

Christopher A. Fields

815 E. Palace Ave #14
Santa Fe, NM 87501
USA

21 Rue les Lavandières
Caunes Minervois
11160 France

fieldsres@gmail.com
<http://chrisfieldsresearch.com>

Personal:

Born 1 May 1955, West Benton Township, Missouri, USA.
U. S. Citizen

Education:

B. S. Physics, Louisiana State University, 1977.
M. S. Physics, University of Colorado, 1980.
M. A. Philosophy, University of Colorado, 1983.
Ph. D. Philosophy, University of Colorado, 1985.
M. A. Molecular, Cellular, and Developmental Biology, University of Colorado, 1988.

Employment:

1987 - 1991: Research Scientist, later Project Manager, Computing Research Laboratory, New Mexico State University, Las Cruces, NM.

My group carried out contract research and prototyping projects in the areas of meteorological data fusion systems (funded by the U.S. Army), general problem solving (funded by the U.S. Army), neural network simulation (funded by NASA), plant disease simulation (funded by NSF), and genome informatics (funded by DOE).

1991 - 1992: Special Expert, Informatics, National Institute of Neurological Disorders and Stroke, Rockville, MD.

I developed information systems and performed data analysis supporting human genomic sequencing, and contributed to the development of the "Expressed Sequence Tag (EST)" strategy for rapid gene identification.

1992 - 1994: Director of Informatics, The Institute for Genomic Research (TIGR), Gaithersburg, MD.

As a founding member of TIGR, I organized the Informatics Department, developed data analysis methodologies, and performed analysis supporting large-scale gene discovery in humans and whole-genome sequencing in microbes.

1994 - 1996: Scientific Director, National Center for Genome Resources (NCGR), Santa Fe, NM.

I was responsible for the research program of NCGR, and obtained DOE funding for and served as Principal Investigator of the Genome Sequence DataBase (GSDB) project for its first two years. I served as lead scientist in developing the Molecular Informatics, Inc. spin-off from NCGR.

1996 - 1997: Vice President and Chief Scientific Officer, Molecular Informatics, Inc., Santa Fe, NM.

As CSO, I was responsible for product concepts and strategic marketing, as well as developing relationships with potential partners.

1997 - 2001: Division Vice President, Science and Technology, PE Molecular Informatics, later PE Informatics, later Informatics Division, Applied Biosystems, Inc., Santa Fe, NM.

Following the acquisition of Molecular Informatics, Inc. by Perkin Elmer Corporation, later PE Corporation, later Applera Corporation, Applied Biosystems Group (NYSE: ABI), I was responsible for scientific and application-integration aspects of Informatics products and services, including developing and maintaining relationships between Informatics and both internal and external partners.

2001 - 2003: President, HayFields Consulting Inc., later HayFields Science, Inc., Las Cruces, NM.

I advised various public and private sector entities on strategic marketing, business development, and information system issues.

2002 - 2005: Adjunct Professor, Molecular Biology, later College Professor and Director, Molecular Biology Program, New Mexico State University, Las Cruces, NM.

As Director, I expanded the Molecular Biology (MOLB) Program, an interdepartmental MS and PhD program, to include faculty from seven academic departments, revised and simplified the PhD curriculum, and integrated the MOLB Program into the planned NMSU Research Clusters.

2005 - 2006: Associate Vice Provost for Research, New Mexico State University, Las Cruces, NM.

My activities focused on strategic partnership and business development for the NMSU Research Clusters.

2006 – present: Independent Scientist.

I now pursue whatever I find interesting.

Service Activities:

External reviewer of proposals and member of standing or *ad hoc* advisory committees for the National Institutes of Health, U. S. Department of Energy, U. S. Department of Agriculture, and National Science Foundation, 1990 - 1996.

Founding Co-editor of the *Journal of Experimental and Theoretical Artificial Intelligence*, member of the Editorial Boards of *Genome Research* and *Genome Science and Technology* (now *Comparative and Microbial Genomics*), and referee for numerous biology and computing journals, including *Science* and *Nature*.

Co-organizer of the Genome Sequencing and Analysis conferences 1992 – 1995 and the After the Genome conferences 1995 – 1997, and member of organizing or program committees of various other national and international conferences in biology and computing.

Firefighter and rescue technician with the Galisteo Volunteer Fire and Rescue Department, a district of the Santa Fe County Fire Department, 1999 - 2002.

Member of the Design Committee of Las Cruces Downtown, a downtown revitalization and economic development organization, 2005 – 2006.

Member of the Board of Llano Adobe Compound, 2012 – present.

Honors

New Mexico Technology AllStar, New Mexico Economic Development Department, 2005

PhD Students

Owen White, PhD Molecular Biology, New Mexico State University, 1992; now Professor and Director of Bioinformatics, University of Maryland, Baltimore.

Mark DeYong, PhD Electrical and Computer Engineering, New Mexico State University, 1992; now Vice President, Engineering, Xtera Corporation, Austin, Texas.

Postdoctoral Associates

Owen White, PhD; now Professor and Director of Bioinformatics, University of Maryland, Baltimore.

Granger Sutton, PhD; now Senior Director of Bioinformatics, J. Craig Venter Institute, Rockville, Maryland.

Carol Bult, PhD; now Professor, Jackson Laboratory, Bar Harbor, Maine.

Judith Blake, PhD; now Associate Professor, Jackson Laboratory, Bar Harbor, Maine.

Rebecca Clayton, PhD; now Adjunct Faculty, Mountain State University, West Virginia.

Lisa FitzGerald, PhD; now Program Director, Myriad Genetics, Salt Lake City, Utah.

Publications

120 + refereed publications in nuclear physics, cognitive science, information systems, and molecular biology. Recent publications and a complete list are available from <http://chrisfieldsresearch.com>.

h-index = 22, g-index = 85, Erdős Number = 3.