

EWA DEELMAN, Ph.D.

4676 Admiralty Way
Marina del Rey, CA 91302
310-448-8408 | www.isi.edu/~deelman
deelman@isi.edu

RESEARCH INTERESTS

Managing large-scale workflows and data in distributed environments. Design and exploration of collaborative scientific environments based on Grid and Cloud technologies. Performance optimization in parallel and distributed environments . Impacting Sci ence.

APPOINTMENTS

2016-present

Research Professor, USC Computer Science Department

2009-2016

Research Associate Professor, USC Computer Science Department

2003-2009

Research Assistant Professor, USC Computer Science Department

University of Southern California, Los Angeles, CA

2016-present

Research Director, Science Automation Technologies, USC Information Sciences Institute

2018-present

Principal Scientist, USC Information Sciences Institute

2012-2015

Assistant Director, Science Automation Technologies, USC Information Sciences Institute

2007-2012

Project Leader, USC Information Sciences Institute

2002-2007

Research Team Leader, USC Information Sciences Institute

2000-2002

Computer Scientist, USC Information Sciences Institute

Marina del Rey, CA

Scientific applications need to make use of a number of heterogeneous and often distributed resources that include both data and computations. My research focuses on developing tools and techniques that enable easy, efficient, and reliable execution of complex applications in distributed environments. Particular emphasis is given to managing applications specified as computational workflows. My research encompasses a number of areas including task scheduling, performance optimization, reliability techniques, resource provisioning, and workflow monitoring and troubleshooting. One of the tools developed in my group is the Pegasus Workflow Management System that is being used day-to-day in a number of scientific applications including astronomy, biology, earthquake science, gravitational-wave physics and others. The applications make use of their own computing clusters, national cyberinfrastructure, and Cloud computing resources. My research interests also include data and metadata management in scientific applications.

1997-2000

Senior Software Developer, University of California

Los Angeles, CA

Conducted research in parallel simulation of message-passing programs and performance modeling.

Participated in the POEMS project, which aims to design a system for Performance Oriented End-to-End Modeling of Large Heterogeneous Adaptive Parallel/Distributed Computer/Communication Systems. Major development was geared towards efficient and accurate simulation of message-passing programs (such as those using MPI) on high performance systems (such as the IBM SP). New SMP-cluster architectures were modeled. Compiler optimizations which improved the efficiency and scalability of the simulator were investigated. The POEMS project involves a collaboration between several universities: Purdue, Rice, UCLA, U.T. Austin, U.T. El Paso, U. of Wisconsin and LANL.

Guest lectured in parallel computation courses.

Guided the research of graduate students.

EDUCATION

Doctor of Philosophy in Computer Science

1997 Rensselaer Polytechnic Institute
Troy, NY

"Performance Optimization of Parallel Discrete Event Simulation of Spatially Explicit Problems"

Developed an object oriented Parallel Discrete Event Simulation System that uses the optimistic approach to event processing. The system was designed to run on an MIMD machine and tested on an IBM SP. In order to achieve good performance , new synchronization techniques were formulated. Developed a new algorithm to continuously monitor the progress of all simulation processes. Designed a new approach for rolling back computation in spatially explicit problems. This approach resulted in a speedup close to linear over a single processor run . Load balancing techniques were also investigated .

Thesis Advisor: Prof. Boleslaw Szymanski

1991 **Master of Science in Computer Science**

State University of New York , New Paltz , NY

1987 **Bachelor of Arts in Mathematics**

Wells College, Aurora, NY

FELLOWSHIPS HONORS

- AAAS Fellow, November 2019
- IEEE Fellow, December 2017
- USC Information Sciences Achievement Award "for technical contributions and leadership in the field of scientific workflow systems for high-performance computing", 2015.
- High-Performance Parallel and Distributed Computing (HPDC) 2015 achievement award, which is presented to an individual who has made long-lasting, influential contributions to the foundations or practice of the field of high-performance parallel and distributed computing, June 2015
- CENIC Star Performer for the ADAMANT project, January 2014
- Corporation for Education Network Initiatives in California's (CENIC) 2013 Innovations in Networking Award for Experimental/Developmental Applications for the ADAMANT (Adaptive Data-Aware Multi-domain Application Network Topologies) Project, March 2013
- Best paper award and the Phil Andrews Most Transformative Contribution Award , Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning) : M. Rynge, K. Vahi, E. Deelman, A. Mandal, I. Baldin, O. Bhide, R. Heiland, V. Welch, R. Hill, W. L. Poehlman, and A. F. Felts, " Integrity Protection for Scientific Workflow Data: Motivation and Initial Experiences," in Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning), New York, NY, USA, 2019, p. 17:1- 17:8.
- Best Paper award, e-Science 2006, Amsterdam, Netherlands: E. Deelman, S. Callaghan, E. Field, H. Francoeur, R. Graves, N. Gupta , V. Gupta , T. H. Jordan, C. Kessel man, P. Ma echling , J.
- Mehringer, G. Mehta, D. Okaya, K. Vahi, and L. Zhao, Managing Large-Scale Workflow Execution from Resource Provisioning to Provenance tracking: The CyberShake Example, Proceedings of e-Science, Amsterdam, The Netherlands, 2006.
- Best Paper award, 15th Workshop on Parallel and Distributed Simulation, Lake Arrowhead, CA, USA; 15-18 May 2001: E. Deelman, R. Bagrodia, R. Sakellariou, V. Adve. Improving Lookahead in Parallel Discrete Event Simulations of Large-Scale Applications Using Compiler Analysis. Proceedings 15th Workshop on Parallel and Distributed Simulation p. 5-13, Lake Arrowhead, CA, USA; 15-18 May 2001.
- General Electric Foundation Fellowship, Rensselaer Polytechnic Institute, 1993-1994.
- Special Distinction in the field of Mathematics, Wells College, 1987.

