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## Addresses

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Bloomington IN 47408

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Digital Science Center  
Pervasive Technology Institute  
2719 E. 10th St.  
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
Theoretical Physics	Ph.D.	1964-1967	Theoretical Physics
Cambridge University	M.A.	1968	

## Professional Experience

2011- Distinguished Professor, Indiana University  
2011- IV-endowed Chair Professor Tsinghua University  
2010-2012 Member of Board Open Grid Forum  
2009- 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-)

### **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) Zhenhua Guo [HIGH PERFORMANCE INTEGRATION OF DATA PARALLEL FILE SYSTEMS AND COMPUTING: OPTIMIZING MAPREDUCE](#) Indiana University PhD August 31 2012
- 2) Seung-Hee Bae [Scalable High Performance Dimension Reduction](#), Indiana University PhD January 17 2012
- 3) Jong Youl Choi [Unsupervised Learning Of Finite Mixture Models With Deterministic Annealing For Large-scale Data Analysis](#), Indiana University PhD January 12 2012
- 4) Jaliya Ekanayake [ARCHITECTURE AND PERFORMANCE OF RUNTIME ENVIRONMENTS FOR DATA INTENSIVE SCALABLE COMPUTING](#) Indiana University PhD December 20 2010
- 5) Ali Kaplan [Collaborative Framework for High-Performance P2P-based Data Transfer in Scientific Computing](#) Indiana University PhD April 28 2009
- 6) Ahmet Topcu [INTEGRATED COLLABORATIVE INFORMATION SYSTEMS](#) Indiana University PhD March 23 2009
- 7) Ahmet Sayar [High Performance, Federated, Service-Oriented Geographic Information Systems](#) Indiana University PhD January 28 2009
- 8) Ahmet Fatih Mustacoglu [Event-based Infrastructure for Reconciling Distributed Annotation Records](#) Indiana University PhD July 31 2008
- 9) Mehmet Nacar [A COMPONENT FRAMEWORK FOR BUILDING WEB SCIENCE GATEWAYS AND PORTALS](#) Indiana University PhD November 27 2007
- 10) Kangseok Kim [A FRAMEWORK FOR SYNCHRONOUS AND UBIQUITOUS COLLABORATION](#) Indiana University PhD September 26 2007
- 11) Beytullah Yildiz [Distributed Handler Architecture \(DHArch\)](#) Indiana University PhD May 28 2007
- 12) Mehmet Aktas [Information Federation in Grid Information Services](#) Indiana University PhD May 3 2007
- 13) Hasan Bulut [HIGH PERFORMANCE RECORDING AND MANIPULATION OF DISTRIBUTED STREAMS](#) Indiana University PhD April 24 2007
- 14) Harshawardhan Gadgil [SCALABLE, FAULT-TOLERANT MANAGEMENT OF GRID SERVICES: APPLICATION TO MESSAGING MIDDLEWARE](#) Indiana University PhD April 5 2007
- 15) Galip Aydin [Service Oriented Architecture for Geographic Information Systems Supporting Real Time Data Grids](#) Indiana University PhD January 15 2007
- 16) Gurhan Gunduz [A Framework for Network Monitoring and Performance Based Routing in Distributed Middleware Systems](#) Syracuse University PhD October 25 2006
- 17) Minjun Wang [GRID-BASED COLLABORATION](#) Syracuse University Computer Engineering August 2 2006
- 18) Sangyoon Oh [Optimizing Web Service Performance in Mobile Computing](#) Indiana University PhD Computer Science August 1 2006

- 19) Jungkee Kim [Hybrid Search across peer-to-peer Federated Data](#) Florida State University April 6 2005
- 20) Ahmet Uyar [Scalable Service Oriented Architecture for Audio/Video Conferencing](#) Syracuse University March 23 2005
- 21) 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)
- 22) Sang Lim [PLATFORMS FOR HPJAVA: RUNTIME SUPPORT FOR SCALABLE PROGRAMMING IN JAVA](#) Florida State University June 11 2003
- 23) Han-Ku Lee [TOWARDS EFFICIENT COMPILATION OF THE HPJAVA LANGUAGE FOR HIGH PERFORMANCE COMPUTING](#) Florida State University June 12 2003
- 24) Sangmi Lee [A Modular Data Pipelining Architecture \(MDPA\) for enabling Universal Accessibility in P2P Grids](#) Florida State University July 3 2003
- 25) Choonhan Youn [Web Services Based Architecture in Computational Web Portals](#) Syracuse University November 7 2003
- 26) Shrideep Pallickara, [A Grid Event Service](#), Syracuse University 2001
- 27) Yuh-Jye Chang, [Architecture of fine-grained data flow network programming environment](#), Syracuse University 2000
- 28) M. A. Saleh Elmohammed, [Algorithms and heuristics for combinatorial optimization problems: Case study of academic course scheduling](#), Syracuse University 2000
- 29) Sung-Hoon Ko, [Object-based message passing in high performance computing using Java](#), Syracuse University 2000
- 30) Myeongjin Lee, [Information architecture of interactive and customizable learning environments](#), Syracuse University 2000
- 31) Tseng-Hui Lin, [Parallelizing legacy applications using message passing programming model and the example of MOPAC](#), Syracuse University 2000
- 32) Bokyun Na, [System model and taxonomy for host-network interfaces](#), Syracuse University 2000
- 33) Mehmet Sen, [Distributed open asynchronous information access environment](#), Syracuse University 2000
- 34) Erol Akarsu, [Integrated Three-Tier Architecture for High-Performance Commodity Metacomputing](#), Syracuse University 1999.
- 35) Alvin Leung, [Real-time interactive client-server terrain rendering](#), Syracuse University 1997
- 36) Kivanc Dincer, [World-wide virtual machine: A metacomputing environment integrating World Wide Web and high performance computing and communications technologies](#), Syracuse University 1997
- 37) David Edelsohn [Random interactions with disk galaxies](#) Syracuse University 1996
- 38) Gang Cheng, [A dataflow-based software integration model in parallel and distributed computing and applications](#), Syracuse University 1996

