Dr. Guido Cervone
Curriculum Vitae

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The Pennsylvania State University
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Education

Ph D, George Mason University, Washington, D.C., 2005.
Major: Computational Science and Informatics
Supporting Areas of Emphasis: Computational Intelligence and Knowledge Mining

MS, George Mason University, Fairfax, VA, 2000.
Major: Computer Science
Supporting Areas of Emphasis: Artificial Intelligence

BS, The Catholic University of America, Washington, D.C., 1998.
Major: Computer Science

Administrative Assignments

Associate Director, Institute. (May 2014 - Present).
Institute for Computational and Data Science

Acting Director, Institute. (February 1, 2022 - April 30, 2022).

Professional Positions

Academic

Professor of Geography, Meteorology and Atmospheric Science, ICDS Fellow of the Institute for Computational and Data Science, Faculty Associate of the Earth and Environmental Systems Institute, The Pennsylvania State University. (July 2019 - Present).

Associate Professor of Geography, Meteorology and Atmospheric Science, Co-Hire of the Institute for CyberScience and the Earth and Environmental Systems Institute, The Pennsylvania State University. (January 2014 - June 2019).

Associate Professor of Geoinformatics, George Mason University. (August 2012 - December 2013).

Assistant Professor of Geoinformatics, George Mason University. (August 2006 - July 2012).

Postdoctoral Scientist, Center for Earth Observing and Space Research (CEOSR). (September 2005 - August 2006).

Licensures and Certifications

Certificate on Twitter Learning Environments, Sloan-C Consortium, National. (July 2003)

OSTS D-Qualification, United States Naval Academy, National. (May 2013)

Professional Memberships

American Geophysical Union (AGU). (2004 - Present).

Committee on Space Research (COSPAR). (2004 - Present).

Program committee member and focus group co-chair, Japanese Geophysical Union. (August 2019 - August 2020).

American Association of Geographers (AAG). (2014 - 2017).

American Association for Artificial Intelligence (AAAI). (1998 - 2004).

Awards and Honors

E. Willard and Ruby S. Miller Professorship in Geography, Penn State College of Earth and Mineral Sciences (EMS). (2022 - 2025).

AGU Local Science Partner, American Geophysical Union (AGU). (2022).

Mentoring Award, Penn State College of Earth and Mineral Sciences (EMS). (2021).

Carolyn Merry Mentoring Award, University Consortium for Geographical Information Science (UCGIS). (2019).

Certificate of Appreciation, Borough of State College. (2017).

Certificate of Appreciation, NASA ESTO. (2015).

Incentive Award, Penn State College of Earth and Mineral Sciences (EMS). (2014).

Medaglia di Rappresentanza, Office of the President of the Republic of Italy. (2013).

TEACHING

Teaching Experience

Penn State

EMSC 100S, Ems First-Yr Smnr, 1 course
GEOG 362, Image Analysis, 16 courses
GEOG 365, Intro GIS Programg, 3 courses
GEOG 485, GIS Programming, 1 course
GEOG 494, Research Project, 3 courses
GEOG 496, Indep Studies, 3 courses
GEOG 497, Special Topics, 1 course
GEOG 560, Giscience Seminar, 2 courses
GEOG 590, Colloquium, 2 courses
GEOG 596, Individual Studies, 6 courses
GEOG 600, Thesis Research, 12 courses
GEOG 601, Ph D Dis Full-Time, 13 courses
GEOG 602, Supv Exp/Coll Tchg, 2 courses

GEOG 610, Thes Res Off Cmpus, 2 courses
METEO 494, Research Project, 1 course

List of Course-Related and Course-Integrated Instructional Activities

Course Name	Course Title	Semester	Year	Sections	Students
SUBJ 602	Supervised Experience in College Teaching	Spring	2017	0	0
			Totals:	**0**	**0**

Directed Student Learning

Hollis Beckner, Undergraduate Research/Teaching/Internships (2012).

John Beieler, Ph.D. Dissertation Committee (2014 - 2016).

Chad Blevins, Master's Thesis (2008 - 2009).

Cristina Boicu, Ph.D. Dissertation Committee (2006 - 2008).

Matthew Brothers, Undergraduate Research/Teaching/Internships (2015).

Martina Calovi, Postdoctoral Mentorship (2017 - 2021). Ph.D. Dissertation Committee (2016 - 2017).

Yanni Cao, Master's Thesis (2016).

Jorge Cardona, Master's Thesis (2009 - 2010).