PROFESSIONAL ACTIVITIES

- Associate Editor, IEEE Internet Computing, 2019 -
- Steering Committee Member, SC Conference 2017-
- Steering Committee Member, IEEE eScience Conference, 2013-
- Steering Committee Member, IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, 2013-
- Steering Committee Member, e-Science All Hands Meeting Foundation, 2008-2012

- Associate Editor responsible for Grid and Cloud Computing for the Scientific Programming Journal, 2002-2014
- Associate Editor, IEEE Transactions on Parallel and Distributed Systems, 2016- 2018
- Editorial Board Member, International Journal of High Performance Computing Application, 2015 -
- Editorial Board Member, ACM International Conference Proceeding Series, 2015-
- Member of the Editorial board, Journal of Grid Computing, 2013-
- Track co-chair, 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2019), Cyprus
- Chair, Birds of a Feather, SC'18, Dallas, November 2018
- Chair, Housing, SC'17, Denver, November 2017
- Vice-Chair of Program Committee, 12th International Conference on Parallel Processing and Applied Mathematics (PPAM), Lublin, Poland, September 2017
- Chair, Workshops, SC'16 Technical Program, Salt Lake City, November 2016
- Deputy Chair, Housing, SC'16, Salt Lake City, November 2016
- Chair, Posters, Cluster 2016, Taipei Taiwan, September 2016
- Co-Chair, Technical Papers, SC'15 Technical Program, Austin, TX, November 2015
- Vice-Chair of Program Committee, 11th International Conference on Parallel Processing and Applied Mathematics (PPAM), Krakow, Poland, September 2015
- Co-chair, Tutorials, 8th IEEE/ACM International Conference on Utility and Cloud Computing, Cyprus, December 2015
- Co-area chair for the SC'14 Technical Program (Clouds and Distributed Computing area), New Orleans, 2014
- Vice Program Chair, International Conference on Parallel Processing and Applied Mathematics. PPAM, Poland, September 2013
- Chair, Global Grid Forum Workflow Management Research Group, 2003-2010
- Co-Chair NSF Workshop SDCI/STCI as the Software Supply Chain of the National Cyberinfrastructure Workshop, January 2010
- Mentor for the CRA-W Distributed Research Experiences for Undergraduates (DREU) program, 2008, 2010
- Co-Chair, Workshop on Workflows in Support of Large-Scale Science, in conjunction with SC 2008, SC 2009, and 2010
- Founder and Chair, Workshop on Workflows in Support of Large-Scale Science, in conjunction with HPDC 2006, and 2007 June 2006 & 2007
- Co-Guest Editor, Scientific Programming Journal, Special issue on Dynamic Computational Workflows: Discovery, Optimization, and Scheduling, 2007
- Co-Guest Editor Journal of Grid Computing, Special Issue dedicated to Workflow Management in Grids, 2006
- Co-Editor, Workflows in e-Science book, Springer 2007
- Workshop Chair Applications and Middleware Grid Workshop, September 2005
- Lecturer, Global Grid Forum Summer School, July 2004
- Organizing Committee Member, GGF Workshop on Workflows in Grids, 2004.

- Co-Editor of the Special Issue of the Scientific Programming Journal devoted to Grid Computing, Volume 10, Number 2, 2002.
- Workshop Chair, Applications Grid Workshop, September 2003, 2005, 2007
- Panel member at the International Conference on Dependable Systems and Network panel on "Dependability and the Grid", June 2002.
- Technical Board member of the Gridlab project, an EU funded project .
- General Co-Chair, of the 15th Workshop on Parallel and Distributed Simulation, PADS2001, Lake Arrowhead, CA, 2001.
- Organizer So-Cal Seminar on Parallel Computing Systems, January 22, 1999.
- Organizing Committee Chair , Third Workshop on Languages, Compilers, and Run-Time Systems for Scalable Computers held at Rensselaer Polytechnic Institute, May 1995.
- Pipeline Project Member, Lectured high-school students about research performed in Computer Science. The goal of this project is to interest and support young women in Computer Science, 1995.

**Program
Committee
Member
(selected)**

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- 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2018)The 1st Workshop on Infrastructure for Workflows and Application Composition (IWAC), 2019, Cyprus, co-area chair for Scheduling and Resource Management.
 - 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2018), Washington, DC
 - The 12Th Workshop on Workflows in Support of Large-Scale Science, Denver, November 2017
 - SuperComputing'17, Denver, November 2017
 - 13th IEEE International Conference on eScience, 2017, Auckland, NZ
 - 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, 2017
 - AMGCC 2017 (The 5th International Workshop on Autonomic Management of high performance Grid and Cloud Computing), Tucson, AZ, 2017
 - ICPP-2017 (46th International Conference on Parallel Processing), Bristol, UK
 - The International Supercomputing Conference (ISC), 2016, Germany
 - 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2016), Columbia
 - 30th IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2016, Chicago
 - The 11Th Workshop on Workflows in Support of Large-Scale Science, Denver, November 2016
 - 11th IEEE International Conference on eScience, 2015, Germany
 - The IOTH Workshop on Workflows in Support of Large-Scale Science, Denver, November 2015
 - Best Paper Committee Member, SC'14 New Orleans, 2014
 - 10th IEEE International Conference on eScience, 2014, Brazil
 - 14th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, 2014
 - The 9Th Workshop on Workflows in Support of Large-Scale Science, Denver, November 2014
 - 2nd Workshop on Sustainable Software for Science: Practice and Experiences in conjunction with SC'14, 2014
 - 9th IEEE International Conference on eScience, 2013
 - 13th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing
 - The 8Th Workshop on Workflows in Support of Large-Scale Science, Denver, November 2013
 - First Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE), Denver, CO 2013
 - IEEE Big Data 2013, Santa Clara, CA, October 2013
 - The 8th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, Compiègne, France, October 2013
 - International Conference on Cloud and Green Computing, Karlsruhe, Germany, September, 2013