- 39) Gregor von Laszewski, [\*A parallel data assimilation system and its implications on a metacomputing environment\*](#), Syracuse University 1996
- 40) Nawal Copt, [\*Language and runtime support for the execution of hierarchical clustering applications on distributed-memory machines\*](#), Syracuse University 1995
- 41) David Koester, [\*Parallel block-diagonal-bordered sparse linear solvers for power systems applications\*](#), Syracuse University 1995
- 42) Leiping Han, [\*Monte Carlo Simulations of Random Surfaces with Extrinsic Curvature\*](#), Syracuse University Physics 1995
- 43) Zeki Bozkus, [\*Compiling Fortran 90D/HPF for Distributed Memory MIMD computers\*](#), Syracuse University 1995
- 44) Zheng-Yao Su, *The Hierarchical Algorithms: Theory and Applications*, Caltech 1994.
- 45) John Apostolakis, *Asymptotic scaling in the two-dimensional  $O(3)$  nonlinear sigma model: A Monte Carlo study on parallel computers*, Caltech 1994
- 46) Nashat Mansour. [\*Physical Optimization Algorithms for Mapping Data to Distributed-Memory Multiprocessors\*](#), Syracuse University 1992
- 47) Ken Rose, *Deterministic Annealing, Clustering, and Optimization*, Electrical Engineering, Caltech 1990
- 48) John K. Salmon, *Parallel Hierarchical N-Body Methods*, Caltech, 1990.
- 49) Roberto Battiti, *Multiscale Methods, Parallel Computation, and Neural Networks for Computer Vision*,. Computation and Neural Systems, Caltech 1990
- 50) Paul Stolorz, *NUMERICAL SIMULATIONS OF LATTICE QCD (MONTE CARLO, LATTICE GAUGE THEORY*, Caltech 1987
- 51) Jon Flower, *Lattice gauge theory on a parallel computer*, Caltech 1987
- 52) Adam Kolawa. *Semi-analytical Calculation of the  $0^{++}$  Glueball Mass in  $SU(2)$  Gauge Theory*, Caltech 1986
- 53) Eric Mjolsness, *NEURAL NETWORKS, PATTERN RECOGNITION, AND FINGERPRINT HALLUCINATION (COLLECTIVE COMPUTATION)*, Caltech 1986
- 54) Mark Johnson, *Concurrent Computation and its Application to the Study of Melting in Two Dimensions*. Caltech 1986
- 55) Apoorva Patel, *Monte Carlo Renormalization Group for Lattice QCD*, Caltech 1984
- 56) Steve Otto, *Monte Carlo Methods in Lattice Gauge Theories*, Caltech 1983.
- 57) Michael Shatz, *A QCD Based Model of Hadron Hadron Scattering*, Caltech 1983
- 58) Sarbmeet Kanwal, *A Leading Order QCD Computation of  $\pi\pi$  Elastic Scattering*, Caltech 1983
- 59) Rajan Gupta, *Mass Gap and Scaling in the  $O(3)$  Sigma Model in 1+1 Dimension*, Caltech 1982
- 60) Kar Woo Yung, *Study of hadronic jets produced by charged pion and proton beams incident on hydrogen and aluminum targets*, Caltech 1980
- 61) James Rohlf, *JET PRODUCTION IN HIGH-ENERGY HADRON-PROTON COLLISIONS*, Caltech 1980

- 62) Stuart Stampke, *PION-PION DECAY DISTRIBUTIONS FOR PION(-) PROTON --> PION(+)* *PION(-) NEUTRON AT 100 AND 175 GEV/C*, Caltech 1982
- 63) Stephen Wolfram, *Some topics in theoretical high-energy physics*, Caltech 1980
- 64) Daniel Novoseller, *PION-EXCHANGE IN A PARTIAL WAVE ANALYSIS OF PION-NUCLEON ---> NUCLEON,PION,PION*, Caltech 1977
- 65) 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 1983-2013, 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-now 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

### **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 3<sup>rd</sup> International Conference on e-Science and Grid Computing", Program Chair



- 16) Indianapolis, Indiana, December 7-12 2008, "[The 4<sup>th</sup> 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 2<sup>nd</sup> 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

### Publications: Introduction

[According to Google Scholar result](#), I have over 21000 citations, 1200 papers and an h-index of 63.



The above chart gives citations per year from Google Scholar ending at December 20 2012.

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 1055 “papers”.

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://grids.ucs.indiana.edu/ptliupages/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](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

### 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

### **Open Source Software and Resources: SALSA Laboratory**

- 6) [Twister Iterative MapReduce for Java applications](#)
- 7) [Twister Iterative MapReduce for Azure](#)
- 8) [MapReduce for Azure](#)
- 9) [Plotviz 3D viewer for study of clustering](#)

### **Open Source Software and Resources: Older Projects**

- 10) This hosts [open-source software from the Chemical Informatics and Cyberinfrastructure Collaboratory](#) at Indiana University
- 11) [Multi-institution Grid Portal](#) (Open Grid Computing Environment) resource
- 12) [Open Geospatial Consortium standards compliant Web Services for Geographical Information Systems](#). Core Software for SERVOnet Complexity Computational Environment.
- 13) [Service oriented audio-video conferencing and collaboration environment](#) (this software is no longer supported)
- 14) [Parallel Java Compiler and mpiJava Java binding to MPI](#)
- 15) Multimedia digital objects (<http://www.undergroundfilm.org/> was taken off the air and rehosted commercially May 2007 due to support funding issues)
- 16) [Core Grid and Web Service software including Extended UDDI, WS-Context, Calendaring Service and older GXOS and XML Nuggets](#).
- 17) [Performance Measurements and Kernel Software on multicore chips](#)
- 18) [Grid and Web Service publish-subscribe messaging infrastructure](#)
- 19) [e-Science Live Audio-Video broadcasting site Live site integrating live and archived video and audio feeds, chats, and blogs for E-Science 2008](#). **(Temporarily unavailable)**

