Julian James Bunn, Ph.D, B.Sc.(Hons), FInstP, CPhys

Principal Computational Scientist, Member of the Professional Staff
Lecturer in Computing and Applied Mathematics

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Professional Preparation

Ph.D.	Particle Physics	University of Sheffield (England)	1983
B.Sc.(Hons)	Physics	University of Manchester (England)	1980
FInstP	Fellow of the Institute of Physics		
CPhys	Chartered Physicist		
AES	Member of the Audio Engineering Society		
IEEE	Member of the Institute of Electrical and Electronic Engineers		

Appointments

Lecturer in Computing and Applied Math.	Caltech, Pasadena	2011-	2013
Principal Computational Scientist	Caltech, Pasadena	2008-	now
Member of the Professional Staff	Caltech, Pasadena	2002-	now
Visiting Faculty Associate (Physics)	Caltech, Pasadena	1997-	2000
Project Leader (GIOD)	CERN, Geneva	1997-	2000
Computing Coordinator	CERN, Geneva	1996-	1997
Project Leader (DEC)	CERN, Geneva	1991-	1996
Section Leader	CERN, Geneva	1986-	1991
Physicist/Programmer	CERN, Geneva	1985-	1986
Research Associate	Rutherford Appleton Laboratory, Oxford	1984-	1985
Research Associate	Max Planck Institute, Munich	1983-	1984

Research Positions

Principal Investigator	Pervasive Computing for Disaster Response (NSF)	2011-	2014
Principal Investigator	TeraGrid Science Gateways	2005-	2010
Principal Investigator	STTR Interactive Physics Data Analysis Ph.II (DOE)	2007-	2009
Co Investigator	Data Intensive Science University Network (NSF)	2005-	2010
Co Investigator	UltraLight (NSF)	2004-	2008
Co Investigator	Contamination Transport (NASA/JPL)	2004-	2007
Co Investigator	CAIGEE (Grid Analysis) Project (NSF)	2002-	2004
Co Investigator	iVDGL Project (NSF)	2001-	2007
Co Investigator	Grid Physics Network (GriPhyN) (NSF)	2000-	2006
Co Investigator	Virtual Sky Project (Caltech)	2000-	2004
Co Investigator	Immersed Boundary Model of the Cochlea	1999-	2007
Co Principal Investigator	ALDAP (NSF/KDI) Project	1999-	2001
Co Investigator	Particle Physics Data Grid Project (DOE)	1999-	2005
Co Investigator	MONARC Project (CERN)	1998-	2000
Co Principal Investigator	Globally Interconnected Object Databases (Caltech)	1996-	2000

Significant Publications

[1] Robert W. Clayton, Thomas Heaton, Mani Chandy, Andreas Krause, Monica Kohler, **Julian Bunn**, Richard Guy, Michael Olson, Mathew Faulkner, MingHei Cheng, Leif Strand, Rishi Chandy, Daniel Obenshain, Annie Liu, Michael Aivazis, *Community Seismic Network*, Annals of Geophysics, Vol 54, No 6(2011)

[2] A. H. Liu, **J. Bunn**, K.M. Chandy, *Sensor Networks for the Detection and Tracking of Radiation and Other Threats in Cities,* Proceedings of The 10th International Conference on Information Processing in Sensor Networks (IPSN), April 12-15, 2011, Chicago, USA

[3] Annie H. Liu, **Julian J. Bunn**, K. Mani Chandy, *An Analysis of Data Fusion For Radiation Detection and Localization*, Presented at the Fusion 2010 Conference, Edinburgh, July 26-29, 2010

[4] **J.J.Bunn**, T.D.Gottschalk, *Incorporating High Energy Physics Data Capabilities into Joint Forces Simulations*, In Proceedings of the Interservice/Industry Training, Simulation and Education Conferemce (I/ITSEC), 2006.

[5] **Bunn J** and Newman H; *Data Intensive Grids for High Energy Physics*, in *Grid Computing, Making the Global Infrastructure a Reality,* Berman, Fox and Hey (Ed.), Wiley, UK, 2003, ISBN 0-470-85319-0

Other Selected Publications (from over 150 in refereed journals)

[1] E.Givelberg and **J.Bunn**, *A Comprehensive Three-Dimensional Model of the Cochlea, J*.Comp.Phys. 191(2):377-391, 2003

[2] Low S.H., Newman H., **Bunn J**., Ravot S. et al.; *FAST TCP: From Theory to Experiments* IEEE Network, January 2005

[3] **Bunn J**, Holtman K, Newman H, Wilkinson R; *The GIOD Project – Globally Interconnected Object Databases* – Comp. Phys. Comm. 140 (2001) 162-171

[4] **Bunn, J**; *Collaborative Computing Environments for HEP* – Comp. Phys. Comm. 110 (1998) 51-58.

[5] **Bunn, J**; *A step towards light life cycle global hypertext* - Proceedings / Ed. by R Cailliau, F L Navarria and P G Pelfer Int. J. Mod. Phys., C : 5 (1994) 765-766

Awards and Activities

SC2009 Bandwidth Challenge Award	Portland		2009
CENIC "Gateway to the Stars" Award	Oakland		2008
SC2006 Bandwidth Challenge Heroic Effort Award	Tampa		2006
SC2005 Bandwidth Challenge Award	Seattle		2005
CENIC "On the Road to a GigaBit" First Place Award			2005
Internet 2 Land Speed Records		2001-	2005
SC2004 Sustained Bandwidth Challenge Award	Pittsburgh		2004
SC2003 Sustained Bandwidth Challenge Award	Baltimore		2003
CENIC "Biggest and Fastest in the West" Award			2003
Guinness Book of World Records, Internet Division			2003
Session Chair, Computing in High Energy Physics Conference	San Diego		2003
NSF "MAGIC" Workshop	Chicago		2002
Session Chair, Computing in High Energy Physics Conference	Beijing		2001
Invited lecturer on Distributed Databases	Islamabad		2001
Joint EU-US Workshop on Large Scientific Databases	Annapolis		1999
Member of the SLAC Computing Advisory Committee	Stanford		1999
Presenter at the Internet-2 DSI workshop	Chapel Hill		1999
Interfaces to Scientific Data Archives committee member	Pasadena		1998
Plenary speaker at Computing in High Energy Physics Conference	Berlin		1997

Patents

US Patent 20020156870 "Method and apparatus for dynamically directing an application to a pre-defined target multimedia resource", 10/24/2002