senior Wrangler, Part III Mathematics, Cambridge (1964); Al P. Sloan Foundation Fellowship (1973-75); Fellow of the American Physical Society (1990)

Journal Editorships

Principal***: Concurrency: Practice and Experience*** (John Wiley, Inc.); ***Physics and Computers*** (International Journal of Modern Physics C-World Scientific); Associate: ***Journal of Supercomputing,***

Selected List of Publications

1 Fox, G.C., Johnson, M.A., Lyzenga, G.A., Otto, S.W., Salmon, J.K., Walker, D.W., *Solving Problems on Concurrent Processors*, Vol. 1, Prentice-Hall, Inc. 1988; Vol. 2, 1990.

2 Fox, G. C., Messina, P., Williams, R., *Parallel Computing Works!*, Morgan Kaufmann, San Mateo Ca, 1994.

3 Fox G.C., Furmanski W., *Computing on the Web, New Approaches to Parallel Processing,Petaop and Exaop Performance in the Year 2007*, IEEE Internet Computing, 1997 (to be published)

4 Fox G.C., Podgorny M, Cheng G. et al., *Web Technologies for Collaborative Visualization and Simulation*, SIAM Parallel Processing Conference, 1997 (to be published)

5 Fox G.C., Dincer K., *Using Java and JavaScript in the Virtual Programming Laboratory: A Web-Based Parallel Programming Environment*, Special Issue on Java, Concurrency:Practice and Experience 1997.

6 Fox, G. C. *Parallel Computing and Education*, Daedalus, Journal of the American Academy of Arts and Sciences, Vol. 121, No. 1, pps 111-118, Winter 1992. C3P-958, CRPC-TR91123.

7 Fox G.C., Mills K., *InfoMall: an Innovative strategy for high-performance computing and communications application development*, Internet Research, 4:31- 45, 1994.

8 Fox, G.C., Hiranadani, S., Kennedy, K., Koelbel, C., Kremer, U., Tseng, C.W., Wu, M.Y., *FortranD Language Specifications*, Rice COMP TR90079, December 1990, Revised, April 1991.

9 Fox, G. C. *Approaches to Physical Optimization*, in Proceedings of 5th SIAM Conference on Parallel Processes for Scientific Computation, pp 153-162, March 25-27, 1991, Houston, TX, J. Dongarra, K. Kennedy, P. Messina, D. Sorensen, R. Voigt, editors, SIAM, 1992.

10 Fox, G, Bozkus, Z., Choudhary, A., Haupt, T., and Ranka, S. *A compilation approach for Fortran 90D/HPF compilers on distributed memory MIMD computers*, in Proceedings of the Sixth Annual Workshop on Languages and Compilers for Parallel Computing. Lecture Notes in Computer Science, Springer-Verlag, pp. 200--215. U. Banerjee, D. Gelernter, A. Nicolau, and D. Padua (editors).

Summary of Interests

Fox is an internationally recognized expert in the use of parallel architectures and the development of concurrent algorithms. He leads a major project to develop prototype high performance Fortran compilers and their runtime support. He is also a leading proponent for the development of computational science as an academic discipline and a scientific method. He has established at Syracuse University both graduate and undergraduate programs which cover both simulation and information technologies. All course have been made available on the Web and his research includes HPCC technology to support education at both K-12 and University level. His research on parallel computing has focused on development and use of this technology to solve large scale computational problems. Fox directs InfoMall, which is focused on accelerating the introduction of high speed communications and parallel computing into New York State industry and developing the corresponding software and systems industry. Much of this activity is centered on NYNET with ISDN and ATM connectivity throughout the state including schools where Fox is leading developments of new K-12 curricula material built using VRML, Java and other new technology.

PhD Advisor: Dr. Richard Eden Cambridge University, England.

Collaborators: Fox has participated in HPCC since 1981 and in that time has collaborated in various fashions with many scientists. In particular current work involves scientists in CRPC (Argonne, Caltech, Los Alamos, Rice, Tennessee), and Grand Challenge scientists at Texas and NASA Goddard.