Geoffrey Charles Fox

Phone
Cell: 8122194643
Informatics: 8128567977
Lab: 8128560927
Home: 8123239196

Email
gcf@indiana.edu
gcf@cs.indiana.edu
gcfexchange@gmail.com

Web Site: http://www.infomall.org

Addresses

School of Informatics and Computing	Community Grids Laboratory
Room 105	Digital Science Center
815 E. 10th Street	2719 E. 10th St.
Bloomington IN 47408	Bloomington, IN 47408

Date of Birth
June 7 1944 Dunfermline Scotland

Education

Institution and Location	Degree	Year(s)	Field of Study
Cambridge Univ., Cambridge, England	B.A.	1961-1964	Mathematics
	Ph.D.	1964-1967	Theoretical Physics
	M.A.	1968	Mathematics

Professional Experience

2015-	Chair, Department of Intelligent Systems Engineering, Indiana University Bloomington
2014-2015	Director of Data Science Program, School of Informatics and Computing, Indiana University Bloomington
2013-2015	Associate Dean for Research, School of Informatics and Computing, Indiana University Bloomington
2011-	Distinguished Professor, Indiana University
2011-2015	IV-endowed Chair Professor Tsinghua University
2010-2015	Member of Board Open Grid Forum
2009-2013	Associate Dean for Graduate Studies and Research, School of Informatics and Computing, Indiana University Bloomington
2009-	Professor of Informatics and Computing, Physics. Indiana University
2009-	Director Digital Science Center of Pervasive Technology Institute
2008-2009	Chair Department of Informatics, Indiana University Bloomington
2006-2012	Senior Research Associate in the Center for Computational Science and Advanced Distributed Simulation at University of Houston Downtown
2005-2009	Vice President of Community/eScience function for Open Grid Forum
2005-2009	Visiting Scholar for Cyberinfrastructure Development at the Alliance for Equity in Higher Education
2004-2012	Visiting Professor of Computer Science at Southampton University UK
2001-2009	Professor of Computer Science, Informatics, Physics. Indiana University
2001-	Director of Community Grid Laboratory Indiana University
2000-2001	Professor of Computer Science, Florida State University
2000-2001	Associate Director of School of Computational Science and Information Technology FSU
2000-2001	Director of the Computational and Information Science Laboratory FSU
2000-2001	Chief Technologist of Office of Distributed and Distance Learning, FSU

2000-2010	Chief Technology Officer, Anabas Inc
2000-2007	Distinguished Visiting Scientist, JPL Pasadena CA
1990-2002	Professor of Computer Science, Syracuse University
1990-2002	Professor of Physics, Syracuse University
1990-2004	Adjunct Professor, Computer Science, Rice University
1990-2000	Director of Northeast Parallel Architectures Center, Syracuse 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)
Mayhew Prize, Applied Mathematics, Cambridge (1964)
Alfred P. Sloan Foundation Fellowship (1973-75)
Fellow of the American Physical Society (1990-)
ACM Fellow (2011-)

Board Membership
Anabas Corporation 2001-
Undergroundfilm.org 2003-2007

Industry Experience
Co-founder of WebWisdom.com and Anabas corporations.
Patents TangoInteractive Collaboration System, March 2000 with several members of WebWisdom.com

Current Journal Editor
1) Main Editor, *Concurrency and Computation: Practice and Experience*, John Wiley, Inc. (1989-present)
2) Member of Editorial board: *The Journal of Supercomputing* (1987-)
3) Member of Editorial board: *Future Generation Computer Systems* (2003-)
4) Member of Editorial board: *Computing in Science and Engineering* (2001-)
5) Member of Editorial board: *Big Data* (2012-)
6) Member of Editorial board: *IEEE Transactions on Cloud Computing (2014-)*

Previous Journal Responsibility
1) Supervisory Editor: *Nuclear Physics B* (1975-1986).
2) Member of the Editorial Board: *Computer Physics Communications* (1987-1994)
3) Member of the Editorial Board: *International C3IS Journal: Command, Control, Communications and Information Systems* (1987-1990)
4) Principal Editor: *Physics and Computers: International Journal of Modern Physics C* (1990-1998)
5) Member of Editorial board: *Theoretical and Computational Fluid Dynamics* (2002-2004)
6) Contributing Editor, *Grid Today* (2002-2003)
7) Member of Editorial board: *International Transactions on Systems Science and Applications (2006-2011)*

PhD Theses supervised
1) Yang Ruan, SCALABLE AND ROBUST CLUSTERING AND VISUALIZATION FOR LARGE-SCALE BIOINFORMATICS DATA Indiana University PhD August 18 2014
2) Tao Huang BUILDING A SCALABLE FRAMEWORK FOR THE COLLABORATIVE ANNOTATION OF REAL TIME DATA STREAMS Indiana University PhD January 11 2013
3) Zhenhua Guo HIGH PERFORMANCE INTEGRATION OF DATA PARALLEL FILE SYSTEMS AND COMPUTING: OPTIMIZING MAPREDUCE Indiana University PhD August 31 2012
4) Seung-Hee Bae *Scalable High Performance Dimension Reduction*, Indiana University PhD January 17 2012
5) Jong Youl Choi *Unsupervised Learning Of Finite Mixture Models With Deterministic Annealing For Large-scale Data Analysis*, Indiana University PhD January 12 2012
6) Jaliya Ekanayake *ARCHITECTURE AND PERFORMANCE OF RUNTIME ENVIRONMENTS FOR DATA INTENSIVE SCALABLE COMPUTING* Indiana University PhD December 20 2010
7) Ali Kaplan *Collaborative Framework for High-Performance P2P-based Data Transfer in Scientific Computing* Indiana University PhD April 28 2009
8) Ahmet Topcu *INTEGRATED COLLABORATIVE INFORMATION SYSTEMS* Indiana University PhD March 23 2009
9) Ahmet Sayar *High Performance, Federated, Service-Oriented Geographic Information Systems* Indiana University PhD January 28 2009
10) Ahmet Fatih Mustacoglu *Event-based Infrastructure for Reconciling Distributed Annotation Records* Indiana University PhD July 31 2008
11) Mehmet Nacar *A COMPONENT FRAMEWORK FOR BUILDING WEB SCIENCE GATEWAYS AND PORTALS* Indiana University PhD November 27 2007
12) Kangseok Kim *A FRAMEWORK FOR SYCHRONOUS AND UBIQUITOUS COLLABORATION* Indiana University PhD September 26 2007

13) Beytullah Yildiz *Distributed Handler Architecture (DHArch)* Indiana University PhD May 28 2007

14) Mehmet Aktas *Information Federation in Grid Information Services* Indiana University PhD May 3 2007

15) Hasan Bulut *HIGH PERFORMANCE RECORDING AND MANIPULATION OF DISTRIBUTED STREAMS* Indiana University PhD April 24 2007

16) Harshawardhan Gadgil *SCALABLE, FAULT-TOLERANT MANAGEMENT OF GRID SERVICES: APPLICATION TO MESSAGING MIDDLEWARE* Indiana University PhD April 5 2007

17) Galip Aydin *Service Oriented Architecture for Geographic Information Systems Supporting Real Time Data Grids* Indiana University PhD January 15 2007

18) Gurhan Gunduz *A Framework for Network Monitoring and Performance Based Routing in Distributed Middleware Systems* Syracuse University PhD October 25 2006

19) Minjun Wang *GRID-BASED COLLABORATION* Syracuse University Computer Engineering August 2 2006

20) Sangyoon Oh *Optimizing Web Service Performance in Mobile Computing* Indiana University PhD Computer Science August 1 2006

21) Jungkee Kim *Hybrid Search across peer-to-peer Federated Data* Florida State University April 6 2005

22) Ahmet Uyar *Scalable Service Oriented Architecture for Audio/Video Conferencing* Syracuse University March 23 2005

23) Xiaohong Qiu *Message-based MVC Architecture for Distributed and Desktop Applications* Syracuse University March 2 2005 (Honored as best Computer and Information Science Thesis at Syracuse University May 2005)

24) Sang Lim *PLATFORMS FOR HPJAVA: RUNTIME SUPPORT FOR SCALABLE PROGRAMMING IN JAVA* Florida State University June 11 2003

25) Han-Ku Lee *TOWARDS EFFICIENT COMPILATION OF THE HPJAVA LANGUAGE FOR HIGH PERFORMANCE COMPUTING* Florida State University June 12 2003

26) Sangmi Lee *A Modular Data Pipelining Architecture (MDPA) for enabling Universal Accessibility in P2P Grids* Florida State University July 3 2003

27) Choonhan Youn *Web Services Based Architecture in Computational Web Portals* Syracuse University November 7 2003

28) Shrideep Pallickara, *A Grid Event Service*, Syracuse University 2001

29) Yuh-Jye Chang, *Architecture of fine-grained data flow network programming environment*, Syracuse University 2000

30) M. A. Saleh Elmohammed, *Algorithms and heuristics for combinatorial optimization problems: Case study of academic course scheduling*, Syracuse University 2000

31) Sung-Hoon Ko, *Object-based message passing in high performance computing using Java*, Syracuse University 2000

32) Myeongjin Lee, *Information architecture of interactive and customizable learning environments*, Syracuse University 2000

33) Tseng-Hui Lin, *Parallelizing legacy applications using message passing programming model and the example of MOPAC*, Syracuse University 2000

34) Bokyun Na**, *System model and taxonomy for host-network interfaces*, Syracuse University 2000

35) Mehmet Sen, *Distributed open asynchronous information access environment*, Syracuse University 2000

36) Erol Akarsu, *Integrated Three-Tier Architecture for High-Performance Commodity Metacomputing*, Syracuse University 1999.