- AMGCC'13 (The 1st International Workshop on Autonomic Management of Grid and Cloud Computing), Miami, Florida, August, 2013
- Grid and Cloud Computing in Biomedicine and Life Sciences, Porto, Portugal, June 2013
- BIGPROV'13: International Workshop on Managing and Querying Provenance Data at Scale, Genoa, March 2013, Italy
- Workshop on Workflows in Support of Large-Scale Science, in conjunction with SC 2012, Salt Lake City, November 2012
- The 5th IEEE/ACM International Conference on Utility and Cloud Computing, Chicago, IL, November 2012
- The 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid) 2012, Ottawa, Canada, May 2012
- Scientific and Statistical Database Management Conference 2011, Portland Oregon
- HPDC 2011, San Jose, CA, 2011
- Workshop on Workflows in Support of Large-Scale Science, in conjunction with SC 2011
- Data Intensive Computing in the Clouds (DataCloud2011), San Jose, CA, 2011
- IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2011), Newport Beach, CA, 2011
- IPDPS 2011 PhD forum, Anchorage, Alaska, 2011
- IPOPS 2011, Anchorage Alaska, 2011
- e-Science 2010, Brisbane, Australia, 2010
- SC 2010, New Orleans, 2010
- CCGrid 2010, Australia, May 2010
- Grid 2010, Brussels, Belgium, October 2010
- 4th Int'l Workshop on Workflow systems in e-Science (WSES09), Shanghai, China, 2009
- High Performance Distributed Computing (HPDC 2009), Garching, Germany, June 2009
- SC 2008, Austin Texas, November 2008
- Grid 2008, Tsukuba, Japan, September 2008
- High Performance Distributed Computing (HPDC 2008), Boston, MA, June 2008
- e-Science 2007, Bangalore, India, December 2007
- NSF/Mellon Workshop on Scientific and Scholarly Workflow. Oct 3-5, 2007, Baltimore, MD
- CoreGRID Workshop on Grid Middleware, Dresden, June 18-19, 2007
- High Performance Distributed Computing (HPDC 2007), Monterey Bay California, June 27-29
- IEEE International Conference on Grid Computing (Grid 2007) (Vice Program chair for Scheduling, Resource Management and Runtime Environments), Grid 2006, Grid 2005
- Second International Conference on Grid computing, high-performance and Distributed Applications" (GADA'07)
- Workflow Systems in e-Science 2007, International Conference on Computational Science (ICCS2007)
- The 13th International Conference on Parallel and Distributed Systems, Hsintu, Taiwan, December 2007
- 3rd International Workshop on Grid and Peer-to-Peer based Workflows (GPWW), Brisbane, Australia, 2007
- IEEE International Symposium on Cluster Computing and the Grid, CCGrid 2007, 2006, 2005
- CoreGRID Workshop on Grid Middleware 2006
- First International Multiconference on Computer Science and Information Systems
- The 2006 International Conference on High Performance Computing and Communications, Grid and cluster computing topic. 2006.
- International Workshop on Workflow Systems in Grid Environments (WSGE06), October 21-23, 2006, Changsha, China.
- Challenges of Large Applications in Distributed Environments Workshop, CLADE 2009, 2008, 2007, 2006, 2005, 2004, 2003

- Fourth International Symposium on Parallel and Processing and Applications (ISPA'06), (Software and Applications Track), Sorrento, Italy, December 2006.
 - 2nd International Workshop on Grid and Peer-to-peer based Workflows (GPWW 2006), Vienna, Austria on September, 2006, and 2005
 - Scientific workflow management in e-Science, in conjunction with the International Conference on Computational Science (ICCS2006), May 2006.
 - Statistical and Scientific Database Management (SSDBM), 2006, 2005
 - ICIW 2006 Web Service-based Systems and Applications track, February 2006
 - International Workshop on Scientific Instruments and Sensors on the Grid, December 2005.
 - Semantic Infrastructure for Grid Applications at CCGrid 2005
 - European Grid Conference 2005
 - Workshop on Web and Grid Services for Scientific Data Analysis (WAGSSDA), to be held in conjunction with the International Conference on Parallel Processing (ICPP-2005)
 - IEEE International Conference on Services Computing (SCC 2004)
 - International Conference on Semantics for a Networked World 2004
 - 2nd European Across Grids Conference, 2004
 - SC 2003, November 2003
 - Heterogeneous Computing Workshop, 2003, 2004
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**Post Doctoral
Advisor**

- Lok Pottier, USC
 - Rafael Ferreira da Silva, USC
 - Dariusz Krol, Samsung, Poland
 - Rubing Duan, AStar, Singapore
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PhD Advisor

- Gideon Juve, SpaceX
 - Weiwei Chen, Google
 - Gurmeet Singh, NetApps
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**PhD
Committee Member**

- Habilitation Committee Member, Frederic Suter, ENS Lyon, 2014
 - Carl Witt, Humboldt-Universitat zu Berlin, Germany 2020
 - Alexey Ilyushkin, Delft University of Technology, Netherlands, 2019
 - Alexandru Uta, Vrije Universiteit, Amsterdam, Netherlands, 2017
 - Gonzalo Rodrigo, Umea University, Sweden, 2017
 - Matthew Brown, USC, Los Angeles, CA 2014
 - Ozan Sonmez, Delft University, Netherlands, 2010
 - Ivona Brandie, Technische Universitat Wien, Austria, 2007
 - Paul Roth, University of South Hampton, 2007
 - Houda Lamahamedi, Rensselaer Polytechnic Institute, 2002.
 - External Examiner for Masters' Candidate, McGill University, 2002.
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Reviewer

Reviewer for journals such as the Journal of Grid Computing, Future Generations of Computer Systems, Journal of Parallel and Distributed Computing, IEEE Intelligent Systems, Informatica, IEEE Transactions on Parallel and Distributed Systems, Concurrency and Computation: Practice and Experience, ACM Computing Surveys

Advisory Board Member

Reviewer for DOE, NSF, University of California Office of the President, INRIA, and European Commission, and other EU funding agencies.

The Institute of Electronics, Communications and Information Technology (ECIT),

Queen's University Belfast, 2018 - 2019

NanoHub Project, <https://nanohub.org/> 2015- 2018

National Biomedical Computation Resource (NBCR) Project, <http://nbcrc.ucsd.edu/>, 2016 - 2018

KEYNOTES AND INVITED TALKS

- SC'19 invited talk, Denver, CO, 2019
- Computer Science Department, Manchester University, November 2018, Manchester, UK,
- Cracow Grid Workshop (CGW), October 2018, Krakow, Poland,
- eResearch Australasia Conference, October 2017, Brisbane, Australia
- Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE5.2), October 2017, Auckland, NZ
- Workshop on Clusters, Clouds, and Data for Scientific Computing, October 2016, Lyon, France
- International Workshop on HPC Architecture, Software, and Applications at an Extreme Scale, September 2016, Wuxi, China.
- Smoky Mountains Computational Sciences and Engineering Conference, September 2016, Gatlingburg, TN
- Workshop on Modeling & Simulation of Systems and Applications, August 2016, Seattle, WA.
- CRA-W/CDC Distinguished Lecture event at the Southeast Women in Computing Conference (SEWIC), November, 2015
- Panelist at the White House National Strategic Computing Initiative Workshop, October 2015
- 11th IEEE International Conference on eScience, August 2015, Germany
- 6th Workshop on Scientific Cloud Computing, Portland, OR, June 2015
- 24th International Symposium High Performance and Distributed Computing, Portland, OR, June 2015
- Supercomputing Frontiers 2015, March 2015
- Oak Ridge National Laboratory, Seminar, September 2014
- University of Queensland /Monash University (MURPA/QURPA) Seminar, Summer 2014
- Sonoma State University, CA, Computer Science Colloquium, Spring 2014
- International Conference on Parallel Processing and Applied Mathematics. PPAM, Torun, Poland, September 2013 (keynote)
- Focused Technical Workshop on Network Issue for Life Sciences Research - LLNL, July 2013 (invited talk)
- Lawrence Berkeley National Laboratory, "Workflow Technologies for Science Automation", Berkeley, CA, May 2013 (invited talk)
- AGH University of Science and Technology, "Science Platforms: Managing Workloads and Resources", Krakow, Poland, March 2013 (invited talk)
- Panel Member, CENIC 100G and Beyond Workshop, San Diego, CA, March 2013
- Polish-Japanese Institute of Information Technology, "Science Platforms: Research and Technologies to Computational Science in Virtual Environments", Warsaw, Poland, March 2013, (seminar)
- Institute of Fundamental Technological Research, Polish Academy of Sciences, "Science Platforms: Managing Computational Workloads and Resources", Warsaw, Poland, March 2013, (Distinguished Lecture)
- HUBbub'12, "Managing Workflows Within HUBzero: How to Use Pegasus to Execute Computational Pipelines", Indianapolis, Indiana, September 2012 (keynote)
- Clusters, Clouds, and Data for Scientific Computing, 2012, "Hosted Science: How to support complex scientific applications on the cloud", Lyon Franc, September 2012 (invited talk)
- EuroPar'12, Rhodes, Greece, August 2012, (keynote)
- Invited Lecture Series, AGH University of Science and Technology, Krakow, Poland, March 2012

