

Sara J. Graves, Ph.D.
Director, Information Technology & Systems Center
University of Alabama System Board of Trustees University Professor
Professor of Computer Science
The University of Alabama in Huntsville, Technology Hall S339A, Huntsville, AL 35899
E-mail: sgraves@itsc.uah.edu

Professional Preparation

University of Alabama, Tuscaloosa	Mathematics	B.S.	1967
University of Alabama, Tuscaloosa	Institutional Analysis	M.A.	1971
University of Alabama in Huntsville	Computer Science	M.S.	1981
University of Alabama in Huntsville	Computer Science	Ph.D.	1984

Professional Appointments

National Academy of Sciences Gulf Research Program Advisory Board 2014-17.
Board on Research Data and Information, (BRDI), and U.S. National Committee on Data for Science and Technology, National Research Council, 2009-16.
Board of Directors of the Gulf of Mexico Coastal Ocean Observing System Regional Association (GCOOS-RA), 2013-17.
Science Advisory Board: Oak Ridge National Laboratory Climate Change Science Institute, 2009-15.
Steering Committee member for Technology Audit for the NSF/XSEDE (TeraGrid Phase III) Program, 2010-14.
Steering Committee member for the Symposium and Workshop on the Future of Scientific Knowledge Discovery in Open Networked Environments, The National Academies, 2009-10.
Secretary General and Executive Committee, CODATA, International Council for Science: Committee on Data for Science and Technology, 2006-15.
Founding Member, National Oceanic and Atmospheric Administration Science Advisory Board Data Archiving and Access Requirements Working Group, 2006-13.
Southeastern Universities Research Association (SURA) Board of Trustees, 2005-17.
The University of Alabama in Huntsville, Director of Information Technology & Systems Center, Board of Trustees University Professor, Professor of Computer Science, Vice President for University Advancement, Executive Director of UAH Foundation, Huntsville, AL.
California Institute of Technology, Jet Propulsion Laboratory, Visiting Senior Scientist with Office of Space Science and Applications, NASA Headquarters, Code SE, Washington, D.C.

Products Relevant to this Proposal

Graves, S., Keiser, K., Maskey, M., and McEniry, M., Supporting Decision Support with Event-Driven Data Delivery. American Meteorological Society (AMS). Atlanta, GA, 2014.
Graves, S., R. Ramachandran, T. Berendes, Using GLIDER for Knowledge Discovery in Climate Science to Visualize, Analyze and Mine Satellite Imagery, SCC '12 Proceedings of the 2012 SC Companion: High Performance Computing, Networking Storage and Analysis, IEEE Computer Society, Washington, D.C., 2012.
Graves, S., X. Li, D. Smith, K. Keiser, Building a Climatology of Mountain Gap Wind Jets and Related Coastal Upwelling, SCC '12 Proceedings of the 2012 SC Companion: High Performance Computing, Networking Storage and Analysis, IEEE Computer Society, Washington, D.C., 2012.
Graves, S. and T. Berendes, "Meeting the Challenges of Data-Intensive Science," IGARSS 2012: IEEE International Geoscience and Remote Sensing Symposium, Munich, Germany, 22-27 July, 2012.

Rushing, J., R. Ramachandran, U.J. Nair, S. J. Graves, R. Welch, and H. Lin, "ADaM: A Data Mining Toolkit for Scientists and Engineers," Elsevier Computers and Geosciences, Vol. 31, No. 5, pp. 607-618, June 2005. Most cited article in Computers and Geosciences 2005-10.

Five Other Significant Products

Conover, H., R. Ramachandran, B. Beaumont, A. Kulkarni, M. McEniry, K. Regner, and S. Graves, accepted: Introducing Provenance Capture into a Legacy Data System. *IEEE Transactions on Geoscience and Remote Sensing* 2013.

Conover, H., Drewry, M., Graves, S., Keiser, K., Maskey, M., Smith, M., et al. SCOOP Data Management: A Standards-based Distributed Information System for Coastal Data Management. In L. Di & H. K. Ramapriyan (Eds.), *Standards-Based Data and Information Systems for Earth Observation*. Springer-Verlag, December 2009.

Ramachandran, R., S. Graves, J. Rushing, K. Keiser, M. Maskey, A. Lin, H. Conover, "ADaM Services: Scientific Data Mining in the Service Oriented Architecture Paradigm," *Data Mining Techniques in Grid Computing Environments*, W. Dubitzky, Editor. Wiley Publication, 2007.

Rushing, J., H. Ranganath, T. Hinke and S. Graves, "Image Segmentation Using Association Rule Features," *IEEE Transactions on Image Processing*: vol. 11. no. 5, pp. 558-567, May 2002.

Rushing, J., H. Ranganath, T. Hinke and S. Graves, "Using Association Rules as Texture Features," *IEEE Transactions on Pattern Analysis and Machine Intelligence*: vol 23. no. 8, pp. 845-858, August 2001.

Synergistic Activities

Workshop Coordinating Committee for NSF Food Energy Workshop: Planned Migration as a Strategy to Sustain Agricultural Production, Boulder, Colorado, October 21-23, 2015

Workshop Coordinating Team for NSF EarthCube Real-time Data Workshop: Integrating Real-time Data into the EarthCube Framework, Boulder, Colorado, June 17-18, 2013.

Co-I, NSF Workshops for Creating a Community Roadmap for EarthCube Services for Data Discovery, Mining and Access: Data Mining Services, 2012-2013

NSF Advisory Committee for Cyberinfrastructure, founding member, 2006-2007

NSF PI for EPSCoR Track II: Research and Education Cyberinfrastructure Investments to Develop the Coastal Hazards Collaboratory in the Northern Gulf Coast and Large ITR: Linked Environments for Atmospheric Discovery (LEAD)

NASA Principal Investigator for many projects including development of the Algorithm Development and Mining (ADaM) data mining toolkit, the Globally Leveraged Integrated Data Explorer for Research (GLIDER) tool for mining and visualizing imagery, and the Global Hydrology Resource Center (GHRC)

Invited participant at the NSF GeoData 2014 meeting in Boulder, Colorado. Presentation given and panel member in the "Social, Financial and Political Issues of Connecting GeoData In and Between Governmental Agencies" session. June 17-19, 2014.

Invited talk in the Big Data for International Scientific Programmes Workshop: "Using Big Data Analytics for Knowledge Extraction and Collaboration." June 6-8, 2014.

Invited talk during the Integrated Research for Disaster Risk Science Conference: "Sustainable Data Infrastructures for integrated Disaster Science Research." June 6-10, 2014.