37) Alvin Leung, *Real-time interactive client-server terrain rendering,* Syracuse University 1997

38) Kivanc Dincer, *World-wide virtual machine: A metacomputing environment integrating World Wide Web and high performance computing and communications technologies*, Syracuse University 1997

39) David Edelsohn *Random interactions with disk galaxies* Syracuse University 1996

40) Gang Cheng, *A dataflow-based software integration model in parallel and distributed computing and applications*, Syracuse University 1996

41) Gregor von Laszewski, *A parallel data assimilation system and its implications on a metacomputing environment*, Syracuse University 1996

42) Nawal Copty, *Language and runtime support for the execution of hierarchical clustering applications on distributed-memory machines*, Syracuse University 1995

43) David Koester, *Parallel block-diagonal-bordered sparse linear solvers for power systems applications*, Syracuse University 1995

44) Leiping Han, *Monte Carlo Simulations of Random Surfaces with Extrinsic Curvature*, Syracuse University Physics 1995

45) Zeki Bozkus, *Compiling Fortran 90D/HPF for Distributed Memory MIMD computers*, Syracuse University 1995

46) Zheng-Yao Su, *The Hierarchical Algorithms: Theory and Applications*, Caltech 1994.

47) John Apostolakis, *Asymptotic scaling in the two-dimensional O(3) nonlinear sigma model: A Monte Carlo study on parallel computers*, Caltech 1994

48) Nashat Mansour. *Physical Optimization Algorithms for Mapping Data to Distributed-Memory Multiprocessors*, Syracuse University 1992

49) Ken Rose, *Deterministic Annealing, Clustering, and Optimization*, Electrical Engineering, Caltech 1990

50) John K. Salmon, *Parallel Hierarchical N-Body Methods*, Caltech, 1990.

51) Roberto Battiti, *Multiscale Methods, Parallel Computation, and Neural Networks for Computer Vision,*. Computation and Neural Systems, Caltech 1990

52) Paul Stolorz, *NUMERICAL SIMULATIONS OF LATTICE QCD (MONTE CARLO, LATTICE GAUGE THEORY,* Caltech 1987

53) Jon Flower, *Lattice gauge theory on a parallel computer*, Caltech 1987

54) Adam Kolawa. *Semi-analytical Calculation of the 0++ Glueball Mass in SU(2) Gauge Theory,* Caltech 1986

55) Eric Mjolsness, *NEURAL NETWORKS, PATTERN RECOGNITION, AND FINGERPRINT HALLUCINATION (COLLECTIVE COMPUTATION)*, Caltech 1986

56) Mark Johnson, *Concurrent Computation and its Application to the Study of Melting in Two Dimensions*. Caltech 1986

57) Apoorva Patel, *Monte Carlo Renormalization Group for Lattice QCD*, Caltech 1984

58) Steve Otto, *Monte Carlo Methods in Lattice Gauge Theories*, Caltech 1983.

59) Michael Shatz, *A QCD Based Model of Hadron Hadron Scattering*, Caltech 1983

60) Sarbmeet Kanwal, *A Leading Order QCD Computation of ππ Elastic Scattering*, Caltech 1983

61) Rajan Gupta, *Mass Gap and Scaling in the O(3) Sigma Model in 1+1 Dimension*, Caltech 1982

62) Kar Woo Yung, *Study of hadronic jets produced by charged pion and proton beams incident on hydrogen and aluminum targets*, Caltech 1980

63) James Rohlf, *JET PRODUCTION IN HIGH-ENERGY HADRON-PROTON COLLISIONS*, Caltech 1980

64) Stuart Stampke, *PION-PION DECAY DISTRIBUTIONS FOR PION(-) PROTON --> PION(+) PION(-) NEUTRON AT 100 AND 175 GEV/C*, Caltech 1982

65) Stephen Wolfram, *Some topics in theoretical high-energy physics,* Caltech 1980

66) Daniel Novoseller, *PION-EXCHANGE IN A PARTIAL WAVE ANALYSIS OF PION-NUCLEON ---> NUCLEON,PION,PION*, Caltech 1977

67) Robert Worden, *Regge models of forward pion and eta photoproduction*, Caltech 1972

Research Activities

From 1967 (my PhD) until 1980, I had a modest size research program but from 1983-2016, I have led research activities that ranged from 20-50 people in size with annual budgets of $2M-$5M dollars. I was involved in but not lead of large projects in the 1976-2000 time period as part of significant experiments at Fermilab. My research has ranged over a range of areas but dominantly focused on practical uses of computing; an interest spurred by undergraduate research experiences. Below I list research thrusts as overlapping focus periods. Details can be found in books and papers and at the web site for current projects.

1) **1964-1985 Particle Physics Phenomenology** with modeling of strong interactions and application to both "soft" and "hard" (high tranverse montum) processes

2) **1975-1985 Particle Physics Experiments** at Fermilab E110 (low tranverse momentum peripheral production), E260 (productions of jets and single particles at high tranverse

montum), E350 (testing Triple Regge Theory)
3) **1980-1995** Study of **Parallel Computing** for MIMD machines based until 1990 on **hypercube** topology machines at Caltech/JPL. Develop core (simple) software, performance models and collaborate on some 50 applications as reported in "Parallel Computing Works" book.
4) **1988-2000** Work on **Parallel Computing** in the **CRPC** (Center for Research in Parallel Computation) and in particular on High Performance Fortran and its PCRC runtime developing first compiler and working on application including the Black Hole Grand Challenge
5) **1990-2005** Identification of **Industry** interest in Data intensive problems with **Infomall** project at Syracuse
6) **1995-2005** Use of **Java** in scientific computing and HPJava
7) **1995-2010 Web-based** and Object Web **Computing**, Publish-Subscribe middleware, WebFlow, Service Oriented Architectures, Web Services and Grids.
8) **1997-2008 Portals** and Gateways using first Web and then Grid technologies
9) **1995-2012 Web-based collaboration** with application to Education and Command & Control
10) **2005-2011 Cheminformatics** Application at Indiana University with Grid and Services
11) **1988-now** Development of **Interdisciplinary Education:** Computational Science, Plectics, Internetics, Informatics
12) **1990-now** Continuing work on **optimization** and complex systems in the tradition of neural networks; in particular deterministic annealing with recent work greatly expanding applicability of this.
13) **1997-now** enhancing involvement of **Minority Serving Institutions** in STEM with Minority Serving Institutions (MSI) - Cyberinfrastructure Empowerment Coalition (MSI-CIEC). Development of e-Humanity portal and distance education.
14) **1998-now QuakeSim** support Earthquake forecasting
15) **2000-now Sensors**, Robots and Smart phone Grids and **Clouds**
16) **2007-now Multicore** use in (my) return to detailed parallel computing but mainly applied to data analytics
17) **2007-now PolarGrid** support Remote Sensing of ice-sheets with CReSIS center
18) **2008-now Bioinformatics** data analytics exploiting clustering and multidimensional scaling with groups at Indiana University and elsewhere
19) **2010-2014 FutureGrid** National Facility and associated Infrastructure as a Service research
20) **2012-now** Small effort in (return to) **Particle Physics Phenomenology** applied to Jefferson Laboratory experiments
21) **2012-now** Small effort in (return to) **Education Technology** with MOOC's
22) **2014-now** Major National Collaboration on building blocks for Data Analytics
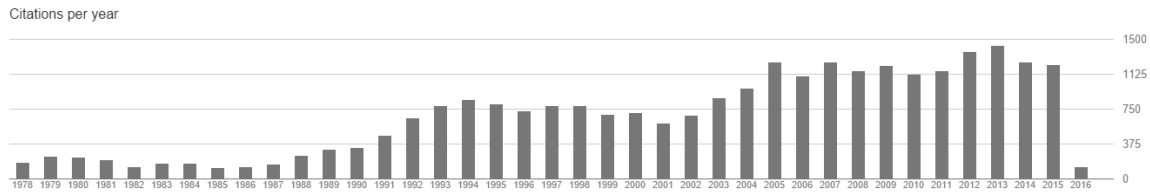
Conferences Organized
1) Caltech 1971 (with C. B. Chiu) on ``High Energy Physics Phenomenology."
2) Caltech 1979 on ``Gauge Theories and Related High Energy Physics (Experimental and Theoretical) Topics."

