

PAUL C. MESSINA
1570 Darien Lake Dr.
Darien, Illinois 60561-5085

Curriculum Vitae

Education

Ph.D. (Honorary) in Computer Engineering, University of Lecce, Italy, 1997

Ph.D. in Mathematics, University of Cincinnati, 1972.

M.S. in Applied Mathematics, University of Cincinnati, 1967.

B.A. in Mathematics, College of Wooster, Wooster, Ohio, 1965.

Professional Experience

2015—present Director, DOE Exascale Computing Project
2015—present Senior Strategic Advisor, Argonne National Laboratory
2014—present Argonne Distinguished Fellow, Argonne National Laboratory
2008—2015 Director of Science, Argonne Leadership Computing Facility, Argonne National Laboratory
2008—present Senior Computational Scientist, Argonne National Laboratory
2004—present Consultant to research institutions and companies on scientific computing issues
2009—2010 Consultant, Office of CyberInfrastructure, National Science Foundation
2002—2004 Senior Computer Scientist, Mathematics and Computer Science Division, Argonne National Laboratory
2002—2003 Senior Advisor, CERN (European Organization for Nuclear Research)
2003—2004 Fellow, Computation Institute of the University of Chicago
2003—2004 Visiting Research Scholar, Information Sciences Institute, University of Southern California
2001—2002 co-Principal Investigator, National Virtual Observatory project
2001—2002 co-Principal Investigator, Extensible Terascale Facility
2001—2002 co-Principal Investigator, Distributed Terascale Facility
1999—2000 Director, Office of Advanced Simulation and Computing, Defense Programs, National Nuclear Security Administration, Department of Energy
1997—2002 Chief Architect and member of Leadership Team and Executive Committee, National Partnership for Advanced Computational Infrastructure (NPACI)
1994—2002 Faculty Associate, Scientific Computing, California Institute of Technology
1994—2002 Assistant Vice President for Scientific Computing, California Institute of Technology
1994—2002 Founder and Director, Center for Advanced Computing Research, California Institute of Technology
1997—2002 co-Principal Investigator, ASCI Center of Excellence at Caltech
1994—1998 Principal Investigator, Scalable I/O Initiative
1990—1996 Founder and Executive Director, Concurrent Supercomputing Consortium
1990—1998 Manager, High-Performance Computing, Jet Propulsion Laboratory
1989—1998 Chairman, Facilities Committee; Member, Executive Committee, Center for Research on Parallel Computation, a National Science Foundation Science and Technology Center
1989—1995 Principal Investigator and Project Manager, CASA gigabit network testbed, a research project on distributed supercomputing
1987—1994 Director, Caltech Concurrent Supercomputing Facilities, California Institute of Technology
1982—1987 Director, Mathematics and Computer Science Division, Argonne National Laboratory
1978—1982 Associate Director, Applied Mathematics Division and Head, Applied Mathematical Science Section, Argonne National Laboratory

- 1973—1978 Computer Scientist and Leader, User Services, Applied Mathematics Division, Argonne National Laboratory
- 1971—1973 Manager, Academic Computer Services, and Adjunct Assistant Professor of Engineering Analysis, University of Cincinnati
- 1970—1971 Numerical Analyst, Department of University Computer Services, University of Cincinnati
- Summer 1968 Mathematician, Industrial Engineering Division and Research and Development Department, The Procter and Gamble Company
- Summer 1967 Programmer, Data Processing Systems Department, The Procter and Gamble Company

Honors and Awards

- 2014 Argonne Distinguished Fellow (*the laboratory's highest scientific and engineering rank*)
- 2013 Thomas Hart Benton Mural Medallion, Indiana University
- 2001 U.S. Department of Energy Distinguished Associate Award (DOE's highest non-monetary award for non-employees)
- 1997 Honorary degree in Computer Engineering by the University of Lecce, Italy, in recognition of contributions to computational science
- 1993 Co-author of Highest Impact Paper award, *20th Annual International Symposium on Computer Architecture*, San Diego, CA., 1993
- 1993 Awarded plaque by the IEEE High-Performance Distributed Computing Conference for pioneering contributions to the field
- 1992 Federal Computer Week's "Federal 100 Award" for spearheading the acquisition of the Intel Touchstone Delta and overcoming politics and interagency rivalries in creating the Concurrent Supercomputing Consortium. FCW gives this award each year to recognize people from academia, government, and industry ``who have made a difference in the Federal systems community."
- 1965-1970 Taft Fellowship, University of Cincinnati Graduate School