### **Publications: Published Journal Articles 2005 – December 2012**

- 1) Thilina Gunarathne, Bimalee Salpitikorala, Arun Chauhan, Geoffrey Fox “[Iterative Statistical Kernels on Contemporary GPUs](#)” Technical report April 11 2012, accepted for publication in International Journal of Computational Science and Engineering (IJCSSE)
- 2) Rajarshi Guha, Gary D. Wiggins, David J. Wild, Mu-Hyun Baik, Marlon E. Pierce, and Geoffrey C. Fox [Improving usability and accessibility of cheminformatics tools for chemists through cyberinfrastructure and education](#) April 18 2007 published in In Silico Biology 11 (2011/2012) 41-60 <http://dx.doi.org/10.3233/CI-2008-0015>
- 3) John Rundle and Geoffrey Fox, “[Computational Earthquake Science](#)”, Editorial for Computing in Science & Engineering Special Issue 14(5): p. 7-9.
- 4) Andrea Donnellan, Jay Parker, Margaret Glasscoe, Eric De Jong, Marlon Pierce, Geoffrey

- Fox, Dennis McLeod, John Rundle, Davis Lisa Grant Ludwig “[A Distributed Approach to Computational Earthquake Science: Opportunities and Challenges Computing in Science and Engineering](#)” Vol. 14(5): p. 31-42.
- 5) Jun Wang, Marlon E. Pierce, Yu Ma, Geoffrey C. Fox, Andrea Donnellan, Jay W. Parker, Margaret Glasscoe “[Using Service-Based Geographical Information System to Support Earthquake Research and Disaster Response](#)” Computing in Science and Engineering 2012. 14(5): p. 21-30.
  - 6) Shrideep Pallickara and Geoffrey Fox. “[Enabling Hierarchical Dissemination of Streams in Content Distribution Networks](#)”. Concurrency and Computation: Practice & Experience. Vol. 24 (14), pp. 1594-1606. 2012. John-Wiley
  - 7) Lizhe Wang, Gregor von Laszewski, Fang Huang, Jai Dayal, Tom Furlani, Geoffrey Fox “[Task scheduling with ANN-based temperature prediction in a data center: a simulation-based study](#)”, Engineering with Computers (2011) 27:381–391 DOI 10.1007/s00366-011-0211-4
  - 8) Adam Hughes, Yang Ruan, Saliya Ekanayake, Seung-Hee Bae, Qunfeng Dong, Mina Rho, Judy Qiu, Geoffrey Fox “[Interpolative Multidimensional Scaling Techniques for the Identification of Clusters in Very Large Sequence Sets](#)” Special Issue of BMC Bioinformatics for Proceedings of GLBIO Great Lakes Bioinformatics Conference Ohio University Athens Ohio May 2-4 2011
  - 9) Geoffrey Fox “[Editorial for Advanced Theory and Practice for High Performance Computing and Communications Special Issue of Concurrency & Computation: Practice & Experience](#)” August 23 2011
  - 10) Johan Bollen, Geoffrey Fox, and Prashant Raj Singhal “[How and where the TeraGrid supercomputing infrastructure benefits science](#)” Journal of Informetrics published online October 23 2010
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- 3) Geoffrey Fox [Computational Sciences and Parallelism](#) in Encyclopedia on Parallel Computing ISBN 978-0-387-09765-7 edited by David Padua and published by Springer September 8, 2011,
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- 2) Jerome E. Mitchell, David Crandall, Geoffrey Fox, and John Paden, "[Automatic Near Surface Estimation from Radar Imagery](#)" Abstract 2012 AGU Fall [Meeting](#) 3-7 December 2012, at the Moscone Convention Center, San Francisco, California
- 3) Geoffrey Fox, José A.B. Fortes "[Computing Research Testbeds as a Service: Supporting large scale Experiments and Testing](#)" Technical Report July 31 2012 Birds of a Feather on November 13 2012 at SC12 International [Conference](#) for High Performance Computing, Networking, Storage and Analytics, Salt Lake City Utah November 10-16 2012
- 4) Manish Parashar, Geoffrey Fox, Kate Keahey "[Science-as-a-Service: Exploring Clouds for Computational and Data-Enabled Science and Engineering](#)" Technical Report July 31 2012 Birds of a Feather on November 13 2012 at SC12 International [Conference](#) for High Performance Computing, Networking, Storage and Analytics, Salt Lake City Utah November 10-16 2012
- 5) Hui Li, Geoffrey Fox, Judy Qiu "[Performance Model for Parallel Matrix Multiplication with Dryad: Dataflow Graph Runtime](#)" 2012 International [Symposium](#) on Big Data and MapReduce (BigDataMR2012) 01-03 November 2012, Xiangtan, Hunan, China
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- 12) Yang Ruan, Saliya Ekanayake, Mina Rho, Haixu Tang, Seung-Hee Bae, Judy Qiu, Geoffrey Fox “[DACIDR: Deterministic Annealed Clustering with Interpolative Dimension Reduction using a Large Collection of 16S rRNA Sequences](#)” ACM [Conference](#) on Bioinformatics, Computational Biology and Biomedicine (ACM BCB) Orlando Florida October 7-10 2012
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- 17) David J. Crandall, Geoffrey C. Fox, John D. Paden “[Layer-finding in Radar Echograms using Probabilistic Graphical Models](#)” Proceedings of twenty-first [conference](#) of the International Association for Pattern Recognition (IAPR), November 11-15, 2012 at the Tsukuba International Congress Center, Tsukuba, Japan, submitted July 16 2012
- 18) Jerome Mitchell, Judy Qiu, Massimo Canonico, Shantenu Jha, Linda Hadyen, Barbara Ann O’Leary, Renato Figueiredo, Geoffrey Fox FutureGrid [Education: Using Case Studies to Develop A Curriculum for Communicating Parallel and Distributed Computing Concepts](#) Presented at [XSEDE12](#) Conference July 16-20, 2012, InterContinental