3) JPL 1988 ``Third Conference on Hypercube Concurrent Computers and Applications;'' Chairperson of program committee.
4) Syracuse 1992 ``First International Symposium on High-Performance Distributed Computing,'' Conference Chair.
5) Spokane 1993 ``Second International Symposium on High-Performance Distributed Computing,'' Conference Chair.
6) San Francisco 1994 ``Third International Symposium on High-Performance Distributed Computing,'' Conference Chair.
7) Washington, D.C. 1995 ``Fourth International Symposium on High-Performance Distributed Computing,'' Conference Chair.
8) Syracuse 1996 ``Fifth International Symposium on High Performance Distributed Computing,'' Conference Chair.
9) Syracuse 1996 "Java for Science and Engineering", Convener and Organizer
10) Seattle 2002 "Java Grande-ISCOPE 2002", Program Chair (plus continued involvement in previous Java Grande activities 1996-2002)
11) Chicago June 26-30, 2005 "GGF14 - The fourteenth Global Grid Forum", Program Chair
12) GCC 2005, The 4th International Conference on Grid and Cooperative Computing, November 30-December 3, 2005, Beijing, China, Program co-chair
13) Athens, Greece February 13-16, 2006 "GGF16 - The sixteenth Global Grid Forum", Program Chair
14) Seattle, Washington, October 15-19, 2007, "The 21st Open Grid Forum - OGF21", Program Chair
15) Bangalore, India, December 10-13 2007, "The 3rd International Conference on e-Science and Grid Computing", Program Chair
16) Indianapolis, Indiana, December 7-12 2008, "The 4th International Conference on e-Science", General Chair
17) The Virtual Summer School of Computational Science and Engineering in "Big Data for Science", July 26-30, 2010, Indiana University and 9 other sites.
18) Indianapolis, Indiana, November 30 - December 3 2010, "The 2nd International Conference on Cloud Computing Technology and Science CloudCom2010", General Chair
19) The Virtual Summer School of Computational Science and Engineering in "Science Clouds" July 30-August 3 2012, Indiana University and 9 other sites
20) 2015 International Summer Workshop on Reaction Theory, June 8-19, 2015 Bloomington, Indiana, US
21) STREAM 2015 interdisciplinary workshop to identify application and technology communities working in streaming, steering and their intersection,

Publications: Introduction
According to Google Scholar result, I have 27820 citations, 1298 papers and an h-index of 72.

(as of February 24, 2016)

Citations per year

The above chart gives citations per year from Google Scholar ending at February 24, 2016.

Google Scholar tends to be liberal in its definition of a "paper" (conference committee pages are included for example) but there are very few "papers" not written by me in this sample. The listings below identify 1122 "papers" ignoring web sites.

We start with full Books, Lecture and Course notes, and open source Software systems. Then the "real" papers are organized in groups starting with those from January 2005 to December 2012. These are divided into conventional categories separating journal, book and conference contributions. This is followed by a set from 1967-1990 and then the set from 1990-2004 with only technical reports separated out. The web site http://www.infomall.org contains recent online material and http://salsahpc.indiana.edu/dlib/home/, http://www.old-npac.org, http://www.new-npac.org/users/fox/, and http://www.new-npac.org/projects/ material from before 2001. I do not list Presentations in this CV; the web sites above list most of my presentations and are approximately complete since 1990 although only presentations while I am at Indiana University (July 2001) are easy to find at http://www.dsc.soic.indiana.edu/presentations.

Books Authored and Edited
1) *Phenomenology in Particle Physics*, 1971, (with C. B. Chiu and A. J. G. Hey), Proceedings of a conference at Caltech (organized by C. B. Chiu and G. C. Fox) in 1971.
2) *Hypercube Concurrent Computers and Applications*, Proceedings of the Third Conference on Hypercube Concurrent Computers and Applications, published by ACM, 1988.
3) *Solving Problems in Concurrent Processors-Volume 1*, with M. Johnson, G. Lyzenga, S. Otto, J. Salmon, D. Walker, Prentice Hall, March 1988.
4) *Solving Problems in Concurrent Processors-Volume 2*, with I. Angus, J. Kim, D. Walker, Prentice Hall, 1990.
5) *Supercomputer Applications of the Hypercube*, published in *Supercomputing Systems*, Chapter 11, pp. 480-577 by Van Nostrand Reinhold Publishing House, New York, N.Y. editors Steve and Lana Kartashev (1989).
6) *Parallel Computing Works!*, with P. Messina, R. Williams, Morgan Kaufman (1994).
7) *The Sourcebook of Parallel Computing* book edited by Jack Dongarra, Ian Foster, Geoffrey Fox, William Gropp, Ken Kennedy, Linda Torczon, and Andy White, Morgan Kaufmann, November 2002 (3 chapters co-authored by Fox)
8) *Grid Computing: Making the Global Infrastructure a Reality* edited by Fran Berman, Geoffrey Fox and Tony Hey, John Wiley & Sons, Chichester, England, ISBN 0-470-85319-0, March 2003
9) *Distributed and Cloud Computing: Clusters, Grids, Clouds and The Internet of Things* by

Kai Hwang, Geoffrey Fox, and Jack Dongarra, Morgan Kaufmann (Elsevier), ISBN 0-123-85880-1, October 2011

Lecture and Course Notes
1) ``Phenomenology of Particle Physics,'' course notes with answered problems for Physics 231, CALT-68-837, unpublished, 1980. These have been digitized at http://salsahpc.org/dlib/articles/00000629/, http://salsahpc.org/dlib/articles/00001078/, http://salsahpc.org/dlib/articles/00001669/
2) Numerous Courses have been put on the web including series Fox taught to Jackson State University 1997-2005 while http://www.old-npac.org has all courses offered at Syracuse http://www.old-npac.org/users/gcf/byarea0.html which lists two CD-Roms we made of educational material
3) "Grid Technologies" August 17 2001 at ERDC Vicksburg Ms
4) "Web Services and Grids" at Global Grid Forum Toronto February 17 2002
5) "XML for Science" HPMCO Users Meeting Austin Texas June 8 2002 (similar at NCSA Alliance Meeting May 8 2002)
6) "Lectures on Grid Technology" April 1-3 2003 CERN http://grids.ucs.indiana.edu/ptliupages/presentations/cerngridtechAapril03.ppt and http://grids.ucs.indiana.edu/ptliupages/presentations/cerngridtechBapril03.ppt
7) "Web Services for Grids" at 2004 Grid Summer School Vico Equense near Naples Italy July 2004 "GlobalMMCS" at CTS2005 Saint Louis, Missouri, USA May 17 2005
8) "Grids" at DSRT2005 Distributed Simulation and Real Time Applications' Montreal October 10-12 2005
9) "Implications of Parallel Computing for Multicore" at Microsoft Research February 26-March 1 2007
10) "Web 2.0 and Grids" with Marlon Pierce CTS2007 May 21 2007 http://grids.ucs.indiana.edu/ptliupages/presentations/Web20Tutorial_CTS.ppt (repeated OGF19, SC07 Education Program and CTS2008)
11) "Parallel Computing and Multicore 2008" HPCS 2008 at Nicosia Cyprus June 5 2008
12) FutureGrid Tutorial at CTS2011 Philadelphia May 23, 2011
13) FutureGrid Tutorial at PPAM September 11, 2011, Poznan
14) See Summer Schools in 2010 and 2012 listed under conferences
15) https://bigdatacoursespring2014.appspot.com/preview Big data Applications and Analytics Course I590, I400 Spring 2014
16) https://bigdatacourse.appspot.com/preview Big data Applications and Analytics MOOC Fall 2013
17) http://iucloudsummerschool.appspot.com/preview Science Cloud Talk Repository Summer 2014
18) Geoffrey Fox Big Data Tutorial on Mapping Big Data Applications to Clouds and HPC: Cloudmesh: Software Defined Distributed Systems as a Service SDDSaaS January 27 2015 BigDat 2015: International WinterSchool on Big Data Tarragona, Spain, January 26-30, 2015
19) Geoffrey Fox Big Data Tutorial on Mapping Big Data Applications to Clouds and HPC: Sports Analytics January 27 2015 BigDat 2015: International Winter School on Big Data Tarragona, Spain, January 26-30, 2015

20) Geoffrey Fox [Big Data Tutorial on Mapping Big Data Applications to Clouds and HPC: Looking At Individual HPCABDS Software Layers](#) January 27 2015 BigDat 2015: International Winter [School](#) on Big Data Tarragona, Spain, January 26-30, 2015
21) Geoffrey Fox [Big Data Tutorial on Mapping Big Data Applications to Clouds and HPC: Data Mining Runtime Software and Algorithms](#) January 27 2015 BigDat 2015: International Winter [School](#) on Big Data Tarragona, Spain, January 26-30, 2015
22) Geoffrey Fox [Big Data Tutorial on Mapping Big Data Applications to Clouds and HPC: Keynote](#) January 27 2015 BigDat 2015: International Winter [School](#) on Big Data Tarragona, Spain, January 26-30, 2015
23) http://bigdataopensourceprojects.soic.indiana.edu/ March-June 2015 Big Data Open Source Software Projects Course