Selected Professional Activities

- Member, Editorial Board, *Mathematical Modelling and Supercomputing*, Springer-Verlag GmbH, Berlin, Germany, 2014-
- Member, LLNL Computation Directorate External Review Committee, 2013
- Member, Organizing and Program Committees, International Advanced Research Workshop on High Performance Computing, Grids, and Clouds, 2012
- Member, Program Committee, Big Data Workshop, NIST, June 2012
- Member, Scientific Advisory Board, Barcelona Supercomputer Center, 2012-
- Member, Organizing Committee, NITRD 20th Anniversary Symposium, 2012
- Member, LLNL Computation Directorate Portfolio Review, 2011
- Member, Scientific Advisory Board, Euro Mediterranean Center on Climate Change (CMCC), 2011-
- Member, External International Advisory Committee for EU project Virtual Multidisciplinary Environments Using Cloud Infrastructures, 2010-2012
- Member, Organizing and Program Committees, International Advanced Research Workshop on High Performance Computing, Grids, and Clouds, 2010
- Member, ASCAC Subcommittee on Exascale Computing, 2010
- Chair, workshop on Crosscutting Technologies for Computing at the Exascale, 2010
- Organizer, Exascale Workshop Panel, 2010
- Member, Scientific Advisory Board, Barcelona Supercomputing Center, 2009-
- Member, Seymour Cray and Sid Fernbach Awards Committee, 2009-2011
- Member, Advisory Group, GRDI2020 project, 2009-2011
- Member, Organizing Committee, workshop on Architectures and Technology for Extreme Scale Computing, 2009
- Chair, workshop on Scientific Grand Challenges for National Security: the Role of Computing at the Extreme Scale, 2009
- Member, Organizing Committee, workshop on Opportunities in Biology at the Extreme Scale of Computing, 2009

Member, Organizing Committee, workshop on Discovery in Basic Energy Sciences: the Role of Computing at the Extreme Scale, 2009

Member, Organizing Committee, workshop on Science Based Nuclear Energy Systems Enabled by Advanced Modeling and Simulation at the Extreme Scale, 2009

Member, Organizing Committee, workshop on Forefront Questions in Nuclear Science and the Role of Computing at the Extreme Scale, 2009

Member, Organizing Committee, workshop on Fusion Energy Sciences and the Role of Computing at the Extreme Scale, 2009

Member, Organizing Committee, workshop on Scientific Challenges for Understanding the Quantum Universe, 2008

Member, Organizing Committee, workshop on Challenges in Climate Change Science and the Role of Computing at the Extreme Scale, 2008

Member, Organizing Committee, International Advanced Research Workshop on High Performance Computing, 2008

Member, Teragrid Planning Process Steering Committee 2007

Member, Programme Committee for 6th International Summer School on Grid Computing 2007

Scientific Advisor, SPACI, 2006—

Member, Organizing Committee, International Advanced Research Workshop on High Performance Computing, 2004

Member, Program Review Committee, IDA Center for Computing Sciences (CCS) 2002 - 2005

Member, Steering Committee, Open Middleware Infrastructure Institute 2003 – 2005

Consultant, Indiana University 2002 – 2005

Consultant, ASCI Office, Los Alamos National Laboratory 2001 – 2005

Member, Board of Directors, Global Grid Forum 2003 - 2004

Member, Grid School Program Committee 2002 - 2004

Member, National Academy of Sciences Committee to study the Future of Supercomputing, 2003 – 2005