- The 6th Workshop on Workflows in Support of Large-Scale Science, Seattle, November 2011, (keynote)
- USC Global Conference, Hong Kong, October 2011 (panelist, The Grand Challenges of Engineering)
- International Supercomputing Conference (ISC) Cloud Conference, Mannheim, Germany, September 2011
- International Conference on Parallel Processing and Applied Mathematics. PPAM, Torun, Poland, September 2011 (keynote)
- Cracow Grid Workshop, Cracow, Poland, October 2010. (keynote)
- International Conference on Parallel Processing and Applied Mathematics. PPAM, Wroclaw, Poland, September 2009
- Cracow Grid Workshop, Cracow, Poland, October 2008. (keynote)
- CoreGrid Workshop, Crete, Greece, April 2008.
- AAAI Spring Symposium on Semantic Scientific Knowledge Integration, Stanford University, March 2008.
- The International Workshop on Performance Analysis and Optimization of High-End Computing Systems, in conjunction with SC'07, November 2007
- International Conference on Parallel Processing and Applied Mathematics. PPAM, Gdansk, Poland, September 2007
- Computer Science Department Colloquium, Southampton University, UK April 2007
- Computer Science Department Colloquium, King's College, London, UK, April 2007
- Colloquium, University of Vienna, Austria, June 2007
- Workshop on Scientific Workflows and Business workflow standards in e-Science, in Conjunction with e-Science 2006, Amsterdam, December 2006
- Workflow Optimization in Distributed Environments, Edinburgh, October 2006
- Manchester University, School of Computer Science Seminar, October 2006
- Louisiana State University, Computer Science Department Seminar, September 2006
- Cyberinfrastructure for Ocean Observations Workshop, September 2006
- Partnerships in Innovation: Serving a Networked Nation conference, National Archives and Records Administration, November 2004
- Astronomical Data Analysis Software & Systems (ADASS), October 2004
- SC4DEVO: Service Composition for Data Exploration in the Virtual Observatory, July 2004
- SSDBM 04 panel on Data Management on the Grid, June 2004
- Ground System Architectures Workshop (GSAW 2004), April 2004
- SDSC Computational Science Seminar Series (CSSS), January 2004
- Rensselaer Polytechnic Institute, GriPhyN: Data-Intensive Science in Grid Environments, Troy, NY, January 2002.
- VIRGO Laboratory, GriPhyN (Grid Physics Network) and LIGO: Data-Intensive Science in Grid Environments, Cascina, Italy, September 2001.
- International Conference on Parallel Processing and Applied Mathematics. GriPhyN (Grid Physics Network): Enabling Data Intensive Science in Grid Environments. Naleczow, Poland, September 2001.
- Poznan Supercomputing and Networking Center, GriPhyN: Data-Intensive Science in Grid Environments, Poznan, Poland, September 2001.
- Mardi Gras Conference, GriPhyN (Grid Physics Network): Building a Data Grid Infrastructure for Experimental Physics, Baton Rouge, LA, February 2001.
- University of Texas at El Paso, MPI-Sim, an MPI Simulator in POEMS (Performance Oriented End-to-End Modeling System), El Paso, TX, August 2000.
- USC/ISI, POEMS: Performance Oriented End-to-End Modeling System, Marina Del Rey, CA, July 2000.
- Aerospace Corporation, Optimization in Parallel Discrete Event Simulation, Los Angeles, CA, July 1997.
- Institute of Fundamental Technological Research, Polish Academy of Sciences, Performance Optimization in Parallel Discrete Event Simulation, Warsaw, Poland, June 1997.

TEACHING ACTIVITIES

- Guest Lecturer at the USC Computer Science Department
- Lecturer at the 2nd Karlsruhe Summer School on Service Research, September 2013
- Guest Lectures at the AGH University of Science and Technology, March 2013
- USC, Computer Science Department, CS 599 Introduction to Grid Computing (Graduate level), Fall 2007
- UCLA, Department of Computer Science, Guest Lecturer
 - CS 133, Parallel and Distributed Programming, an undergraduate level course in parallel programming. It covers architectural and language models of parallelism. The emphasis is learning to write parallel programs. Winter Term 1998, and 1999.
 - CS 233A, Parallel Programming, graduate course in parallel programming that covers in more depth the topics of CS 133. Emphasis is on examining state of the art research and individual research projects. Winter Term 1998, and 1999.
 - CS 239, Parallel Simulation, a follow-up course to CS 233A. Spring Term 1998 .