- (Magnificent Mile), Chicago
- 19) Judy Qiu and Geoffrey Fox “[MapReduce and Data Intensive Applications](#)” Prepared May 15 2012 for Birds of a Feather at [XSEDE12](#) Conference July 16-20, 2012, InterContinental (Magnificent Mile), Chicago
  - 20) Geoffrey Fox, Renato Figueiredo, Barbara Ann O'Leary [Hosting Cloud, HPC and Grid Educational Activities](#) on FutureGrid Prepared May 15 2012 for Birds of a Feather at [XSEDE12](#) Conference July 16-20, 2012, InterContinental (Magnificent Mile), Chicago
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  - 22) Gregor von Laszewski, Javier Diaz, Fugang Wang, Geoffrey Fox “[Comparison of Multiple Cloud Frameworks](#)” Technical Report May 6 2012 in Proceedings of [IEEE CLOUD 2012](#) 5th International Conference on Cloud Computing June 24-29 2012, Hyatt Regency Waikiki Resort and Spa, Honolulu, Hawaii, USA
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  - 24) Gabriel Antoniu, Götz Brasche, Shane Canon, Geoffrey Fox “Science Clouds Experiences: Sunny, Cloudy or Rainy?” Panel at Science Clouds [Workshop](#) of ACM [HPDC](#) 2012 conference at Delft the Netherlands
  - 25) 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
  - 26) Yang Ruan, Zhenhua Guo, Yuduo Zhou, Judy Qiu, Geoffrey Fox “[HyMR: a Hybrid MapReduce Workflow System](#)” Technical Report April 23 2012, Proceedings of Emerging Computational Methods for the Life Sciences Workshop ECMLS2012 of ACM [HPDC](#) 2012 conference at Delft the Netherlands
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  - 29) Geoffrey C. Fox, Supun Kamburugamuve, Ryan Hartman “[Architecture and Measured Characteristics of a Cloud Based Internet of Things API](#)” Workshop 13-IoT Internet of Things, Machine to Machine and Smart Services Applications (IoT 2012) at The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012) May 21-25, 2012 The Westin Westminster Hotel Denver, Colorado, USA, Technical Report February 14 2012
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- 31) Jai-Hoon Kim, Kangseok Kim and Geoffrey Fox “Analysis for Optimal Degree of Replication” Technical Report January 3 2012 Information Science and Technology Conference IST2012 Shanghai China April 28-30 2012
  - 32) Jai-Hoon Kim, Sanghyuk Park, Geoffrey Fox “[Real-Time Scheduling in Cyber-Physical Systems](#)” Abstract Accepted in 2012 International [Conference](#) on Computer and Applications March 30-31, 2012 at Olympic Parktel, Seoul, Korea
  - 33) Geoffrey Fox “[Deterministic Annealing and Robust Scalable Data mining for the Data Deluge](#)” Invited talk at Petascale Data Analytics: Challenges, and Opportunities (PDAC-11) Workshop at SC11 Seattle November 14 2011
  - 34) 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
  - 35) 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.
  - 36) Jay W Parker, Andrea Donnellan, Robert A Granat, Gregory A Lyzenga, Margaret T Glasscoe, Dennis McLeod, Rami Al-Ghanmi, Marlon Pierce, Geoffrey Fox, Lisa Grant Ludwig, John Belting Rundle “[QuakeSim: a Web Service Environment for Productive Investigations with Earth Surface Sensor Data](#)” Fall AGU Meeting San Francisco CA December 5-9 2011
  - 37) 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
  - 38) 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
  - 39) 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
  - 40) 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
  - 41) 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
  - 42) 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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- 44) Thilina Gunarathne, Bimalee Salpitikorala, Arun Chauhan, Geoffrey Fox “[Optimizing OpenCL Kernels for Iterative Statistical Applications on GPUs](#)” 2nd International Workshop on GPUs and Scientific Applications (GPUScA 2011), Galveston Island, Texas, USA, October 10, 2011, in conjunction with PACT 2011
- 45) 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
- 46) 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
- 47) 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
- 48) Javier Diaz, Gregor Von Laszewski, Fugang Wang, Geoffrey C Fox “[Towards Generic FutureGrid Image Management](#)” presented at TG 11 (TeraGrid '11: Extreme Digital Discovery) Marriott Salt Lake City July 19 2011
- 49) 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
- 50) Geoffrey Fox, Gregor von Laszewski, Renato Figueiredo “[FutureGrid Tutorial](#)” presented at OGF32 Marriott Salt Lake City July 17 2011
- 51) 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 International Conference on Cloud Computing (CLOUD 2011) July 4-9, 2011, Washington Marriott, Washington DC, USA updated April 2011
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- 53) Judy Qiu, Thilina Gunarathne, Geoffrey Fox “[Classical and Iterative MapReduce on Azure](#)” Abstract for Cloud Futures 2011 workshop Microsoft Conference Center Building 33 Redmond, Washington United States, June 2–3, 2011
- 54) Geoffrey Fox, Alex Ho, and Eddy Chan, “[Measured Characteristics of FutureGrid Clouds for Scalable Collaborative Sensor-Centric Grid Applications](#)” IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, Waleed Smari, Editor. May 23-27 2011, Philadelphia.
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- 60) Thilina Gunarathne, Judy Qiu, Geoffrey Fox “[Iterative MapReduce for Azure Cloud](#)” in Proceedings of CCA11 Cloud Computing and Its Applications April 12-13, 2011
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- 63) Seung-Hee Bae, Judy Qiu, Geoffrey C. Fox “[Multidimensional Scaling by Deterministic Annealing with Iterative Majorization algorithm](#)” Proceedings of IEEE eScience 2010 Conference, Brisbane, Australia 7 - 10 December 2010
- 64) Bingjing Zhang, Yang Ruan, Tak-Lon Wu, Judy Qiu, Adam Hughes, Geoffrey Fox “[Applying Twister to Scientific Applications](#)” Proceedings of CloudCom 2010 Conference IUPUI Conference Center Indianapolis November 30-December 3 2010
- 65) Thilina Gunarathne, Tak-Lon Wu, Judy Qiu, Geoffrey Fox “[MapReduce in the Clouds for Science](#)” Proceedings of CloudCom 2010 Conference IUPUI Conference Center Indianapolis November 30-December 3 2010
- 66) Xiaoming Gao, Yu Ma, Marlon Pierce, Mike Lowe, Geoffrey Fox “[Building a Distributed Block Storage System for Cloud Infrastructure](#)” Proceedings of CloudCom 2010 Conference IUPUI Conference Center Indianapolis November 30-December 3 2010
- 67) Gregor von Laszewski, Geoffrey C. Fox, Fugang Wang, Andrew Younge, Archit Kulshrestha, Warren Smith, Jens Vockler, Renato J. Figueiredo, Jose Fortes, Kate Keahey “[Design of the FutureGrid Experiment Management Framework](#)” GCE Workshop at SC10 November 14 2010
- 68) 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
- 69) 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
- 70) Geoffrey Fox “[Cloud Architecture for Earthquake Science](#)” Abstract for 7th ACES International Workshop OTARU, October 3-8, 2010
- 71) Donnellan, A., Parker, J., Granat, R., Lyzenga, G., Glasscoe, M., Rundle, J., McLeod, D., Al-Ghanmi, R., Pierce, M., Fox, G. and Ludwig, L. G. “[QuakeSim Earthquake Modeling, Forecasting, and Data Access Tools](#)” Abstract for 7th ACES International Workshop