Open Source Software and Resources: Current
1) [Virtual machine based simulation test bed with much in house software](#)
2) [C# code for Clustering with deterministic annealing and Multi Dimensional Scaling](#)
3) [QuakeSim web site](#) providing interactivity and support for earthquake fault spatial deformation applications and GPS time series analysis tools using Web services for accessing backend high performance computing resources. Used by NASA JPL researchers and geophysics classes at California State University-Northridge. [This was awarded a NASA Software of the year award jointly with another NASA activity](#) (a mobile application)
4) [MSI-CIEC Portal](#)
5) [eHumanity](#) cultural portal developed for AIHEC the American Indian Higher Education Consortium with NEH (National Endowment for Humanities) funding
6) SPIDAL Github https://github.com/DSC-SPIDAL data analytics library
7) WebPlotViz 3D point viewer including time series https://spidal-gw.dsc.soic.indiana.edu/

Open Source Software and Resources: SALSA Laboratory
8) [Twister Iterative MapReduce for Java applications](#)
9) [Twister Iterative MapReduce for Azure](#)
10) [MapReduce for Azure](#)
11) [Plotviz 3D viewer for study of clustering](#)

Open Source Software and Resources: Older Projects
12) This hosts [open-source software from the Chemical Informatics and Cyberinfrastructure Collaboratory](#) at Indiana University
13) [Multi-institution Grid Portal](#) (Open Grid Computing Environment) resource
14) [Open Geospatial Consortium standards compliant Web Services for Geographical Information Systems](#). Core Software for SERVOGrid Complexity Computational Environment.
15) [Service oriented audio-video conferencing and collaboration environment](#) (this software is no longer supported)
16) [Parallel Java Compiler and mpiJava Java binding to MPI](#)
17) Multimedia digital objects (http://www.undergroundfilm.org/ was taken off the air and rehosted commercially May 2007 due to support funding issues)

18) [Core Grid and Web Service software including Extended UDDI, WS-Context, Calendaring Service and older GXOS and XML Nuggets](#).
19) [Performance Measurements and Kernel Software on multicore chips](#)
20) [Grid and Web Service publish-subscribe messaging infrastructure](#)
21) [e-Science Live Audio-Video broadcasting site Live site integrating live and archived video and audio feeds, chats, and blogs for E-Science 2008](#).

Publications: Published Journal Articles 2005 – December 2015

1) Geoffrey L. House, Saliya Ekanayake, Yang Ruan, Ursel Schütte, Wittaya Kaonongbua, Geoffrey Fox, Yuzhen Ye, James D. Bever, "Sequence variation in the ribosomal RNA gene within isolates of arbuscular mycorrhizal fungi: Tests of phylogeny and clustering methods", submitted for publication.

2) Ahmet F. Mustacoglu, Geoffrey C. Fox, "A novel digital information service for federating distributed digital entities", Information Systems, Volume 55, January 2016, Pages 20–36

3) Jahanzeb Maqbool, Sangyoon Oh, Geoffrey C. Fox, "Evaluating ARM HPC clusters for scientific workloads", [DOI](#) Concurrency and Computation: Practice and Experience Volume 27, Issue 17, 10 December 2015, Pages 5390–5410

4) Hengjing He, Supun Kamburugamuve, and G.C. Fox, [Cloud based real-time multi-robot collision avoidance for swarm robotics](#) Technical Report, May 7, 2015. To be published in International Journal of Grid and Distributed Computing.

5) V. Mathieu, I. V. Danilkin, C. Fernández-Ramírez, M. R. Pennington, D. Schott, A. P. Szczepaniak, G. Fox, [Toward Complete Pion Nucleon Amplitudes](#), JLAB-THY-15-205 [arXiv:1506.01764](#) June 5 2015. Phys. Rev. D 92, 074004 (2015)

6) V. Mathieu, G. Fox, A. P. Szczepaniak, [Neutral Pion Photoproduction in a Regge Model](#), [arXiv:1505.02321](#) , May 9 2015. Phys. Rev. D 92, 074013 (2015).

7) E. Kolker and others including Geoffrey Fox, Towards more transparent and reproducible omics studies through a common metadata checklist and data publications Big Data Journal, Volume 1, Number 4, 2013

8) E. Kolker and others including Geoffrey Fox, Towards more transparent and reproducible omics studies through a common metadata checklist and data publications, OMICS. 2014 Jan. 18(1):10-4. doi: 10.1089/omi.2013.0149.

9) Supun Kamburugamuve, Leif Christiansen, Geoffrey Fox [A Framework for Real-Time Processing Processing of Sensor Data in the Cloud](#) , Journal of Sensors, 2015. 2015: p. 11. DOI:10.1155/2015/468047

10) Feng Xie, Zhen Chen, Jiaxing Shang, Geoffrey C. Fox "Grey forecast model for accurate recommendation in presence of data sparsity and correlation", Knowledge-Based Systems (Elsevier) Volume 69, October 2014, Pages 179–190 http://dsc.soic.indiana.edu/publications/GreyForecastModel2.pdf

11) E. Kolker and others including Geoffrey Fox, "Towards more transparent and reproducible omics studies through a common metadata checklist and data publications", Big Data journal to be published, December 2013 http://dsc.soic.indiana.edu/publications/Toward_Checklist_Big_Data_1.pdf

12) E. Kolker and others including Geoffrey Fox, Towards more transparent and reproducible omics studies through a common metadata checklist and data publications, OMICS. 2014

Jan. 18(1):10-4. doi: 10.1089/omi.2013.0149.
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15) John Paul Walters, Andrew J. Younge, Dong-In Kang, Ke-Thia Yao, Mikyung Kang, Stephen P. Crago, and Geoffrey C. Fox GPU-Passthrough Performance: A Comparison of KVM, Xen, VMWare ESXi, and LXC for CUDA and OpenCL Applications Applications & Industry Track paper, 7th IEEE InternationalConference on Cloud Computing June 27 - July

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20) Sherif Abdelhamid, Maksudul Alam, Richard Alo, Shaikh Arifuzzaman, Pete Beckman, Tirtha Bhattacharjee, Hasanuzzaman Bhuiyan, Keith Bisset, Stephen Eubank, Albert C. Esterline, Edward A. Fox, Geoffrey C. Fox, S.M.Shamimul Hasan, Harshal Hayatnagarkar, Maleq Khan, Chris J. Kuhlman, Madhav V. Marathe, Natarajan Meghanathan, Henning S. Mortveit, Judy Qiu, S.S. Ravi, Zalia Shams, Ongard Sirisaengtaksin, Samarth Swarup, Anil Kumar S. Vullikanti, and Tak-Lon Wu CINET 2.0: A CyberInfrastructure for Network Science May 19 2014 Technical Report published in The 10th IEEE International Conference on e-Science Guarujá, SP, Brazil 20th – 24th October 2014

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22) Richard L. Moore, Chaitan Baru, Diane Baxter, Geoffrey C. Fox, Amit Majumdar, Phillip Papadopoulos, Wayne Pfeiffer, Robert S. Sinkovits, Shawn Strande, Mahidhar Tatineni, Richard P. Wagner, Nancy Wilkins-Diehr, Michael L. Norman Gateways to Discovery: Cyberinfrastructure for the Long Tail of Science Technology Track XSEDE14 All Hands Meeting July 13-18 Atlanta

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39) Geoffrey Fox Collaboration in the Cloud and Online Education Environments April 15 2013 Abstract of Invited Talk at The 2013 International Conference on Collaboration Technologies and Systems (CTS 2013) May 20-24, 2013 The Sheraton San Diego Hotel & Marina San Diego, California, USA

40) Geoffrey Fox Distributed Data and Software Defined Systems White Paper April 20 2013 BDEC Big Data and Extreme-Scale Computing Charleston April 30 to May 01 Renaissance Charleston Historic District Hotel

41) Andrea Donnellan, Margaret Glasscoe, Jay W. Parker, Robert Granat, Marlon Pierce, Jun Wang, Geoffrey Fox, Dennis McLeod, John Rundle, Lisa Grant Ludwig "Integrating Remotely Sensed and Ground Observations for Modeling, Analysis, and Decision Support" 2013 IEEE Aerospace Conference Big Sky Montana Mar 2-9 2013

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65) Larissa Stanberry, Roger Higdon, Winston Haynes, Natali Kolker, William Broomall, Saliya Ekanayake, Yang Ruan, Judy Qiu, Eugene Kolker, Geoffrey Fox, and Adam Hughes "Visualizing the Protein Sequence Universe" Technical Report April 23 2012 for Proceedings of Emerging Computational Methods for the Life Sciences Workshop ECMLS2012 of ACM HPDC 2012 conference at Delft the Netherlands

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74) Geoffrey Fox "Data Intensive Applications on Clouds" Keynote at The Second International Workshop on Data Intensive Computing in the Clouds (DataCloud-SC11) at SC11 November 14 2011

75) Yunhee Kang, Geoffrey C. Fox, "Performance Evaluation of MapReduce applications on Cloud Computing Environment, FutureGrid" GDC2011, 2011 Conference on Grid and Distributed Computing December 8 ~ 10, 2011 in Jeju Grand Hotel, Jeju Island, Korea. Chapter 10 in Grid and Distributed Computing, T.-h. Kim, H. Adeli, H.-s. Cho, O. Gervasi, S. Yau, B.-H. Kang, and J. Villalba, Editors. 2011, Springer Berlin Heidelberg. p. 77-86. http://dx.doi.org/10.1007/978-3-642-27180-9_10.