MEDIA CITATIONS

- "Ewa Deelman Named AAAS Fellow",
<https://viterbischool.usc.edu/news/2019/11/ewa-deelman-named-aaas-fellow/>
- "Four USC professors selected as fellows of renowned scientific society AAAS",
<https://news.usc.edu/163211/four-usc-professors-aaas-fellows-scientific-society/>
- USC professors recognized for work in a variety of scientific fields,
<http://www.uscannenbergmedia.com/2019/12/05/usc-professors-recognized-for-work-in-a-variety-of-scientific-fields/>
- "Pegasus research team discovers errors for a win" <https://www.isi.edu/news/story/388>
- "USC ISI To Pilot Cyberinfrastructure Center of Excellence for NSF's Largest Scientific Facilities",
<https://viterbischool.usc.edu/news/2018/10/usc-isi-to-pilot-cyberinfrastructure-center-of-excellence-for-nsfs-largest-scientific-facilities/>, October 2018
- "ISI Research Director Ewa Deelman Named IEEE Fellow",
<https://www.isi.edu/news/story/334>, USC/ISI Jan 2018
- "Nobel Prize-winning discovery on gravitational waves came about with contributions from USC scientists", USC
<https://news.usc.edu/129550/nobel-prize-winning-discovery-on-gravitational-waves-came-about-with-contributions-from-use-scientists/>, USC, Oct. 2017
- "ISI's Pegasus Program Contributed to New Gravitational-Wave Detector Discovery",
<https://www.isi.edu/news/story/323>, USC/ISI, October 2017
- "Super-Efficient Workflows, Deelman is impacting science applications", IEEE Women in Engineering Magazine, June 2017
- "Recipients of ISI's Institute Achievement Award Announced",
<https://www.isi.edu/news/year/2017> USC/ISI, Jan 2017
- "Ewa Deelman and Yolanda Gil co-author Science Article on Reproducibility",
<http://www.isi.edu/news/story/278>, USC/ISI, December 2016
- "How ISI's Pegasus helped scientists make the discovery of the century", USC Viterbi School of Engineering,
<http://viterbi.usc.edu/news/news/2016/isi-gravitational-waves-software-pegasus.htm>, Feb 2016
- "Caltech wasn't the only SoCal school helping discover gravitational waves", mentions the use of Pegasus for managing workflows used to discover gravitational waves, Southern California NPR Station: KPCC, February 11, 2016
<http://www.scpr.org/news/2016/02/11/57446/caltech-wasn-t-the-only-socal-school-helping-discover/>

TEACHING ACTIVITIES

- Guest Lecturer at the USC Computer Science Department
- Lecturer at the 2nd Karlsruhe Summer School on Service Research, September 2013
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 - CS 233A, Parallel Programming, graduate course in parallel programming that covers in more depth the topics of CS 133. Emphasis is on examining state of the art research and individual research projects. Winter Term 1998, and 1999.
 - CS 239, Parallel Simulation, a follow-up course to CS 233A. Spring Term 1998.

MEDIA CITATIONS

- "Ewa Deelman Named AAAS Fellow",
<https://viterbischool.usc.edu/news/2019/11/ewa-deelman-named-aaas-fellow/>
- "Four USC professors selected as fellows of renowned scientific society AAAS",
<https://news.usc.edu/163211/four-usc-professors-aaas-fellows-scientific-society/>
- USC professors recognized for work in a variety of scientific fields,
<http://www.uscannenbergmedia.com/2019/12/05/usc-professors-recognized-for-work-in-a-variety-of-scientific-fields/>
- "Pegasus research team discovers errors for a win" <https://www.isi.edu/news/story/388>
- "USC ISI To Pilot Cyberinfrastructure Center of Excellence for NSF's Largest Scientific Facilities",
<https://viterbischool.usc.edu/news/2018/10/usc-isi-to-pilot-cyberinfrastructure-center-of-excellence-for-nsfs-largest-scientific-facilities/>, October 2018
- "ISI Research Director Ewa Deelman Named IEEE Fellow",
<https://www.isi.edu/news/story/334>, USC/ISI Jan 2018
- "Nobel Prize-winning discovery on gravitational waves came about with contributions from USC scientists", USC
<https://news.usc.edu/129550/nobel-prize-winning-discovery-on-gravitational-waves-came-about-with-contributions-from-usc-scientists/>, USC, Oct. 2017
- "ISI's Pegasus Program Contributed to New Gravitational-Wave Detector Discovery",
<https://www.isi.edu/news/story/323>, USC/ISI, October 2017
- "Super-Efficient Workflows, Deelman is impacting science applications", IEEE Women in Engineering Magazine, June 2017
- "Recipients of ISI's Institute Achievement Award Announced",
<https://www.isi.edu/news/year/2017> USC/ISI, Jan 2017
- "Ewa Deelman and Yolanda Gil co-author Science Article on Reproducibility",
<http://www.isi.edu/news/story/278>, USC/ISI, December 2016
- "How ISI's Pegasus helped scientists make the discovery of the century", USC Viterbi School of Engineering,
<http://viterbi.usc.edu/news/news/2016/isi-gravitational-waves-software-pegasus.htm>, Feb 2016
- "Caltech wasn't the only SoCal school helping discover gravitational waves", mentions the use of Pegasus for managing workflows used to discover gravitational waves, Southern California NPR Station: KPCC, February 11, 2016
<http://www.scpr.org/news/2016/02/11/57446/caltech-wasn-t-the-only-socal-school-helping-discover/>

- Ewa Deelman Awarded Prestigious HPDC Honor, September 2015, <http://www.isi.edu/news/story/251>
- CENIC Star Performer: Ewa Deelman, USC, January 2014, <http://www.cenic.org/p=1554/>
- Project ADAMANT Wins Innovations in Networking Award for XD Apps, March 13, 2013, <http://www.cenic.org/p=356/>
- How can we use HPC platforms to help dig out new exoplanets?, iSGTW, April 3, 2013, <http://www.isgtw.org/feature/how-can-we-use-hpc-platforms-to-help-dig-out-new-exoplanets>
- Pegasus project leader, White House advanced manufacturing adviser to speak at HUBzero conference, iTap Newsroom (Purdue IT News), July 2012 <https://hubzero.org/news/hubhub2012-speakers>
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- USC Neuroscientists to Map Gene Expression, USC News, October 5, 2009 http://uscnews.usc.edu/science/technology/usc_neuroscientists_to_map_gene_expression.html
- Viterbi School's ISi Part of FutureGrid Test Bed, USC Viterbi News, September 2009 <http://viterbi.usc.edu/news/news/2009/viterbi-school-s213206.htm>
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- Image of the week - Earth-quaking science in Hollywood, international Science Grid this Week, iSGTW online, January 2008, <http://www.isgtw.org/?pid=1000848>
- Feature - Montage a rising star in grid-enabled sky mosaics, international Science Grid this Week, iSGTW online, December 2007, <http://www.isgtw.org/?pid=1000731>
- Feature - Pegasus invites new communities to saddle up, international Science Grid this Week, iSGTW online, September 2007, <http://www.isgtw.org/?pid=1000664>
- ISi Leads \$13.8 Million E-Science Effort to Tame Terabyte Torrents, ISi News, <http://www.isi.edu/news/news.php?story=165>
- Rensselaer Supercomputers Battle Lyme Disease, Rensselaer Polytechnic Institute Review Vol. 17 No. 18, June 14, 1996

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- PI, "Connecting Large NSF Facilities Cyberinfrastructure Workshop", 6/1/19 - 5/31/20, \$96,402, NSF
- PI, "Cyberinfrastructure Center of Excellence Pilot Study", 10/01/2018 - 09/30/2020, \$3,000,000, NSF
- Co-PI, "CC* Integration: Delivering a Dynamic Network-Centric Platform for Data-Driven Science (DyNamo)", 08/01/2018- 7/31/2020, \$330,000, NSF
- Sr. Personnel, Center for Genomic Studies on Mental Disorders, 3/01/2018 - 2/28/2023, 1,605,134, NIH
- Co-PI, "CICI: SSC: Integrity Introspection for Scientific Workflows (IRIS)", 09/01/2018- 8/31/2021, \$350,000, NSF
- PI, Collaborative Research: EAGER: Exploring and Advancing the State of the Art in Robust Science in Gravitational Wave Physics, 05/01/2018 - 4/30/2020; \$75,000.00; NSF
- PI, "Panorama 360: Predictive Modeling and Diagnostic Monitoring of Extreme Science

Workflows, 9/2017 - 8/2020, \$1,275,000, DOE.

