

**Jessica Block***Spatial Data Scientist*Qualcomm Institute, [www.calit2.net](http://www.calit2.net)

University of California, San Diego

9500 Gilman Drive, MC 0436

La Jolla, CA 92093-0436

858-534-7337

[j.block@ucsd.edu](mailto:j.block@ucsd.edu)**(a) Professional Preparation**

University of California, Los Angeles	Geology	BS, 2001
Arizona State University, Tempe AZ	Geological Sciences, Urban Ecology NSF IGERT Associate	MS, 2007

**(b) Academic/Professional Appointments**

2010-Present	Spatial Data Scientist, Research Associate, Qualcomm Institute at UCSD Managing Coordinator, Big Pixel Initiative
2010	Wildfire Research Officer, University of Melbourne, Australia
2009	Research Associate, University of Ballarat, Water in Drylands Collaborative Research Program, Australia
2008	Research Associate, Natural Disasters, San Diego State University
2004-2008	Adjunct Faculty, Senior Research Developer for Data Visualization and Policy, Arizona State University
2001-2003	GIS Specialist and Geologist, US Geological Survey

**(c) Products****(i)**

1. Block, J., Yazdani, M., Mgyuen, M., Crawl, D., Jankowska, M., Graham, J., DeFanti, T., Altintas, I., (2017) An Unsupervised Deep Learning Approach for Satellite Image Analysis with Applications in Demographic Analysis, in IEEE 13<sup>th</sup> International Conference on E-Science, pp.9-18.
2. Hedayatnia, B., Yazdani, M., Nguyen, M., Block, J., Altintas, I., (2016) Determining Feature Extractors for Unsupervised Learning on Satellite Images, in *Proceedings of the 2016 IEEE International Conference on Big Data*, pp 2655-2663.
3. Altintas I., Block J., de Callafon R., Crawl D., Cowart C., Gupta A., Nguyen M., Braun H.W., Schulze J., Gollner M., Trouve A., Smarr L., (2015) Towards an Integrated Cyberinfrastructure for Scalable Data-Driven Monitoring, Dynamic Prediction and Resilience of Wildfires. *In Proceedings of the Workshop on Dynamic Data-Driven Application Systems (DDDAS) at the 15th International Conference on Computational Science. **Best Workshop Paper Award.***
4. Block, J., Graymore, M., Wallis, A. M., Vamplew, P., Mitchell, B., O'Toole, K. and McRae-Williams, P. (2013). Visualising the Value of Water. *in* M. Graymore, P. McRae-Williams, Barton, A. and L. Lehmann (Eds.) "Pipes, Ponds and People: Adaptive water management in Drylands." Mt Helen, Victoria: VURRN Press Inc.
5. Hahn, D., Block, J., Keith, M., and Vinze, A., (2010). Collaborative Systems for Decision Making for Disaster Preparedness and Response *in* "Always-On Enterprise Information Systems for Business Continuanace: Technologies for Reliable and Scalable Operations" IGI Global, publications. 16pp.

**(ii) Other Products**

1. Katsis, Y., Balac, N., Chapman, D., Kapoor M., Block, J. Griswold, W., Huang, J.,; Koulouris, N., Menarini, M., Nandigam, V., Ngo, M., Ong, K.W., Papakonstantinou, Y., Smith, B., Zarifis, K., Woolf S., Patrick, K., (2017) Big Data Techniques for Public Health: A Case Study, in IEEE/ACM International Conference on Connected Health: Applications, Systems, and Engineering Technologies (CHASE).
2. Schulze, J., Block, J., Weber, P., (2015). How the waters might have parted - Visualizing evidence for a major volcanic eruption in the Mediterranean and its impact on Exodus models, *in* Levy, T, Schneider, T., Propp, WHC., Sparks, B.C., (eds), "EX3-Exodus, Cyberarchaeology and the Future." New York, NY, Springer.
3. Srour, D., Mangan, J., Hoff, A., Margolis, T., Block, J., Vincent, ML., DeFanti, T.A., Levy, T.E., Kuester, F., (2015). MediaCommons Framework: An Immersive Storytelling Platform and Exodus. *in* Levy, T, Schneider, T., Propp, WHC., Sparks, B.C., (eds), "EX3-Exodus, Cyberarchaeology and the Future." New York, NY, Springer.
4. Hanchard, Doug, (2012). *Constructive Convergence: Imagery and Humanitarian Assistance*, Center for Technology and National Security Policy, Institute for National Strategic Studies, National Defense University. Jessica Block, Jeffrey Smotherman, Frank Hoffman, Isadora Blachman-Biatch, eds.
5. Block, J., Shangraw, R., Miller, P., Adams, J., Kubach, A., Conner, J., Hirschboeck, K., Makinen, T., (2008). Improved Tools for Water Management, Final Report to the Arizona Water Institute, University of Arizona. <http://wsp.arizona.edu/sites/wsp.arizona.edu/files/AWI734shangraw.pdf>

**(d) Synergistic Activities**

1. Research Associate: Robert Wood Johnson Foundation-Funded Project: The Use of Big Data to Understand and Promote a Culture of Health, PI Steven Woolf, Virginia Commonwealth University and PI Kevin Patrick, UCSD, 2015-2016.
2. Research Associate: Senior Personnel: NSF Hazards SEES Type 2: WIFIRE: A Scalable Data-Driven Monitoring, Dynamic Prediction and Resilience Cyberinfrastructure for Wildfires, 10/01/2013-09/30/2016
3. Research Associate, NSF SHB: Type II (INT): DELPHI: Data E-platform Leveraged for Patient Empowerment and Population Health Improvement, Award # #1237174, 10/01/2012 – 09/30/2017
4. Associate/Researcher: *Sustainable Technologies, Accelerated Research – Transportable Infrastructures for Development and Emergency Support (STAR-TIDES)*, National Defense University, Washington, DC - Provide GIS integration and document lessons learned from Humanitarian Assistance, Disaster Relief (HA/DR) experimentation events. Assist with technical issues relating to the integration of existing data sets collected by various participants, and assist with drafting the final after action review. (2008-2010)
5. Member/Collaborator: *National Institute for Urban Search and Rescue*. Collaborating with other members on the use of technology for disaster relief events. (2009-Present)