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- 74) Beytullah Yildiz and Geoffrey Fox "Measuring Overhead for Distributed Web Service Handler" Proceedings of 3rd IEEE International Conference on Computer Science and Information Technology (ICCSIT 2010) 9-11 July 2010 pages 566 – 570. [DOI](#)
- 75) Judy Qiu, Thilina Gunarathne, Jaliya Ekanayake, Jong Youl Choi, Seung-Hee Bae, Hui Li, Bingjing Zhang, Yang Ryan, Saliya Ekanayake, Tak-Lon Wu, Scott Beason, Adam Hughes, Geoffrey Fox "[Hybrid Cloud and Cluster Computing Paradigms for Life Science Applications](#)" 11th Annual Bioinformatics Open Source Conference BOSC 2010 July 9-10 2010
- 76) Geoffrey Fox "[Algorithms and Application for Grids and Clouds](#)" Keynote Talk at 22nd ACM Symposium on Parallelism in Algorithms and Architectures Santorini, Greece June 13 - 15, 2010
- 77) 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
- 78) Thilina Gunarathne, Tak-Lon Wu, Judy Qiu, and Geoffrey Fox, "[Cloud Computing Paradigms for Pleasingly Parallel Biomedical Applications](#)" March 21 2010. Proceedings of Emerging Computational Methods for the Life Sciences Workshop of ACM HPDC 2010 conference, Chicago, Illinois, June 20-25, 2010.
- 79) 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.
- 80) Jaliya Ekanayake, Hui Li, Bingjing Zhang, Thilina Gunarathne, Seung-Hee Bae, Judy 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.
- 81) 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
- 82) 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
- 83) 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.
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- 85) 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
- 86) 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
- 87) 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
- 88) 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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- 90) 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
- 91) 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
- 92) 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
- 93) 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
- 94) 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

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- 96) 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
- 97) 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
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- 99) Marlon Pierce and Geoffrey Fox [QuakeSim Web Computing Infrastructure](#) Abstract for Asia Oceania Geosciences Society [Meeting](#) in Singapore AOGS2009 August 11-15 2009
- 100) 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
- 101) 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
- 102) Richard Alo, Karl Barnes , Diane Baxter, Julie Foertsch , Geoffrey Fox, Al Kuslikis, Alex Ramirez [CyberInfrastructure \(CI\) Days at Minority-Serving Institutions \(MSIs\): A MSI-CIEC Update in a Changing Climate](#) Poster at TeraGrid 09 [meeting](#) Hyatt Regency Crystal City. June 22-25 2009
- 103) Siddharth Maini, Joshua Rosen, Marlon E. Pierce, Geoffrey C. Fox [AVATS: Audio-Video and Textual Synchronization](#) Proceedings 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
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- 105) Tao Huang, Shrideep Pallickara, Geoffrey Fox [A Distributed Framework for Collaborative Annotation of Streams](#) Proceedings 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
- 106) Geoffrey Fox [Summary of Cloud Systems Birds of a Feather](#) session at [OGF22](#) Hyatt Regency Cambridge MA February 27 2008
- 107) 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
- 108) 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

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- 112) 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
- 113) 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
- 114) 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
- 115) 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
- 116) 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
- 117) Shantenu Jha, Andre Merzky and Geoffrey Fox [Programming Abstractions for Clouds](#) CCA-08 Cloud Computing and its Applications Chicago ILL October 22-23 2008
- 118) 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)
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- 120) 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
- 121) 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

- 122) 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
- 123) 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
- 124) 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.
- 125) 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
- 126) 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
- 127) 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
- 128) 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
- 129) Xiaohong Qiu, Geoffrey C. Fox, Huapeng Yuan, Seung-Hee Bae, George Chrysanthakopoulos, Henrik Frystyk Nielsen [Performance of Multicore Systems on Parallel Data Clustering with Deterministic Annealing](#) ICCS 2008: "Advancing Science through Computation" [Conference](#); ACC CYFRONET and Institute of Computer Science AGH University of Science and Technology Kraków, POLAND; June 23-25, 2008. Springer Lecture Notes in Computer Science Volume 5101, pages 407-416, 2008. [DOI](#)
- 130) 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.
- 131) 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.
- 132) 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
- 133) 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
- 134) Xiaohong Qiu, Geoffrey Fox, H. Yuan, Seung-Hee Bae, George Chrysanthakopoulos, Henrik Frystyk Nielsen [High Performance Multi-Paradigm Messaging Runtime Integrating Grids and Multicore Systems](#) (updated from [original](#)) September 23 2007 to be published in proceedings of eScience 2007 [Conference](#) Bangalore India December 10-13 2007
- 135) 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
- 136) 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
- 137) 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
- 138) 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
- 139) 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
- 140) 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
- 141) 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
- 142) 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
- 143) 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
- 144) 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.