- PI, "512-551: Pegasus: Automating compute and data intensive science", 4/1/17 - 3/31/22, \$2,500,00, NSF
- Co-PI, BIGDATA: IA: Collaborative Research: In Situ Data Analytics for Next Generation Molecular Dynamics Workflows, 10/1/2017-9/30/2021, \$516,000, NSF
- Co-PI, "MINT: Model INtegration through Knowledge-Rich Data and Process Composition", 12/01/2017 - 11/30/2021, \$12,979,881, DARPA
- PI, "Repository and Workflows for Accelerating Circuit Realization (RACE)", 4/2016-7/2019, \$3,793,062, DARPA
- PI, "Big Data Meets HPC" 12/2016- 08/2017, \$50,000, LLNL LORD
- Co-PI, Collaborative Research: CICI: Secure and Resilient Architecture: Scientific Workflow Integrity with Pegasus, 09/2016- 8/2019; \$290,000, NSF
- Sr. Personnel, XSEDE 2.0: Integrating, Enabling and Enhancing National Cyberinfrastructure with Expanding Community Involvement, 9/2016-8/2021, \$480,000, NSF
- Sr. Personnel, Natural Hazards Engineering Research Infrastructure: Computational Modeling and Simulation Center, 10/2016-9/2021, \$433,340, NSF
- PI, "A Data Analytics Approach to Improving Simulation Workflow", 11/2015 - 05/2016, LLNL LORD
- PI, Predictive Modeling and Diagnostic Monitoring of Extreme Science Workflows, DOE, 9/2014-8/2017, \$3,824,927
- Co-PI, CIF21 DIBBs: Domain-aware management of heterogeneous workflows: Active data management for gravitational-wave science workflows, NSF, 10/2014-9/2017, \$444,850
- PI, XSEDE Scientific Workflow Application Support Specialist, (XSEDE), 9/2013 - 06/2015, NSF, \$220,000
- Co_PI, The Center for Genomic Studies of Mental Disorders, 06/2013 - 05/2018, NIMH, \$1,879,412
- Co-PI, PAGE II Coordinating Center, 06/13- 05/17, NHGRI, \$435,999
- PI, Collaborative Research: CC-NIE Integration: Transforming Computational Science with ADAMANT (Adaptive Data-Aware Multi-domain Application Network Topologies), January 2013-December 2014, NSF, \$204,070

Integrating resource provisioning and work/low execution on Clouds.

- Sr. Personnel, The Open Science Grid The Next Five Years: Distributed High Throughput Computing for the Nation's Scientists, Researchers, Educators, and Students, August 2012-July 2017, NSF, \$913,748

Supporting computations on the Open Science Grid.

- Co-PI dV/dt -Accelerating the rate of progress towards extreme scale collaborative Science, September 2012-August 2015, DOE, \$744,606

Conducting research in resource planning on dynamic resources for complex applications.

- PI, 512-551: Distributed Workflow Management Research and Software in Support of Science, April 2012-March 2016, NSF, \$2,153,597

Continued development and support of the Pegasus Work/low Management System.

- Co-PI rSeq: Robust and Portable Workflow-based tools for mRNA and Genome re-sequencing, February 2012-December 2014, NIH, \$338,330

Developing and supporting RNA_Seq work/lows.

- Co-PI, EarthCube Community Workshop: Designing A Roadmap for Workflows in Geosciences, April 2012-March 2013, NSF, \$15,432

Organizing and participating in discussion on the future of the Geosciences cyberinfrastructure.

- PI, The Role of Software and Software Institutes in Computational Science Over Time, October 2012-September 2013, NSF \$74,430
Organizing a workshop regarding the future of Cyberinfrastructure.
- Sr. Personnel, Geoinformatics: A Petascale Cyberfacility for Physics-Based Seismic Hazard Analysis (SCEC PetaSHA3 Project), NSF, July 2010-June 2012, \$174,000
Supporting the earthquake science work/lows.
- Sr. Personnel, Sustaining and Extending the Open Science Grid: Science Innovation on a PetaScale Nationwide Facility, NSF December 2009-August 2011, \$128,000
Providing user support for the project
- PI, SDCI/STCI as the Software Supply Chain of the National Cyberinfrastructure Workshop, NSF, 2/1/2010- 1/31/2011, \$89,968
Organizing a workshop for the PI meeting for the NSF Office of Cyberinfrastructure SDCI and STCI programs
- Co-PI, Transcriptional Atlas of Human Brain Development, NIH, 9/1/2009-8/31/2011, \$492,900
Developing workflows for gene expression studies
- Sr. Personnel, FutureGrid: An Experimental, High-Performance Grid Test-bed, NSF, 10/1/2009-9/30/2013, \$725,000
Developing work/low technologies for virtual execution environments
- PI, STCI: Middleware for Monitoring and Troubleshooting of Large-Scale Applications on National Cyberinfrastructure, NSF, 9/1/2009-8/31/2012, \$1,875,830
Developing efficient, online work/low monitoring and troubleshooting capabilities.
- PI, STCI: Integrated Resource Provisioning Across the National Cyberinfrastructure in Support of Scientific Workloads, NSF, 9/1/09-8/31/2012, \$1,611,038
Developing tools that can provision computational resources in static and dynamics manner.
- Co-PI DC: Medium: Intelligent Data Placement in Support of Scientific Workflows, NSF, 09/01/2009-08/31/2012, \$405,000
Developing algorithms for coupling work/low and data management systems.
- Co-PI, Center for Genomic Studies of Mental Disorders, National Institutes of Health, 10/01/08 -9/30/2013, \$2,250,000
Development of the Cyberinfrastructure and work/low technologies for the coordinating center.
- Sr. Personnel, Genomic Psychiatry Cohort, National Institutes of Health, 10/2008-9/2013, \$300,000
Development of the Cyberinfrastructure for a psychiatric study.
- Co-PI, NHGRI EpiGenVar Coordinating Center, National Institutes of Health, 7/1/2008-6/30/2012, \$500,000
Development of the Cyberinfrastructure and work/low technologies for the coordinating center.
- PI, Supporting Ocean Modeling With Workflow Technologies, Jet Propulsion Laboratory, 6/1/2008-5/31/2009, \$70,000
Development of work/lows for and ocean forecasting system.
- PI, SDCI NMI Improvement: Pegasus: From Concept to Execution- - Mapping Scientific Workflows onto the National Cyberinfrastructure, National Science Foundation, 09/01/2007 - 08/31/2012, \$1,700,000
Hardening of the Pegasus work/low software that manages execution of complex scientific work/lows on distributed resources.
- PI, Designing Scientific Software one Workflow at a Time, National Science Foundation, 10/1/2007-9/30/2010, \$313,556.