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77) Margaret Glasscoe, Ronald Blom, Gerald Bawden, Geoffrey Fox, Marlon Pierce, John Rundle, Jun Wang, Robert Granat, Michael Burl, Yu Ma, Mark Yoder, Michael Sachs, Eric Fielding, Jay Parker, Charles Norton, Greg Lyzenga, Roland Bürgmann "E-DECIDER: Earthquake Disaster Decision Support and Response Tools . Development and Experiences" Fall AGU Meeting San Francisco CA December 5-9 2011

78) Javier Diaz, Gregor von Laszewski, Fugang Wang, Andrew J. Younge and Geoffrey Fox "FutureGrid Image Repository: A Generic Catalog and Storage System for Heterogeneous Virtual Machine Images" 3rd IEEE International Conference CloudCom on Cloud Computing Technology and Science, Athens Greece, November 29 - December 1 2011

79) Jong Youl Choi (adviser Geoffrey Fox) "Large-scale data visualization for data-intensive and high-dimensional scientific data analysis" Doctoral Show case at SC11 Seattle November 15 2011

80) Hui Li, Yang Ruan, Yuduo Zhou, Judy Qiu, Geoffrey Fox "Design Patterns for Scientific Applications in DryadLINQ CTP" The Second International Workshop on Data Intensive Computing in the Clouds (DataCloud-SC11) at SC11 November 14 2011

81) Thilina Gunarathne (adviser Geoffrey Fox) "Architectures for Iterative Data Intensive Analysis Computations on Clouds and Heterogeneous Environments" Doctoral Show case at SC11 Seattle November 15 2011

82) Andrea Donnellan, Jay Parker, Robert Granat, Eric De Jong, Shigeru Suzuki, Marlon Pierce and Geoffrey Fox, John Rundle, Dennis McLeod, and Rami Al-Ghanmi, Lisa Grant Ludwig "QuakeSim: Integrated Modeling and Analysis of Geologic and Remotely Sensed Data" Published in 2012 IEEE Aerospace Conference, March 3–10, 2012 Big Sky, Montana. DOI

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85) Seung-Hee Bae, Judy Qiu, Geoffrey Fox "Scalable Dimension Reduction for Large Abstract Data Visualization" Poster at IEEE Cluster 2011 at the Hilton Hotel in Austin, TX, and hosted by the Texas Advanced Computing Center September 26-30 2011

86) Geoffrey Fox, "FutureGrid from User's Perspective", FutureGrid Birds of a Feather session TG 11 (TeraGrid '11: Extreme Digital Discovery) Marriott Salt Lake City July 20

87) Geoffrey Fox MapReduce TG11 BOF "MapReduce Birds of a Feather session" TG 11 (TeraGrid '11: Extreme Digital Discovery) Marriott Salt Lake City July 19 2011

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89) Geoffrey Fox, Gregor von Laszewski, Andrew Grimshaw, Renato Figueiredo, Kate Keahey, Gregory G. Pike, Andrew Younge, "FutureGrid Tutorial" presented at TG 11 (TeraGrid '11: Extreme Digital Discovery) Marriott Salt Lake City July 18 2011

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91) Andrew J. Younge, Robert Henschel, James T. Brown, Gregor von Laszewski, Judy Qiu, Geoffrey C. Fox "Analysis of Virtualization Technologies for High Performance Computing Environments" Proceedings of The Fourth IEEE InternationalConference on Cloud Computing (CLOUD 2011) July 4-9, 2011, Washington Marriott, Washington DC, USA updated April 2011

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108)   Tyler Pace, Shaowen Bardzell and Geoffrey Fox "Practice-Centered e-Science: A Practice Turn Perspective on Cyberinfrastructure" Design Group 10 Conference, Sanibel Island Florida, November 7-10 2010

109)   Craig A. Stewart, Stephen Simms, Beth Plale, Matthew Link, David Y. Hancock, Geoffrey C. Fox "What is Cyberinfrastructure?" Association for Computing Machinery (ACM) Special Interest Group on University and College Computing Services (SIGUCCS) 2010 Fall Conference, Norfolk Waterside Marriot, October 24 - 27, 2010

110)   Geoffrey Fox "Cloud Architecture for Earthquake Science" Abstract for 7th ACES International Workshop OTARU, October 3-8, 2010

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117)   Richard A. Aló, Diane Baxter, Karl Barnes, Al Kuslikis ,Geoffrey Fox, Alex Ramirez "A Model for LACCEI: Minority Serving Institutions and CyberInfrastructure Research/ Education Minority Serving Institutions-CyberInfrastructure Empowerment Coalition- MSI-CIEC" Proceedings of The Eighth LACCEI Annual Conference for Engineering and Technology Innovation and Development for the Americas Arequipa, Peru on June 1-4 2010

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119)   Jong Youl Choi, Seung-Hee Bae, Judy Qiu, Geoffrey Fox, Bin Chen, and David Wild, "Browsing Large Scale Cheminformatics Data with Dimension Reduction" March 21 2010. Proceedings of Emerging Computational Methods for the Life Sciences Workshop of ACM HPDC 2010 conference, Chicago, Illinois, June 20-25, 2010.

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Qiu, Geoffrey Fox "Twister: A Runtime for Iterative MapReduce" Proceedings of the First International Workshop on MapReduce and its Applications of ACM HPDC 2010 conference, Chicago, Illinois, June 20-25, 2010.

121) Beytullah Yildiz, Geoffrey C. Fox "DISTRIBUTED HANDLER ARCHITECTURE" 3rd IEEE International Conference on Computer Science and Information Technology (IEEE ICCSIT 2010) Chengdu, China during July 9 - 11, 2010

122) Seung-Hee Bae, Jong Youl Choi, Judy Qiu, Geoffrey Fox "Dimension Reduction and Visualization of Large High-dimensional Data via Interpolation" Proceedings of ACM HPDC 2010 conference, Chicago, Illinois, June 20-25, 2010

123) Jong Youl Choi, Judy Qiu, Marlon Pierce, Geoffrey Fox "Generative Topographic Mapping by Deterministic Annealing" to appear in the Proceedings of the 10th International conference on Computational Science and Engineering (ICCS 2010), May 31 - Jun 2, 2010. Amsterdam, The Netherlands.

124) Richard A. Aló, Diane Baxter, Karl Barnes, Al Kuslikis ,Geoffrey Fox, Alex Ramirez "Advancing Computational Science, Visualization and Homeland Security Research/ Education at Minority Serving Institutions National Model Promoted/ Implemented by MSI-CIEC (Minority Serving Institutions-CyberInfrastructure Empowerment Coalition" Proceedings of the 10th International conference on Computational Science and Engineering (ICCS 2010), May 31 - Jun 2, 2010. Amsterdam, The Netherlands. DOI

125) Apu Kapadia, Steven Myers, XiaoFeng Wang and Geoffrey Fox "Secure Cloud Computing with Brokered Trusted Sensor Networks" Proceedings of The 2010 International Symposium on Collaborative Technologies and Systems (CTS 2010) May 17-21, 2010 The Westin Lombard Yorktown Center Chicago, Illinois, USA

126) Ahmet Fatih Mustacoglu and Geoffrey Fox "Performance of a Collaborative Framework for Federating Distributed Digital Entities" Proceedings of The 2010 International Symposium on Collaborative Technologies and Systems (CTS 2010) May 17-21, 2010 The Westin Lombard Yorktown Center Chicago, Illinois, USA

127) Tyler Pace, Shaowen Bardzell, Geoffrey Fox "Human-Centered e-Science: A Group-Theoretic Perspective on Cyberinfrastructure Design" Proceedings of The 2010 International Symposium on Collaborative Technologies and Systems (CTS 2010) May 17-21, 2010 The Westin Lombard Yorktown Center Chicago, Illinois, USA

128) Judy Qiu, Scott Beason, Seung-Hee Bae, Saliya Ekanayake, Geoffrey Fox "Performance of Windows Multicore Systems on Threading and MPI" Proceeding Frontiers of GPU, Multi- and Many-Core Systems Workshop of 10th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing Conference (CCGrid 2010). May 17-20, 2010. Melbourne, Victoria, Australia.