Member, High-End Computing Strategy Committee, United Kingdom Science Research Councils, 2003 – 2004

Member, Scientific Advisory Committee for ICAR-CNR (Istituto di Calcolo e Reti ad Alte Prestazioni del Consiglio Nazionale delle Ricerche) 2002 - 2004

Member, Organizing Committee, International Advanced Research Workshop on High Performance Computing, 2002

Chair, Review Panel for NSF Middleware Initiative, 2002

Member, Advisory Committee for the National Virtual Observatory project, 2002-2005

Member, Los Alamos ADWP Program Review Committee, 2002-2004

Member, Advisory Committee for Swiss Grid program, 2002

Member, Blue-Ribbon Advisory Panel for Cyberinfrastructure, National Science Foundation, 2001- 2003

Member, Advisory Committee, National Nuclear Security Administration 2001–2003

Member, Steering Committee for United Kingdom's e-Science Programme, 2001–2006

Member, Grid Technical Advisory Group, United Kingdom's e-Science Core Programme, 2001-2006

Chair, Advisory Committee, Global Grid Forum, 2001-2005

Co-Chair, Advisory Committee GriPhyN project, 2001-2005

Member, subcommittee on facilities, Advanced Scientific Computing Advisory Committee, DOE Office of Science, 2001 – 2002

Member, Organizing Committee, International Advanced Research Workshop on High Performance Computing, 2000

Chair and Organizer, Symposium on Information Technology at the Turn of the Century: A Computational Science Perspective, Caltech, October 1999

Chair and Organizer, the European Union -- United States joint workshop on Large Scientific Databases, Annapolis, Maryland, USA, 1999

Member, National Energy Research Scientific Computing (NERSC) Policy Board, 1999-

Member, Burn Code Review Committee 1999–2004

Chair, Technology Working Group, National Workshop on Advanced Scientific Computation, National Academy of Sciences, July 1998

Member, Committee on Science Policy of the Society for Industrial and Applied Mathematics 1998–2005

Associate Editor, Concurrency: Practice and Experience, John Wiley and Sons, Ltd., Chichester, England 1989-1998

Member, Editorial Board of IEEE journal "Computing in Science & Engineering," 2000-2005

Chairman, Technical Coordinating Committee for Systems Software of the NASA High-Performance Computing and Communications Program, 1992-1996

Co-Organizer, mini-symposium on Scalable High Performance Libraries for Large Scale Scientific Computing, International Conference on Industrial and Applied Mathematics, Hamburg, Germany, 1995.

Member, Review Committee, Centre for Information Science Research, ANU, Canberra, Australia, 1995

Member, Energy Research Supercomputer Users' Group, 1983-1989

Program Chair, Workshop on Enabling Technologies for Peta(fl)ops Computing, Pasadena, California, 1994

Program Chair, Second Pasadena Workshop on Systems Software and Tools for High-Performance Computing Environments, Pasadena, California, 1994

Member, Energy Research Supercomputer Users' Group Executive Committee, representing Department of Energy Applied Mathematical Sciences program, 1989--1995

Program Director, SIAM Activity Group on Supercomputing, 1988--1991

Member, NSF Program Advisory Panel for Advanced Scientific Computing, 1989--1992

Member, Policy Advisory Committee, Army High Performance Computing Research Center, 1990-1991

Chair, Review Panel, Scientific Computing Division, National Center for Atmospheric Research, 1990

Member, Review Panel for DOE Energy Sciences Network (ESnet), 1990--1991

Member, External Advisory Committee for Computing and Communications Division, Los Alamos National Laboratory, 1988--1993

Co-Organizer, Chair, and invited speaker, International Conference on Parallel Computing: Achievements, Problems, and Prospects, Capri, Italy, June 1990

Chairman, Department of Energy Advanced Computing Committee Language Working Group (LWG), 1979-1987

Member of American Association for the Advancement of Science, Association for Computing Machinery, Society for Industrial and Applied Mathematics, IEEE Computer Society, and Sigma Xi