Exploring the use of the work/low paradigm in the context of large-scale software design.

- Sr. Personnel, Cyberinfrastructure in Support of Research: A New Imperative, National Science Foundation, 10/01/2004 - 09/30/2008, \$250,000

This project, lead by NCSA developed technologies necessary to support a wide range of NSF applications.

- Co-PI, Scalable Cross-Organization Threat and Event Discovery through Grid Workflows, Air Force Research Lab, 10/1/2006 - 9/30/2010, \$2,104,000

This project, lead by ISI develops new techniques to optimize work/lows representing large-scale data mining applications and to provide seamless access to distributed data sources.

- Co-PI, CSR-AES: Collaborative Research: Intelligent Optimization of Parallel and Distributed Applications, National Science Foundation, 08/01/2006 - 07/31/2009, \$215,452.

This project, lead by ISI develops new techniques to optimize work/lows in distributed Systems.

- Sr. Personnel, Enabling Earthquake System Science Through Petascale Calculations (PetaShake), National Science Foundation, 10/01/2007-9/30/2009, \$200,000.

Providing a cyberinfrastructure and work/low technologies for earthquake science applications.

- PI, Pegasus: Supporting LIGO Workflows on the Open Science Grid, National Science Foundation, 11/1/2006 - 10/31/2007, \$102,000

This project, lead by ISI will enable efficient execution of gravitational-wave physics applications on large grid deployments in conjunction with the efficient data management.

- Co-PI, Neuroscience: Collaborative Research (CRCNS): Assembling Visible Neurons for Simulations: Merging of High-throughput 3D Microscopies with Advanced Computational Tools, National Institute of Health (NIH), 10/01/2002- 09/30/2006, \$45,000

This project, lead by SDSC, developed work/low software necessary to support complex tomographic image reconstruction on distributed resources.

- PI, Towards Cognitive Grids: Knowledge-Rich Services for Autonomous Workflow refinement and Robust Execution, National Science Foundation, 12/15/2004 - 11/30/2006, \$200,000

This project examined the use of semantic technologies to describe resources and services on the grid.

- Co-PI, WSW-06: 2006 Workshop on Challenges of Scientific Workflows, National Science Foundation, 05/01/2006 to 10/31/2007, \$44,000

Funding for the Workshop on the Challenges of Scientific Work/lows

PUBLICATIONS

BOOK EDITOR

1. Workflows fore-Science: Scientific Workflows for Grids, Ian J. Taylor, Ewa Deelman, Dennis B. Gannon, Matthew Shields (Editors), Springer, January 2007

JOURNALS

1. G. Papadimitriou, C. Wang, K. Vahi, R. Ferreira da Silva, A. Mandal, L. Zhengchun, R. Mayani, M. Rynge, M. Kiran, V. E. Lynch, R. Kettimuthu, E. Deelman, J. S. Vetter, and I. Foster, "End-to-End Online Performance Data Capture and Analysis for Scientific Workflows," *Future Generation Computer Systems*, vol. 117, pp. 387-400, 2021., (Funding Acknowledgments: DOE DE-SC0012636)
2. E. Deelman, R. Ferreira da Silva, K. Vahi, M. Rynge, R. Mayani, R. Tanaka, W. Whitcup, and M. Livny, "The Pegasus Workflow Management System: Translational Computer Science in Practice," *Journal of Computational Science*, 2020., (Funding Acknowledgments: NSF 1664162)
3. R. Ferreira da Silva, L. Pottier, T. Coleman, E. Deelman, and H. Casanova, "WorkflowHub: Community Framework for Enabling Scientific Workflow Research and Development," in 2020 IEEE/ACM Workflows in Support of Large-Scale Science (WORKS), 2020, p. 49-56. (Funding Acknowledgments: NSF 2016619, DOE DE-SC0012636, NSF 1664162, NSF 1923539)
4. R. Ferreira da Silva, H. Casanova, A. Orgerie, R. Tanaka, E. Deelman, and F. Suter, "Characterizing, Modeling, and Accurately Simulating Power and Energy Consumption of I/O-intensive Scientific Workflows," *Journal of Computational Science*, vol. 44, p. 101157, 2020., (Funding Acknowledgments: NSF 1642335, NSF 1923539, NSF 1664162, DOE DE-SC0012636)
5. M. Kiran, C. Wang, G. Papadimitriou, A. Mandal, and E. Deelman, "Detecting Anomalous Packets in Network Transfers: Investigations using PCA, Autoencoder and Isolation Forest in TCP," *Machine Learning*, 2020., (Funding Acknowledgments: DOE DESC0012636)
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7. G. Papadimitriou, K. Vahi, J. Kincl, V. Anantharaj, E. Deelman, and J. Wells, "Workflow Submit Nodes as a Service on Leadership Class Systems," in *Proceedings of the Practice and Experience in Advanced Research Computing*, New York, NY, USA, 2020. (Funding Acknowledgments: DOE DESC0012636)
8. G. Papadimitriou, E. Lyons, C. Wang, K. Thareja, R. Tanaka, P. Ruth, J. J. Villalobos, I. Rodero, E. Deelman, M. Zink, and A. Mandal, "Application Aware Software Defined Flows of Workflow Ensembles," in 2020 IEEE/ACM Innovating the Network for Data-Intensive Science (INDIS), 2020. (Funding Acknowledgments: NSF 1826997)
9. G. Papadimitriou, C. Wang, K. Vahi, R. Ferreira da Silva, A. Mandal, L. Zhengchun, R. Mayani, M. Rynge, M. Kiran, V. E. Lynch, R. Kettimuthu, E. Deelman, J. S. Vetter, and I. Foster, "End-to-End Online Performance Data Capture and Analysis for Scientific Workflows," *Future Generation Computer Systems*, 2020., (Funding Acknowledgments: DOE DE-SC0012636)
10. L. Pottier, R. Ferreira da Silva, H. Casanova, and E. Deelman, "Modeling the Performance of Scientific Workflow Executions on HPC Platforms with Burst Buffers," in 2020 IEEE International Conference on Cluster Computing (CLUSTER), 2020, p. 92-103. (Funding Acknowledgments: DOE DE-SC0012636, NSF 1664162, NSF 1741040, NSF 1923539, NSF 1923621)
11. K. Vahi, D. Goldstein, G. Papadimitriou, P. Nugent, and E. Deelman, "Gearing the DECam Analysis Pipeline for Multi-Messenger Astronomy using Pegasus Workflows," *Astronomical Data Analysis Software and Systems (ADASS) XXIX*, 2020., (Funding Acknowledgments: NSF 1664162, DOE DESC0012636)
12. L. Versluis, R. Matha, S. Talluri, T. Hegeman, R. Prodan, E. Deelman, and A. Iosup, "The Workflow Trace Archive: Open-Access Data from Public and Private Computing Infrastructures," *IEEE Transactions on Parallel and Distributed Systems*, vol. 31, iss. 9, pp. 2170-2184, 2020., (Funding Acknowledgments: NSF 1664162)