- 145) 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
- 146) 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
- 147) Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara, Marlon Pierce [Scalable, Fault-tolerant Management of Grid Services](#) to appear in Proceedings of [IEEE Cluster 2007](#)
- 148) 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
- 149) Xiaohong Qiu [Multi-Paradigm Run Time MPR for Multicore Systems](#) Position Paper for Microsoft Multicore Computing Workshop Seattle June 20-21 2007
- 150) 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)
- 151) 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)
- 152) 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
- 153) 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)
- 154) 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
- 155) 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
- 156) 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
- 157) 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
- 158) 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

- 159) 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.
- 160) 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
- 161) 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
- 162) Mehmet S. Aktas, Sangyoon Oh, Geoffrey C. Fox, and Marlon E. Pierce [XML Metadata Services](#) Proceedings of [SKG2006](#) Guilin China October 31 - November 3 2006.
- 163) Fang Juan, Geoffrey Fox, Marlon Pierce [Grid Portal System Based on GPIR](#) Proceedings of [SKG2006](#) Guilin China October 31 - November 3 2006.
- 164) 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.
- 165) 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.
- 166) 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
- 167) 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
- 168) 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](#)
- 169) 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
- 170) 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
- 171) 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
- 172) Mehmet S. Aktas, Geoffrey C. Fox, Marlon Pierce [Information Services for Dynamically Assembled Semantic Grids](#) IEEE Proceedings of 1st International [Conference](#) on SKG2005 Semantics, Knowledge and Grid Beijing China November 27-29 2005 page 10 [DOI](#)
- 173) Geoffrey Fox [Collaboration and Community Grids](#) Special Session VI: [Collaboration and Community Grids](#) 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, pp 419-428. ISBN 0-9785699-0-3 [DOI](#)
- 174) Ahmet Fatih Mustacoglu, Wenjun Wu, and Geoffrey Fox [Internet Calendaring and Scheduling Core Object Specification \(iCalendar\) Compatible Collaborative Calendar-Server \(CCS\) Web Services](#) 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, pp12-17. ISBN 0-9785699-0-3 [DOI](#)
- 175) 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](#)
- 176) Minjun Wang, Geoffrey Fox and Marlon Pierce [Collaboration Entities on Deterministic Finite Automata](#) 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, pp26-37. ISBN 0-9785699-0-3 [DOI](#)
- 177) Hyunju Kim, Loretta Moore, Robert Whalin, Geoffrey Fox, [An Experience on a Distance Education Course over the Access Grid Nodes](#) Proceedings of 4th International Conference on Education and Information Systems, Technologies and Applications ([EISTA 2006](#)) Orlando, USA, July 20-23, 2006.
- 178) Shrideep Pallickara, Geoffrey Fox, Beytullah Yildiz, Sangmi Lee Pallickara, Sima Patel and Damodar Yemme [An Analysis of the Costs for Reliable Messaging in Web/Grid Service Environments](#) Proceedings of the 2005 IEEE International [Conference](#) on e-Science & Grid Computing. December 5-8 2005, Melbourne, Australia
- 179) Shrideep Pallickara, Harshawardhan Gadgil and Geoffrey Fox [On the Discovery of Topics in Distributed Publish/Subscribe systems](#) Proceedings of the IEEE/ACM [GRID 2005 Workshop](#), pp 25-32. November 13-14 2005 Seattle, WA. Also selected as one of the six best papers at the workshop Pages 25-32 [DOI](#)
- 180) 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
- 181) 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
- 182) 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
- 183) 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
- 184) 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
- 185) Beytullah Yildiz, Shrideep Pallickara, Geoffrey Fox [Experiences in Deploying Services within the Axis Container](#) Proceedings of IEEE International Conference on Internet and Web Applications and Services [ICIW'06](#) February 23-25, 2006 Guadeloupe, French Caribbean, with [Older version](#) Technical Report October 2005
- 186) 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](#)
- 187) 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
- 188) Geoffrey Fox, Galip Aydin, Harshawardhan Gadgil, Shrideep Pallickara, Marlon Pierce, and Wenjun Wu [Management of Real-Time Streaming Data Grid Services](#) Invited talk at Fourth International Conference on Grid and Cooperative Computing ([GCC2005](#)), held in Beijing, China, during Nov 30-Dec 3, 2005 and [Longer Version](#)
- 189) Jungkee Kim, Geoffrey Fox, and Seong-Joon Yoo. [Data Integration Hub for a Hybrid Paper Search](#). In *Proceedings of 9th International [Conference](#) on Knowledge-based & Intelligent Information & Engineering Systems (KES)* , pages 170-176 volume 3683 [DOI](#) of *Lecture Notes in Artificial Intelligence*. Melbourne Australia 14-16 September, 2005.
- 190) Sang Boem Lim, Bryan Carpenter, Geoffrey Fox, and Han-Ku Lee, [Collective Communications for Scalable Programming](#) Proceedings of Third International [Symposium](#) on Parallel and Distributed Processing and Applications ([ISPA'05](#)), Nanjing , China November 2-5 2005. Springer-Verlag Lecture Notes in Computer Science, Volume 3758, Oct 2005, Pages 286 - 297 [DOI](#)
- 191) Sang Lim, Geoffrey Fox, Ali Kaplan, Shrideep Pallickara and Marlon Pierce [GridFTP and Parallel TCP Support in NaradaBrokering](#) Proceedings of 6th International Conference on Algorithms and Architectures for Parallel Processing [ICA3PP 2005](#) Melbourne Australia. October 2-5 2005. Springer-Verlag Lecture Notes in Computer Science, Volume 3719, Page 93-102 [DOI](#)
- 192) Sang Boem Lim, Bryan Carpenter, Geoffrey Fox, and Han-Ku Lee, [A Low--Level Communication Library for Java HPC](#) Proceedings of 6th International Conference on Algorithms and Architectures for Parallel Processing. [ICA3PP 2005](#) Melbourne

