Geoffrey Charles Fox

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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:

2001-	Professor of Computer Science, Informatics, and Physics. Indiana University
2001-	Director of Community Grids Laboratory; Pervasive Technology Laboratories at Indiana University
2000-2001	Professor of Computer Science, Florida State University
2000-2001	Associate Director of School for Computational Science and Information Technology -- Director of Computational Science and Information Laboratory
2000-2001	Chief Technologist of Office of Distributed and Distance Learning, FSU
2000-	Distinguished Visiting Scientist, JPL
1990-2002	Professor of Computer Science, Syracuse University
1990-2002	Professor of Physics, Syracuse University
1990-2000	Director of Northeast Parallel Architectures Center, Syracuse University
1989-2004	Visiting Professor in Computer Science, Rice University
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, Brookhaven National Laboratory, Long Island
1969-1970	Research Fellow at Peterhouse College, Cavendish Lab., Cambridge
1968-1969	Research Scientist, Lawrence Berkeley Lab., Berkeley, Calif.
1967-1968	Member of School of Natural Science, Inst. for Advanced Study, Princeton, New Jersey

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

Journal Editor: *Concurrency and Computation: Practice and Experience*, John Wiley, Inc., (1989-)
Member of Editorial board: *The Journal of Supercomputing* (1987-)
Member of Editorial board: *Future Generation Computer Systems* (2002-)

Industry Experience: Co-founder of WebWisdom.com and Anabas corporations. Fox is currently Chief Technology Officer for Anabas.

Patents TangoInteractive Collaboration System, March 2000 with several members of WebWisdom.com

Publications (selected from over 500 in Computer Science, Computational Science and Physics)

1) "Grid Computing: Making the Global Infrastructure a Reality" edited by Fran Berman, Geoffrey Fox and Tony Hey, John Wiley & Sons, Chicester, England, ISBN 0-470-85319-0, February 2003
2) Malcolm Atkinson, David DeRoure, Alistair Dunlop, Geoffrey Fox, Peter Henderson, Tony Hey, Norman Paton, Steven Newhouse, Savas Parastatidis, Anne Trefethen and Paul Watson.Web Service Grids: An

Evolutionary Approach UK e-Science Technical Report July 13 2004 Special Issue on Grid Architecture of Concurrency&Computation: Practice and Experience 17, 377-389 (2005) http://www.nesc.ac.uk/technical_papers/UKeS-2004-05.pdf

3) Geoffrey Fox, Alex Ho, Shrideep Pallickara, Marlon Pierce, Wenjun Wu *Grids for the GiG and Real Time Simulations* in Proceedings Ninth IEEE International Symposium Distributed Simulation and Real Time Applications 2005, pages 129-138 IEEE Comp. Society, Montreal Oct. 10-12 2005. http://grids.ucs.indiana.edu/ptliupages/publications/gig/DSRTOct05.pdf
4) Lisa B. Grant, Andrea Donnellan, Dennis McLeod, Marlon Pierce, Geoffrey C. Fox, Anne Yun-An Chen, Miryha M. Gould, Sang-Soo Sung, Paul Rundle, "A Web-Service Based Universal Approach to Heterogeneous Fault Databases", Computing in Science and Engineering., Vol. 7, No. 4. (July 2005), pp. 51-57. http://ieeexplore.ieee.org/search/wrapper.jsp?arnumber=1463136
5) Fox, G., "Internetics: Technologies, Applications and Academic Fields" *Invited Chapter in Book :Feynman and Computation*, edited by A.J.G. Hey, Perseus Books (1999). http://www.new-npac.org/users/fox/documents/internetics/
6) Wenjun Wu, Geoffrey Fox, Hasan Bulut, Ahmet Uyar, Tao Huang "Service Oriented Architecture for VoIP conferencing" to be published 2006 in Special Issue on Voice over IP - Theory and Practice of the International Journal of Communication Systems. http://grids.ucs.indiana.edu/ptliupages/publications/soa-voip-05.doc
7) Geoffrey Fox "Messaging Systems: Parallel Computing, the Internet and the Grid" Proceedings of EuroPVM/MPI 2003, pages 1-9 of Recent Advances in Parallel Virtual Machine and Message Passing Interfaces, edited by Dongarra, Laforenza, Orlando, Springer LNCS 2840, September 30 2003, http://grids.ucs.indiana.edu/ptliupages/publications/gridmp_fox.pdf
8) Geoffrey Fox, Shrideep Pallickara, Marlon Pierce, Harshawardhan Gadgil, "Building Messaging Substrates for Web and Grid Applications", Special Issue on *Scientific Applications of Grid Computing* Philosophical Transactions of the Royal Society: Mathematical, Physical and Engineering Sciences. Volume 363, Number 1833, pp 1757-1773. August 15, 2005 http://grids.ucs.indiana.edu/ptliupages/publications/RS-CGL-ColorOnlineSubmission-Dec2004.pdf
9) "The Sourcebook of Parallel Computing" edited by Jack Dongarra, Ian Foster, Geoffrey Fox, William Gropp, Ken Kennedy, Linda Torczon, and Andy White, Morgan Kaufmann, November 2002
10) Fox, G. C., Messina, P., Williams, R., "Parallel Computing Works!", Morgan Kaufmann, San Mateo Ca, 1994.

Summary of Interests

Fox has worked in a variety of applied computer science fields with his work on computational physics evolving into contributions to parallel computing initially involving the hypercube architecture. Publications 9) and 10) represent significant broad contributions to parallel computing. He has led activities to develop prototype high performance Java and Fortran compilers and their runtime support. He helped set up the Java Grande forum to encourage use of Java in large-scale computations. He has worked on the computing issues in several application areas – currently focusing on Chemical Informatics, DoD Information systems (3) and Earthquake Science (4). Fox is working with the Minority Serving Institutions in systemic deployment of Cyberinfrastructure. This builds on a long standing interest in parallel computing and other applied computer science interdisciplinary curriculum (5).A major activity has been the use of Grid technologies to build collaboration systems and their application in an integrated approach to synchronous and asynchronous distance education. This includes a Web service framework for audio-video conferencing (6). The Gateway computational portal was one of the earliest computing environments to integrate object and grid technologies. Fox co-chairs both the Semantic Grid and Grid Computing Environment (GCE) research groups of the Grid Forum (GGF) and is a member of the GGF Steering Group. He has designed built a modern information portal - the Online Knowledge Center for the PET program of the DoD HPCMO (High Performance Computing Modernization Office) and is a member of NSF Middleware Initiative OGCE project developing Grid portals. Fox co-edited a book (1)) with 43 chapters on Grid technology. His group has developed NaradaBrokering as an open source messaging system (7, 8) for Grids, Peer-to-peer networks and A/V conferencing. Recently he has been working on the core architecture for Grids (2) and e-Science in a major collaboration with the UK core e-Science program and their OMII (Open Middleware Infrastructure Institute).

Collaborators: Bramley Randy and Gannon, Dennis, Indiana University; Giles, Roscoe, Boston University; Rundle, John (UC Davis); Severance Chuck (Michigan); Thomas, Mary, SDSU; Thompson, Joe, Mississippi State University; von Laszewski, Gregor, Argonne.

Thesis Advisor: Eden, Richard, Cambridge University