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130) Andrea Donnellan, Marlon Pierce, Dennis McLeod, Jay Parker, John Rundle, Lisa Grant, Rami Al-Ghanmi, Gepffrey Fox, Robert Granat "Integrating GPS, InSAR, and UAVSAR data into the QuakeSim Computational Environment" 2011 IEEE Aerospace Conference March 5-12, 2011, Big Sky, Montana

131) Jay W Parker, Margaret T Glasscoe, Andrea Donnellan, Robert A Granat, John Belting Rundle, Dennis McLeod, Rami Al-Ganmi, Lisa Grant Ludwig, Geoffrey Fox, Marlon Pierce, Walt Brooks QuakeSim: Increasing Utility of Spacebourne and Ground-based Earthquake Fault Data Earth and Space Science Informatics 2009 AGU Fall Meeting 14–18 December 2009 San Francisco, California, USA

132) Jaliya Ekanayake, (Advisor Geoffrey Fox) Architecture and Performance of Runtime Environments for Data Intensive Scalable Computing Doctoral Showcase SC09 Portland Oregon November 14-20 2009

133) Xiaohong Qiu, Jaliya Ekanayake, Thilina Gunarathne, Seung-Hee Bae, Jong Youl Choi, Scott Beason, Geoffrey Fox Using MapReduce Technologies in Bioinformatics and Medical Informatics in Using Clouds for Parallel Computations in Systems Biology workshop at SC09 Portland Oregon November 16 2009

134) Xiaohong Qiu, Jaliya Ekanayake, Scott Beason, Thilina Gunarathne, Geoffrey Fox, Roger Barga, Dennis Gannon Cloud Technologies for Bioinformatics Applications 2nd ACM Workshop on Many-Task Computing on Grids and Supercomputers (SC09), Portland, Oregon, November 16th, 2009

135) Geoffrey Fox, Xiaohong Qiu, Scott Beason, Jong Youl Choi, Mina Rho, Haixu Tang, Neil Devadasan, Gilbert Liu Biomedical Case Studies in Data Intensive Computing Keynote talk at The 1st International Conference on Cloud Computing (CloudCom 2009) at Beijing Jiaotong University, China December 1-4, 2009

136) Xiaohong Qiu, Jaliya Ekanayake, Geoffrey Fox, Thilina Gunarathne, Scott Beason Computational Methods for Large Scale DNA Data Analysis Microsoft eScience workshop, October 16 2009, Gates Center Carnegie Mellon University Pittsburgh

137) Jaliya Ekanayake, Atilla Soner Balkir, Thilina Gunarathne, Geoffrey Fox, Christophe Poulain, Nelson Araujo, Roger Barga DryadLINQ for Scientific Analyses 5th IEEE International Conference on e-Science Oxford UK, December 9-11 2009

138) Andrea Donnellan, Jay Parker, Charles Norton, Margaret Glasscoe, Robert Granat, John Rundle, Geoffrey Fox, Marlon Pierce3, Lisa Grant, Dennis McLeod, and Rami Al-Ghanmi QuakeSim Earthquake Modeling and Assimilation Environment Abstract for Asia Oceania Geosciences Society Meeting in Singapore AOGS2009 August 11-15 2009

139) Marlon Pierce and Geoffrey Fox QuakeSim Web Computing Infrastructure Abstract for Asia Oceania Geosciences Society Meeting in Singapore AOGS2009 August 11-15 2009

140) Geoffrey Fox and Marlon Pierce Web 2.0, Cloud Computing, and Earthquake Forecasting Abstract for Asia Oceania Geosciences Society Meeting in Singapore AOGS2009 August 11-15 2009

141) Jaliya Ekanayake, Geoffrey Fox High Performance Parallel Computing with Clouds and Cloud Technologies First International Conference *CloudComp* on Cloud Computing October 19 - 21, 2009, Munich, Germany

142) Richard Alo, Karl Barnes , Diane Baxter, Julie Foertsch , Geoffrey Fox, Al Kuslikis, Alex Ramirez CyberInfrastructure (CI) Days at Minority-Serving Intuitions (MSIs): A MSI-CIEC Update in a Changing Climate Poster at TeraGrid 09 meeting Hyatt Regency Crystal City. June 22-25 2009

143) Siddharth Maini, Joshua Rosen, Marlon E. Pierce, Geoffrey C. Fox AVATS: Audio-Video and Textual Synchronization Proceeedings of The 2009 International Symposium on

Collaborative Technologies and Systems CTS 2009 May 18-22, 2009 The Westin Baltimore Washington International Airport Hotel Baltimore, Maryland, USA

144) Geoffrey Fox, Alex Ho, Eddy Chan, William Wang Measured Characteristics of Distributed Cloud Computing Infrastructure for Message-based Collaboration Applications Proceeedings of The 2009 International Symposium on Collaborative Technologies and Systems CTS 2009 May 18-22, 2009 The Westin Baltimore Washington International Airport Hotel Baltimore, Maryland, USA

145) Tao Huang, Shrideep Pallickara, Geoffrey Fox A Distributed Framework for Collaborative Annotation of Streams Proceeedings of The 2009 International Symposium on Collaborative Technologies and Systems CTS 2009 May 18-22, 2009 The Westin Baltimore Washington International Airport Hotel Baltimore, Maryland, USA

146) Geoffrey Fox Summary of Cloud Systems Birds of a Feather session at OGF22 Hyatt Regency Cambridge MA February 27 2008

147) Jong Y. Choi, Joshua Rosen, Siddharth Maini, Marlon E. Pierce, and Geoffrey C. Fox Collective Collaborative Tagging System Proceedings of GCE08 workshop at SC08 Austin Texas November 16 2008

148) Carl Lagoze describing work by University of Cambridge (Peter Murray Rust, Jim Downing), Cornell University (Carl Lagoze, Theresa Velden), Indiana University (Geoffrey Fox, Marlon Pierce), Penn State University (C. Lee Giles, Prasenjit Mitra, Karl Mueller), PuBChem (Steve Bryant), and University of Southampton (Jeremy Frey, Simon Coles).The OreChem Project paper at WebSci'09: Society On-Line Athens, Greece 18th–20th March, 2009

149) Shrideep Pallickara, Jaliya Ekanayake, and Geoffrey Fox. An Overview of the Granules Runtime for Cloud Computing. Proceedings of the IEEE International Conference on e-Science. Indianapolis. 2008. December 7-12 2008

150) Jaliya Ekanayake, Shrideep Pallickara, and Geoffrey Fox Map-Reduce for Data Intensive Scientific Analyses .(Earlier version Map-Reduce for Data Intensive Scientific Analyses) Proceedings of the IEEE International Conference on e-Science. Indianapolis. 2008. December 7-12 2008

151) Kangseok Kim, Rajarshi Guha, Marlon E. Pierce, Geoffrey C. Fox, David J. Wild, Kevin E. Gilbert SQMD: Architecture for Scalable, Distributed Database System built on Virtual Private Servers Proceedings of "eScience for Cheminformatics and Drug Discovery" workshop at eScience 2008 , Indianapolis, IN Dec 12, 2008.

152) Geoffrey Fox Distributed and Parallel Programming Environments and their performance Abstract of keynote talk at Microsoft Research eScience Workshop December 9 2008 IEEE International Conference on e-Science. Indianapolis. 2008. December 7-12 2008

153) Mehmet S. Aktas, Geoffrey Fox and Marlon Pierce Information Federation in Grids 4th International Conference on Semantics, Knowledge and Grid (SKG 2008) Beijing China December 3-5 2008

154) Linda B. Hayden, Geoffrey Fox, Anthony Adade Implementing Cyberinfrastructure in Support of Greenland and Antarctic SAR Data Sets Abstract for AARSE Conference. 7th International Conference of the African Association of Remote Sensing of the Environment (AARSE)-2008 Accra Ghana October 27-31 2008

155) Geoffrey Fox Integrating Parallel and Distributed Computing across Scientific and Web

[2.0 Applications](#) Abstract of keynote talk at 7th International [Conference](#) on Grid and Cooperative Computing GCC2008 Shenzhen China October 24-26 2008

156)   Xiaohong Qiu (presenter), Geoffrey C. Fox, Huapeng Yuan, Seung-Hee Bae, George Chrysanthakopoulos, Henrik Frystyk Nielsen [Parallel Data Mining on Multicore Clusters](#) (Old version [Parallel Data Mining on Multicore Systems](#)) 7th International [Conference](#) on Grid and Cooperative Computing GCC2008 Shenzhen China October 24-26 2008

157)   Shantenu Jha, Andre Merzky and Geoffrey Fox [Programming Abstractions for Clouds](#) CCA-08 Cloud Computing and its Applications Chicago ILL October 22-23 2008

158)   Geoffrey Fox and Marlon Pierce [Web 2.0 and Cloud Computing](#) Abstract of talk at APRU Association of Pacific Rim Universities 4th Earthquake and Tsunami [Symposium](#) August 21 - 22, 2008 University of California, Davis (USA)

159)   Marlon Pierce and Geoffrey Fox [QuakeSim Web Computing Infrastructure](#) Abstract of talk at APRU Association of Pacific Rim Universities 4th Earthquake and Tsunami [Symposium](#) August 21 - 22, 2008 University of California, Davis (USA)

160)   Geoffrey Fox [Parallel Data Mining from Multicore to Cloudy Grids](#) INTERNATIONAL ADVANCED RESEARCH WORKSHOP ON HIGH PERFORMANCE COMPUTING AND GRIDS [HPC2008](#) Cetraro Italy June 30 - July 4, 2008