- Australia. October 2-5 2005. Springer-Verlag Lecture Notes in Computer Science, Volume 3719, Pages 429 - 434 [DOI](#)
- 193) Jungkee Kim and Geoffrey Fox. [Scalable Hybrid Search on Distributed Databases](#). In *Proceedings of 3rd International Workshop on Autonomic Distributed Data and Storage Systems Management (ADSM'05)* in conjunction with [ICCS 2005](#), May 22-25 2005, Atlanta GA. Lecture Notes in Computer Science, Springer-Verlag Volume 3516, Pages 431 - 438. [DOI](#)
- 194) Geoffrey Fox, Alex Ho, Shrideep Pallickara, Marlon Pierce, Wenjun Wu [Grids for the GiG and Real Time Simulations](#) Proceedings of Ninth IEEE International [Symposium DS-RT 2005](#) on Distributed Simulation and Real Time Applications, pages 129-138 IEEE Computer Society [DOI](#), Montreal October 10-12 2005
- 195) Taylor, S.J.E.; Fox, G.; Fujimoto, R.; Pullen, J.M.; Roberts, D.J.; Theodoropoulos, G.K. [Revisiting Distributed Simulation and the Grid: A Panel](#) Distributed Simulation and Real-Time Applications, 2005. [DS-RT 2005](#) Proceedings. Ninth IEEE International Symposium Page 161. [DOI](#), Montreal October 10-12 2005
- 196) Shrideep Pallickara, Harshawardhan Gadgil and Geoffrey Fox [On the Discovery of Brokers in Distributed Messaging Infrastructures](#) Proceedings of [IEEE Cluster 2005](#), September 27 - 30, 2005, Boston, Massachusetts, USA
- 197) Ahmet Sayar, Marlon Pierce and Geoffrey Fox, [Message Exchange for Web Service-Based Mapping Services](#), Proceedings of [GeoInformatics'05](#), Toronto Canada 17-19 August 2005.
- 198) Harshawardhan Gadgil, Geoffrey Fox, Marlon Pierce, Shrideep Pallickara [HPSearch: Service Management & Administration Tool](#) Abstract for VLAB Meeting Minnesota July 21-23 2005
- 199) Ahmet Uyar, Wenjun Wu, Hasan Bulut, Geoffrey Fox. [Service-Oriented Architecture for a Scalable Videoconferencing System](#) Proceedings of IEEE International [Conference](#) on Pervasive Services 2005 (ICPS'05) July 2005, Santorini, Greece.
- 200) Sang Boem Lim, Bryan Carpenter, Geoffrey Fox, and Han-Ku Lee, [Implementation of Collectives for Scalable Programming in Java](#), Proceedings of 2005 International Conference on Parallel and Distributed Processing Techniques and Applications ([PDPTA'05](#): June 27-30, 2005, Las Vegas, USA)
- 201) Mehmet Aktas, Galip Aydin, Andrea Donnellan, Geoffrey Fox, Robert Granat, Greg Lyzenga, Dennis McLeod, Shrideep Pallickara, Jay Parker, Marlon Pierce, John Rundle, and Ahmet Sayar [Implementing Geographical Information System Grid Services to Support Computational Geophysics in a Service-Oriented Environment](#) NASA Earth-Sun System Technology [Conference](#) University of Maryland, Adelphi, Maryland, June 28 - 30, 2005. All material is online for [paper](#), [presentation](#), and [abstract](#)
- 202) M. P. Thomas, J. Burruss, L. Cinquini, G. Fox, D. Gannon, L. Gilbert, G. von Laszewski, K. Jackson, D. Middleton, R. Moore, M. Pierce, B. Plale, A. Rajasekar, R. Regno, E. Roberts, D. Schissel, A. Seth, and W. Schroeder [Grid Portal Architectures for Scientific Applications](#) Proceedings of SciDAC 2005 [meeting](#) June 26-30 2005 San Francisco
- 203) Galip Aydin, Mehmet S. Aktas, Geoffrey C. Fox, Harshawardhan Gadgil, Marlon Pierce, Ahmet Sayar [SERVOGrid Complexity Computational Environments \(CCE\) Integrated Performance Analysis](#) Proceedings of Grid Computing [Conference](#), 2005. The 6th IEEE/ACM International Workshop 13-14 Nov. 2005. Page(s): 256 - 261 [DOI](#)
- 204) Pete Burnap, Hasan Bulut, Shrideep Pallickara, Geoffrey Fox, David Walker, Ali Kaplan,

