

Vita: Mark Hereld

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#### Education:

- Ph.D. 1984 California Institute of Technology  
*Physics, minor in Computer Science*
- M.S. 1980 California Institute of Technology  
*Physics*
- B.S. 1978 University of California at Berkeley  
*Engineering Physics, minor in Computer Science*

#### Employment history:

- 2000-\*\* Senior Fellow, Computation Institute, The University of Chicago
- 1998-\*\* Experimental Systems Engineer, Argonne National Laboratory
- 1998-00 Visiting Scholar, University of Chicago
- 1996-98 Visiting Scientist, Argonne National Laboratory
- 1994-98 Senior Scientist, University of Chicago
- 1988-94 Senior Research Associate, University of Chicago

#### Professional activities:

##### *External:*

- Reviewer for Journal of Electronic Imaging (2004)
- Reviewer for IEEE Distributed System special issue on Data Intensive Computing (2004)
- Reviewer for SBAC-PAD (2003)
- Reviewer for Special Issue of the Cluster Computing Journal (2001)
- Reviewer for selection advisory panel for Council of Physical Sciences, Nederlands Organization for Scientific Research (NWO) (2002)
- NSF Site Visit Team (2003)
- NSF Review Panel (2004)
- DARPA High Productivity Computer Systems Workshops (2003 – 2004)
- Program Committee, Workshop on Advanced Collaborative Environments (2003)
- Program Committee, Workshop on Advanced Collaborative Environments (2002)
- Program Committee, High Performance Computing Symposium (2004)
- IEEE Computer Society (2004)
- SPIE – The International Society for Optical Engineering (~1982 – 1986)
- APS – American Physical Society (~1978 – 1996)
- AAS – American Astronomical Society (~1984 – 1998)
- NYAS – New York Academy of Sciences (~1990 – 2000)

##### *Internal:*

- PBCS Electronics Committee (2004)
- MCS Library Committee (2000 – 2002)
- Senior Fellow, Computation Institute of The University of Chicago and Argonne National Laboratory (2000 – present)

#### Current research interests:

- Collaborative environments; virtual reality technologies; high performance visualization;  
VR development tools;
- Application performance analysis; reconfigurable computing; computer architectures;  
algorithms;
- Biological neural network simulation;

Large distributed storage systems; hierarchical storage systems;  
Scientific data visualization; metabolic pathway visualization.

**Other research interests:**

Image processing, remote and automated instrument control, automated data processing;  
Infrared instrumentation, infrared detectors, interferometry;  
Galaxy evolution, star formation, gravitational radiation.

**Supervisions:**

Bernard J. Rauscher	Ph.D. Thesis & Postdoc	Space Telescope Science Institute
Hien Nguyen	Postdoc	NASA, Jet Propulsion Laboratory
Scott A. Severson	Ph.D. Thesis	UCO/Lick Observatory, University of California, Santa Cruz
Donald F. Figer	Masters Thesis	Space Telescope Science Institute
James P. Lloyd	South Pole Scientist	Cornell University, Dept. of Astronomy