161)   Beytullah Yildiz, Geoffrey Fox, Shrideep Pallickara [An Orchestration for Distributed Web Service Handlers](#) The Third International [Conference](#) on Internet and Web Applications and Services ICIW 2008 June 8-13, 2008 - Athens, Greece

162)   Mehmet S. Aktas, Geoffrey C. Fox, Marlon Pierce, [Principles and Experiences: Building a Hybrid Metadata Service for Service Oriented Architecture based Grid Applications](#), accepted for The Third International IEEE International [Conference](#) on Internet and Web Applications and Services ICIW'08 June 8-13, 2008 - Athens, Greece

163)   Alex Ramirez, Geoffrey Fox, Al Kuslikis, Richard Alo, Karl Barnes, Diane Baxter, and Julie Foertsch [Engaging Minority-Serving Institutions (MSIs) in Cyberinfrastructure (CI) through CI Days](#) The 3rd annual TeraGrid [Conference](#), TeraGrid '08 All Hands Meeting Riviera Hotel and Casino in Las Vegas Nevada, June 9-13 2008

164)   Xiaohong Qiu, Geoffrey C. Fox, Huapeng Yuan, Seung-Hee Bae, George Chrysanthakopoulos, Henrik Frystyk Nielsen [PARALLEL CLUSTERING AND DIMENSIONAL SCALING ON MULTICORE SYSTEMS](#) Invited talk at the 2008 High Performance Computing & Simulation Conference ([HPCS 2008](#)) In Conjunction With The 22nd EUROPEAN CONFERENCE ON MODELLING AND SIMULATION (ECMS 2008) Nicosia, Cyprus June 3 - 6, 2008.

165)   Marlon E. Pierce Geoffrey C. Fox Joshua Rosen Siddharth Maini and Jong Y. Choi [Social Networking for Scientists Using Tagging and Shared Bookmarks: a Web 2.0 Application](#) 2008 International [Symposium](#) on Collaborative Technologies and Systems (CTS 2008) at The Hyatt Regency Irvine Irvine, California, USA May 19-23, 2008

166)   Jaliya Ekanayake, Shrideep Pallickara and Geoffrey Fox [Collaborative Framework for Scientific Data Analysis](#) 2008 International [Symposium](#) on Collaborative Technologies and Systems (CTS 2008) at The Hyatt Regency Irvine Irvine, California, USA May 19-23, 2008

167)   Ahmet Fatih Mustacoglu and Geoffrey Fox [Hybrid Consistency Framework for Distributed Annotation Records in a Collaborative Environment](#) 2008 International [Symposium](#) on Collaborative Technologies and Systems (CTS 2008) at The Hyatt Regency

Irvine Irvine, California, USA May 19-23, 2008

168) Geoffrey Fox, Alex Ho, Rui Wang, Edward Chu and Isaac Kwan A Collaborative Sensor Grids Framework 2008 International Symposium on Collaborative Technologies and Systems (CTS 2008) at The Hyatt Regency Irvine Irvine, California, USA May 19-23, 2008

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170) Marlon Pierce and Geoffrey Fox Web 2.0 and Geo-sciences Abstract for 6th ACES International Workshop Cairns, Australia from 11 to 16 May 2008.

171) Pierce, M, Gao, X, Fox, G, Granat, R and Donnellan, A Services and Components for the QuakeSim Project Abstract for 6th ACES International Workshop Cairns, Australia from 11 to 16 May 2008.

172) Marlon E. Pierce, Geoffrey C. Fox, Galip Aydin, Zhigang Qi, Andrea Donnellan, Jay Parker and Robert Granat QuakeSim: Web Services, Portals, and Infrastructure for Geophysics December 19 2007 published in 2008 IEEE Aerospace Conference March 1-8 2008, Big Sky MT

173) Andrea Donnellan, Jay Parker, Robert Granat, Geoffrey Fox, Marlon Pierce, John Rundle, Dennis McLeod, Rami Al-Ghanmi, Lisa Grant, Walter Brooks QuakeSim: Efficient Modeling of Sensor Web Data in a Web Services Environment November 30 2007 to be published in 2008 IEEE Aerospace Conference March 1-8 2008, Big Sky MT

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175) Geoffrey Fox, Seung-Hee Bae, Rajarshi Guha, Marlon E. Pierce, Xiaohong Qiu, David J. Wild , H. Yuan High Performance Robust Datamining for Cheminformatics PAPER ID: 1168842 at Division of Chemical Information session on *Cheminformatics: From Teaching to Research* Tuesday, April 8, 2008 from 11:35 AM to 12:00 PM at Spring 2008 American Chemical Society National Meeting & Exposition Sunday, April 6 — Thursday, April 10, 2008 New Orleans, LA USA

176) Rajarshi Guha, Geoffrey Fox, Kevin E. Gilbert, Marlon Pierce and David Wild I don't care where my data and methods are: A web-service approach for distributed access to methods, data and models. PAPER ID: 1170920 at Division of Chemical Information session on *Cheminformatics: From Teaching to Research* Tuesday, April 8, 2008 at Spring 2008 American Chemical Society National Meeting & Exposition Sunday, April 6 — Thursday, April 10, 2008 New Orleans, LA USA

177) Mehmet A. Nacar, Marlon E. Pierce, Andrea Donnellan, Geoffrey C. Fox Building QuakeSim Portlets with GTLAB Paper at GCE07 Workshop November 11-12 2007 at SC07 Reno Nevada

178) Ali Kaplan, Geoffrey C. Fox, Gregor von Laszewski GridTorrent Framework: A High-performance Data Transfer and Data Sharing Framework for Scientific Computing Paper at

GCE07 Workshop November 11-12 2007 at SC07 Reno Nevada

179) Geoffrey Fox, Seung-Hee Bae, Rajarshi Guha, Marlon E. Pierce, Xiaohong Qiu, David J. Wild , H. Yuan, Neil M Devadasan, George Chrysanthakopoulos, Henrik Frystyk Nielsen Parallel Clustering in a Cheminformatics Grid The 2007 Microsoft eScience Workshop at RENCI (The Friday Center for Continuing Education UNC - Chapel Hill 100 Friday Center Drive Chapel Hill, NC 27599-1020) October 21-23 2007

180) Geoffrey C. Fox, Marlon E. Pierce, Ahmet Fatih Mustacoglu, and Ahmet E. Topcu Web 2.0 for E-Science Environments Keynote Presentation at 3rd International Conference on Semantics, Knowledge and Grid SKG2007 Xian China October 28-30 2007

181) Mehmet A. Nacar, Marlon E. Pierce, Geoffrey C. Fox GTLAB: Grid Tag Libraries Supporting Workflows within Science Gateways 3rd International Conference on Semantics, Knowledge and Grid SKG2007 Xian China October 28-30 2007

182) Ahmet E. Topcu , Ahmet Fatih Mustacoglu, Geoffrey Fox , Aurel Cami Integration of Collaborative Information Systems in Web 2.0 3rd International Conference on Semantics, Knowledge and Grid SKG2007 Xian China October 28-30 2007

183) Xiaohong Qiu, Geoffrey Fox, H. Yuan, Seung-Hee Bae, George Chrysanthakopoulos, Henrik Frystyk Nielsen Performance of a Multi-Paradigm Messaging Runtime on Multicore Systems Abstract of Poster at Grid 2007 Conference, Omni Austin Downtown Hotel Austin Texas, September 19 2007

184) Donnellan, Andrea (JPL), John Rundle (UC Davis), Lisa Grant (UC Irvine), Dennis McLeod (USC), Geoffrey Fox (Indiana U), Marlon Pierce (Indiana U), Terry Tullis (Brown U), Walt Brooks (NASA Ames), Jay Parker (JPL), and Robert Granat (JPL) Abstract for 2007 SCEC Annual Meeting, September 9-12 at the Palm Springs Hilton Hotel in Palm Springs, California.