13. C. Wang, G. Papadimitriou, M. Kiran, A. Mandal, and E. Deelman, "Identifying Execution Anomalies for Data Intensive Workflows Using Lightweight ML Techniques," in *2020 IEEE High Performance Extreme Computing Conference (HPEC), 2020*. (Funding Acknowledgments: DOE DESC0012636)
14. S. Bogol, P. Brenner, A. Brinckman, E. Deelman, R. Ferreira da Silva, S. Gupta, J. Nabrzyski, S. Park, D. Perez, M. Rynge, I. Taylor, K. Vahi, M. V. Werf, R. Sarah, and S. Wyngaard, "A Secure Gateway for Enabling ASIC Design Collaborations," in *11th International Workshop on Science Gateways (WSG 2019)*, 2019. (Funding Acknowledgments : DARPA HR00II-16-C-0043)
15. A. Brinckman, E. Deelman, S. Gupta, J. Nabrzyski, S. Park, R. Ferreira da Silva, I. J. Taylor, and K. Vahi, "Collaborative Circuit Designs using the CRAFT Repository," *Future Generation Computer Systems*, vol. 94, p. 841-853, 2019. (Funding Acknowledgments: DARPA HR00II-16-C-0043)
16. P. Chang, G. Allen, W. Anderson, F. B. Bianco, J. S. Bloom, P. R. Brady, A. Brazier, B. S. Cenko, S. M. Couch, T. DeYoung, E. Deelman, Z. B. Etienne, R. J. Foley, D. B. Fox, Z. V. Golkhou, D. R. Grant, C. Hanna, K. Holley-Bockelmann, A. D. Howell, E. A. Huerta, M. W. G. Johnson, M. Juric, D. L. Kaplan, D. S. Katz, A. Keivani, W. Kerzendorf, C. Kopper, M. T. Lam, L. Lehner, Z. Marka, S. Marka, J. Nabrzyski, G. Narayan, B. W. O'Shea, D. Petravick, R. Quick, R. A. Street, I. Taboada, F. Timmes, M. J. Turk, A. Weitman, and Z. Zhang, *Cyberinfrastructure Requirements to Enhance Multi-messenger Astrophysics*, 2019.
17. D. Chapp, D. Rorabaugh, D. A. Brown, E. Deelman, K. Vahi, V. Welch, and M. Taufer, "Applicability Study of the PR/MAD Model to UGO Gravitational Wave Search Workflows," in *Proceedings of the 2nd International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS'19)*, 2019, p. 1-6.
18. E. Deelman, A. Mandal, V. Pascucci, S. Sons, J. Wyngaard, C. F. Vardeman, S. Petruzza, I. Baldin, L. Christopherson, R. Mitchell, L. Pottier, M. Rynge, E. Scott, K. Vahi, M. Kogank, J. A. Mann, T. Gulbransen, D. Allen, D. Barlow, S. Bonarrigo, C. Clark, L. Goldman, T. Goulden, P. Harvey, D. Hulsander, S. Jacob, C. Laney, I. Lobo-Padilla, J. Sampson, J. Staarmann, and S. Stone, "Cyberinfrastructure Center of Excellence Pilot: Connecting Large Facilities Cyberinfrastructure," in *15th International Conference on eScience (eScience)*, 2019. (Funding Acknowledgments : NSF 1842042)
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25. D. Garijo, D. Khider, V. Ratnakar, Y. Gil, E. Deelman, R. Ferreira da Silva, C. Knoblock, Y. Chiang, M. Pham, J. Pujara, B. Vu, D. Feldman, R. Mayani, K. Cobourn, C. Duffy, A. Kemanian, L. Shu, V. Kumar, A. Khandelwal, K. Tayal, S. Peckham, M. Stoica, A. Dabrowski, D. Hardesty-Lewis, and S. Pierce, "An Intelligent Interface for Integrating Climate, Hydrology, Agriculture , and Socioeconomic Models," in ACM 24th International Conference on Intelligent User Interfaces (IUI'19), 2019, p. 111- 112. (Funding Acknowledgments: DARPA W911NF-18-1-0027)
26. E. Lyons, G. Papadimitriou, C. Wang, K. Thareja, P. Ruth, J. J. Villalobos, I. Rodero, E. Deelman, M. Zink, and A. Mandal, "Toward a Dynamic Network-centric Distributed Cloud Platform for Scientific Workflows: A Case Study for Adaptive Weather Sensing," in 15th International Conference on eScience (eScience), 2019, p. 67-76. (Funding Acknowledgments: NSF 1826997)
27. R. Mitchell, L. Pottier, S. Jacobs, R. Ferreira da Silva, M. Rynge, K. Vahi, and E. Deelman, "Exploration of Workflow Management Systems Emerging Features from Users Perspectives," in First International Workshop on Big Data Tools, Methods, and Use Cases for Innovative Scientific Discovery (BTSD), 2019, p. 4537-4544. (Funding Acknowledgments: NSF 1842042)
28. G. Papadimitriou, M. Kiran, C. Wang, A. Mandal, and E. Deelman, "Training Classifiers to Identify TCP Signatures in Scientific Workflows," in 2019 IEEE/ACM Innovating the Network for Data-Intensive Science (INDIS), 2019, pp. 61-68. (Funding Acknowledgments: DOE DESC0012636)
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