- Beytullah Yildiz, and Mehmet A. Nacar [Worldwide Messaging Support for High Performance Real-time Collaboration](#) UK e-Science [All Hands Meeting](#) September 2005
- 205) Geoffrey Fox [Global Multimedia Collaboration System Tutorial](#) Proceedings of the IEEE International [Symposium](#) on Collaborative Technologies and Systems CTS05 May 2005, St. Louis Missouri, USA. PAGES 11-13 [DOI](#)
- 206) Ahmet Uyar and Geoffrey Fox. [Investigating the Performance of Audio/Video Service Architecture I: Single Broker](#) Proceedings of the IEEE International [Symposium](#) on Collaborative Technologies and Systems CTS05 May 2005, St. Louis Missouri, USA. PAGES 120-127 [DOI](#)
- 207) Ahmet Uyar and Geoffrey Fox. [Investigating the Performance of Audio/Video Service Architecture II: Broker Network](#). Proceedings of the IEEE International [Symposium](#) on Collaborative Technologies and Systems CTS05 May 2005, St. Louis Missouri, USA. Pages 128-135 [DOI](#)
- 208) Sangyoon Oh, Hasan Bulut, Ahmet Uyar, Wenjun Wu, Geoffrey Fox [Optimized Communication using the SOAP Infoset For Mobile Multimedia Collaboration Applications](#) Proceedings of the IEEE International Symposium on Collaborative Technologies and Systems CTS05 May 2005, St. Louis Missouri, USA. Pages 32 - 39 [DOI](#)
- 209) Minjun Wang, Geoffrey Fox and Marlon Pierce [Instantiations of Shared Event Model in Grid-based Collaboration](#) Proceedings of the 9th World Multi-[Conference](#) on Systemics, Cybernetics and Informatics July 10-13, 2005 - Orlando, Florida, USA
- 210) Sangyoon Oh, Sangmi Lee Pallickara, Sunghoon Ko, Jai-Hoon Kim, Geoffrey Fox [Cost Model and Adaptive Scheme for Publish/Subscribe Systems on Mobile Environments](#) Springer-Verlag Lecture Notes in Computer Science 3516, pp. 275-278 in Proceedings of the 2nd International Workshop on Active and Programmable Grids Architectures and Components, [APGAC05](#) as part of [ICCS05](#), Atlanta, GA, May 2005. [DOI](#)
- 211) Sangyoon Oh, Sangmi Lee Pallickara, Sunghoon Ko, Jai-Hoon Kim, Geoffrey Fox [Publish/Subscribe Systems on Node and Link Error Prone Mobile Environments](#) Lecture Notes in Computer Science 3515, pp. 576-584 in Proceeding of the Wireless and Mobile Systems [Workshop](#) at [ICCS 2005](#), Atlanta, GA, May 2005. [DOI](#)
- 212) Mehmet S. Aktas, Geoffrey Fox, Marlon Pierce [Managing Dynamic Metadata as Context](#) Istanbul International Computational Science and Engineering Conference ([ICCSE2005](#)) June 2005
- 213) Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara, Marlon Pierce, Robert Granat [A Scripting based Architecture for Management of Streams and Services in Real-time Grid Applications](#) Proceedings of the IEEE/ACM Cluster Computing and Grid 2005 Conference ([CCGrid 2005](#)). Cardiff, UK May 2005 Pages 710-717. No DOI
- 214) Harshawardhan Gadgil, Geoffrey Fox, Shrideep Pallickara [HPSearch for Managing Distributed Services](#) Work in Progress session at IEEE/ACM Cluster Computing and Grid 2005 Conference ([CCGrid 2005](#)). Cardiff, UK May 2005
- 215) Hongbin Liu, Shrideep Pallickara, Geoffrey Fox [Performance of Web Services Security Proceedings](#) of the 13th Annual 13th Mardi Gras [Conference](#), February 3rd to 5th 2005, Baton Rouge, Louisiana
- 216) Minjun Wang, Geoffrey Fox and Marlon Pierce [Grid-based Collaboration in Interactive Data Language Applications](#) Proceedings of International [Conference](#) on Information Technology: Coding and Computing (ITCC'05) - Volume I pp. 335-341, April 4-6, 2005, Las Vegas [DOI](#)

- 217) Shrideep Pallickara and Geoffrey Fox [An Analysis of Notification Related Specifications for Web/Grid applications](#) October 30 2004 and as a [Short Paper](#) in Proceedings of International [Conference](#) on Information Technology: Coding and Computing (ITCC'05), Volume II pages 762-763, April 4-6, 2005, Las Vegas [DOI](#)
- 218) Shrideep Pallickara, Geoffrey Fox and Sangmi Lee Pallickara [An Analysis of Reliable Delivery Specifications for Web Services](#) in Proceedings of International [Conference](#) on Information Technology: Coding and Computing (ITCC'05), Volume I pp. 360-365. April 4-6, 2005, Las Vegas [DOI](#)
- 219) Ahmet Uyar, Wenjun Wu, Hasan Bulut, Geoffrey Fox [Service-Oriented Architecture for Building a Scalable Videoconferencing System](#) Technical Report January 2005 published in IEEE International Conference on Pervasive Services 2005 ([ICPS'05](#)), 11-14 July 2005, Santorini, Greece

### **Technical Reports 2005 - December 2012**

- 1) Geoffrey Fox “[White Paper on Clouds and the Internet of Things \(Sensor Clouds\)](#)” November 25 2012
- 2) Manish Parashar, Geoffrey Fox, Kate Keahey “[Integrating Clouds and Cyberinfrastructure for CDS&E: Research Challenges](#)” Technical report October 26 2012
- 3) Geoffrey Fox “[Cloud Value Proposition for Science and Engineering](#)” Technical report October 26 2012
- 4) Manish Parashar and Geoffrey Fox “[Integrating Clouds and Cyberinfrastructure for CDS&E: Research Challenges](#)” Technical Report 30 August 2012
- 5) Geoffrey Fox “[FutureGrid Annual Summary](#)” August 2012
- 6) Andrew J. Younge, John Paul Walters, Jinwoo Suh, Dong-In D. Kang, Youngsam Park, Stephen P. Crago, Geoffrey C. Fox “[Towards a High Performance Virtualized IaaS Deployment](#)” Poster August 1 2012
- 7) Andrew J. Younge and Geoffrey C. Fox “[Bridging the Gap Between HPC and IaaS](#)” Technical Report August 1 2012
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