185) Shrideep Pallickara, Hasan Bulut, and Geoffrey Fox. Fault-Tolerant Reliable Delivery of Messages in Distributed Publish/Subscribe Systems . Proceedings of the 4th IEEE International Conference on Autonomic Computing. Jacksonville, Florida. June 12-15 2007

186) Yili Gong, Marlon E. Pierce, and Geoffrey C. Fox Matchmaking Scientific Workflows in Grid Environments Proceedings of IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2007), November 19 - 21, 2007, at Cambridge, USA

187) Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara, Marlon Pierce Scalable, Fault-tolerant Management of Grid Services to appear in Proceedings of IEEE Cluster 2007

188) Andrea Donnellan, Jay Parker, Charles Norton, Gregory Lyzenga, Margaret Glasscoe, Geoffrey Fox, Marlon Pierce, John Rundle, Dennis McLeod, Lisa Grant, Walter Brooks and Terry Tullis QuakeSim: Enabling Model Interactions in Solid Earth Science Sensor Webs NASA Science Technology Conference NSTC 2007 University of Maryland June 19-21 2007

189) Xiaohong Qiu Multi-Paradigm Run Time MPR for Multicore Systems Position Paper for Microsoft Multicore Computing Workshop Seattle June 20-21 2007

190) Zao Liu, Marlon E. Pierce, and Geoffrey C. Fox Implementing a Caching and Tiling Map Server: a Web 2.0 Case Study Proceedings of The 2007 International Symposium on Collaborative Technologies and Systems (CTS 2007)

191) Ahmet Fatih Mustacoglu, Ahmet E. Topcu Aurel Cami, Geoffrey Fox A Novel Event-

Based Consistency Model for Supporting Collaborative Cyberinfrastructure Based Scientific Research Proceedings of The 2007 International Symposium on Collaborative Technologies and Systems (CTS 2007)

192) Galip Aydin, Zhigang Qi, Marlon E. Pierce, Yehuda Bock, and Geoffrey C. Fox Building a Sensor Grid for Real Time Global Positioning System Data Proceedings of Workshop on Principles of Pervasive Information Systems Design Sunday, May 13, 2007 In conjunction with Pervasive 2007 Toronto, Ontario, Canada

193) Ahmet Fatih Mustacoglu, and Geoffrey Fox AJAX Integration Approach for Collaborative Calendar-Server Web Services Proceedings of The 2007 World Congress in Computer Science, Computer Engineering, & Applied Computing Las Vegas, Nevada, USA (June 25-28, 2007)

194) Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara Scalable, Fault-tolerant Management in a Service Oriented Architecture Poster in pages 235-236 of proceedings for IEEE International Symposium in High-Performance Distributed Computing (HPDC) Monterey California June 27-29 2007

195) Mehmet A. Nacar, Jong Y. Choi, Marlon E. Pierce, and Geoffrey C. Fox Building a Grid Portal for Teragrid's Big Red Proceedings of TeraGrid 2007 Conference Madison Wisconsin June 4-8 2007

196) Richard A. Aló, Karl Barnes, Diane Baxter, Geoffrey Fox, Al Kuslikis, and Alex Ramirez Advances in the MSI Community and the MSI CyberIn-frastructure Empowerment Coalition (MSI-CIEC) Proceedings of TeraGrid 2007 Conference Madison Wisconsin June 4-8 2007

197) Linda Hayden, Geoffrey Fox, and Prasad Gogineni Cyberinfrastructure for Remote Sensing of Ice Sheets Proceedings of TeraGrid 2007 Conference Madison Wisconsin June 4-8 2007

198) Geoffrey Fox, Ahmet Fatih Mustacoglu, Ahmet E. Topcu, Aurel Cami SRG: A Digital Document-Enhanced Service Oriented Research Grid April 7 2007 accepted for IEEE International Conference on Information Reuse and Integration (IEEE IRI-2007) August 13 - 15, 2007 Las Vegas, USA

199) Shrideep Pallickara, Jaliya Ekanayake, Geoffrey Fox, A Scalable Approach for the Secure and Authorized Tracking of the Availability of Entities in Distributed Systems. (To appear) Proceedings of the 21st IEEE International Parallel & Distributed Processing Symposium (IPDPS 2007). Long Beach, California.

200) Mehmet Nacar, Marlon Pierce, Gordon Erlebacher, Geoffrey Fox. Designing Grid Tag Libraries and Grid Beans Second International Workshop on Grid Computing Environments GCE06 at SC06, Tampa, FL. Nov. 12-13 2006

201) Hao Yin, Sofia Brenes-Barahona, Donald F. McMullen, Marlon Pierce, Kianosh Huffman, Geoffrey Fox, A PERMIS-based Authorization Solution between Portlets and Back-end Web Services . Second International Workshop on Grid Computing Environments GCE06 at SC06, Tampa, FL. Nov. 12-13 2006

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204)   Shrideep Pallickara, Marlon Pierce, Harshawardhan Gadgil, Geoffrey Fox, Yan Yan, Yi Huang. A Framework for Secure End-to-End Delivery of Messages in Publish/Subscribe Systems. Proceedings of the 7th IEEE/ACM International Conference on Grid Computing (GRID 2006). Barcelona, Spain; September 28th-29th 2006.

205)   Hao Yin, Donald F. McMullen, Mehmet A. Nacar, Marlon Pierce, Kianosh Huffman, Geoffrey Fox and Yu Ma Providing Portlet-Based Client Access to CIMA-Enabled Crystallographic Instruments, Sensors, and Data Technical Report April 21 2006 with short poster version for 7th IEEE/ACM International Conference on Grid Computing (GRID 2006). Barcelona, Spain.

206)   Galip Aydin, Geoffrey C. Fox, Harshawardhan Gadgil and Marlon E. Pierce Streaming Data Services to Support Archival and Real-Time Geographical Information System Grids Sixth Annual NASA Earth Science Technology Conference June 27th - 29th College Park, MD

207)   Richard Alo, Karl Barnes, Diane Baxter, Geoffrey Fox, Al Kuslikis, Calvin Lowe, Alex Ramirez, Selena Singleton MSI-CIEC: MSI Cyberinfrastructure Empowerment Coalition and the TeraGrid (Abstract) TeraGrid '06 Indianapolis IN June 12-15 2006

208)   Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara and Marlon Pierce Managing Grid Messaging Middleware Proceedings of IEEE Conference on the Challenges of Large Applications in Distributed Environments (CLADE) Paris France June 19 2006, pp. 83 - 91 DOI

209)   Sangyoon Oh, Mehmet S. Aktas, Marlon Pierce, Geoffrey C. Fox Optimizing Web Service Messaging Performance Using a Context Store for Static Data Invited paper for 5th WSEAS Int.Conf. on TELECOMMUNICATIONS and INFORMATICS (TELE-INFO '06), Istanbul, Turkey, May 27-29, 2006

210)   Geoffrey Fox Grid-based Information Architecture for iSERVO International Solid Earth Research Virtual Organization Abstract for Western Pacific Geophysics Meeting (WPGM) 24-27 July 2006 Beijing China

211)   Geoffrey C. Fox, Mehmet S. Aktas, Galip Aydin, Andrea Donnellan, Harshawardhan Gadgil, Robert Granat, Shrideep Pallickara, Jay Parker, Marlon E. Pierce, Sangyoon Oh, John Rundle, Ahmet Sayar, and Michael Scharber Building Sensor Filter Grids: Information Architecture for the Data Deluge IEEE Proceedings of 1st International Conference SKG2005 on Semantics, Knowledge and Grid Beijing China November 27-29 2005

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215) Wenjun Wu, Tao Huang, Geoffrey Fox Building Scalable and High Efficient Java Multimedia Collaboration Proceedings of IEEE 2006 International Symposium on Collaborative Technologies and Systems CTS 2006 conference Las Vegas May 14-17 2006; IEEE Computer Society, Ed: Smari, Waleed & McQuay, William, pp18-25. ISBN 0-9785699-0-3 DOI

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220) Geoffrey C. Fox, Mehmet S. Aktas, Galip Aydin, Hasan Bulut, Harshawardhan Gadgil, Sangyoon Oh, Shrideep Pallickara, Marlon E. Pierce, Ahmet Sayar, and Gang Zhai Grids for Real Time Data Applications Invited talk in proceedings of PPAM 2005 – 6th International Conference on Parallel Processing and Applied Mathematics Poznan Poland September 11-14 2005

221) Minjun Wang, Geoffrey Fox and Marlon Pierce Thin Client Collaboration Web Services Proceedings of IEEE International Conference on Internet and Web Applications and Services ICIW'06 February 23-25, 2006 Guadeloupe, French Caribbean

222) Ahmet Sayar, Marlon Pierce and Geoffrey Fox Integrating AJAX Approach into GIS Visualization Web Services Proceedings of IEEE International Conference on Internet and Web Applications and Services ICIW'06 February 23-25, 2006 Guadeloupe, French Caribbean

223) Sayar, M. Pierce, G. C. Fox DEVELOPING GIS VISUALIZATION WEB SERVICES FOR GEOPHYSICAL APPLICATIONS ISPRS International Society for Photogrammetry and Remote Sensing Workshop Commission II WG/2 METU, Ankara, Turkey, November, 24-25, 2005

224) Mehmet S. Aktas, Geoffrey C. Fox, Marlon Pierce Information Services for Dynamically Assembled Semantic Grids Proceedings of 1st International Conference on SKG2005 Semantics, Knowledge and Grid Beijing China November 27-29 2005

225) Beytullah Yildiz, Shrideep Pallickara, Geoffrey Fox Experiences in Deploying Services

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226)   Gang Zhai, Geoffrey Fox, Marlon Pierce, Wenjun Wu, Hasan Bulut eSports: Collaborative and Synchronous Video Annotation System in Grid Computing Environment Proceedings of IEEE International Symposium on Multimedia (ISM2005), Pages 95-103, IEEE Computer Society, December 12-14, 2005 Irvine, California, USA, DOI

227)   Geoffrey C. Fox, Mehmet S. Aktas, Galip Aydin, Hasan Bulut, Shrideep Pallickara, Marlon Pierce, Ahmet Sayar, Wenjun Wu, and Gang Zhai Real Time Streaming Data Grid Applications Invited talk at TIWDC 2005 CNIT Tyrrhenian International Workshop on Digital Communications July 4-6 2005

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