Ross Caruso, Undergraduate Research/Teaching/Internships (2015).

Sara Cavallo, Master's Thesis Committee (2015).

Connor Chapman, Master's Thesis Committee (2018 - 2020).

Laura Clemente Harding, Ph.D. Dissertation Committee (2014 - 2019).

Mark Coletti, Postdoctoral Mentorship (2014 - 2015).

Anna De Angelis, Master's Thesis Committee (2016).

Emiliano Di Marino, Master's Thesis Committee (2015).

Jeremy Diaz, Master's Thesis Committee (2019 - 2021).

Blakeley Edward, Undergraduate Research/Teaching/Internships (2013).

Kuai Fang, Ph.D. Dissertation Committee (2016 - 2018).

Gabriella Ferruzzi, Postdoctoral Mentorship (2014 - 2015).

Ben Fisher, Ph.D. Dissertation Committee (2014 - 2016).

Kyle Foster, Master's Thesis (2013).

Gabriele Franch, Ph.D. Dissertation Committee (2018 - 2019).

Elena Galvan, Master's Thesis (2016).

Nikolay Golosov, Ph.D. Dissertation Committee (2021 - Present).

Hannah Halliday, Ph.D. Dissertation Committee (2014 - 2016).

Alexandra Hardt, Undergraduate Research/Teaching/Internships (2015).

Mikael Hiestand, Ph.D. Dissertation Committee (2018 - 2022). Master's Thesis Committee (2017 - 2018).

John Hodgson, Ph.D. Dissertation Committee (2016 - 2019).

Luba Hristova, Undergraduate Research/Teaching/Internships (2018).

Weiming Hu, Ph.D. Dissertation Committee (2018 - 2021). Master's Thesis (2016 - 2018).

Carolynne Hultquist, Ph.D. Dissertation Committee (2014 - 2019). Master's Thesis (2016).

Carolynne Hultquist, Postdoctoral Mentorship (2019 - 2020).

Heather Hunter, Master's Thesis (2013 - 2014).

Courtney Jackson, Master's Thesis (2017 - 2020). Undergraduate Research/Teaching/Internships (2015).

Morteza Karimzadeh, Ph.D. Dissertation Committee (2015 - 2017).

Branden Katona, Ph.D. Dissertation Committee (2019 - Present).

Kunho Kim, Ph.D. Dissertation Committee (2016 - 2019).

Vincenzo Leone, Postdoctoral Mentorship (2015).

Zhongjung Li, Undergraduate Research/Teaching/Internships (2018).

Josh Magarick, Master's Thesis (2013).

Dakotah Maguire, Undergraduate Research/Teaching/Internships (2015).

Lori Mandable, Master's Thesis (2011 - 2013).

Ashley Milton, Ph.D. Dissertation Committee (2012 - 2015).

Martina Moccaldi, Master's Thesis Committee (2015).

Shawn Murdzek, Ph.D. Dissertation Committee (2019 - 2022).

Kyle Nardi, Ph.D. Dissertation Committee (2019 - Present).

Justin Novak, Master's Thesis (2015).

Kelly Nunez Ocasio, Ph.D. Dissertation Committee (2018 - 2021).

Ashley Olson, Master's Thesis Committee (2020 - 2021).

Ame Osotsi, Ph.D. Dissertation Committee (2017 - 2021).

Alex Owusu, Ph.D. Dissertation Committee (2006 - 2009).

Chris Oxendine, Ph.D. Dissertation Committee (2010 - 2014).

Yifan Pan, Ph.D. Dissertation Committee (2017).

George Panteras, Postdoctoral Mentorship (2015 - 2016).

Alessio Petrozziello, Master's Thesis (2015).

Mark Prettyman, Master's Thesis Committee (2019 - 2020).

Jacek Radzikowski, Master's Thesis (2006 - 2007).

Mina Rahimian, Ph.D. Dissertation Committee (2017 - 2021).

Gabriel Ramirez, Ph.D. Dissertation Committee (2017 - 2022).

Yuying Ren, Undergraduate Research/Teaching/Internships (2018).

Andres Ruiz Paspuel, Ph.D. Dissertation Committee (2016 - Present).

Julie Sanchez, Ph.D. Dissertation Committee (2017 - 2022). Master's Thesis Committee (2016 - 2017). Ph.D. Candidacy Committee (2015).

Laura Santos, Master's Thesis (2018).

Elena Sava, Ph.D. Dissertation Committee (2014 - 2018). Master's Thesis (2015). Undergraduate Research/Teaching/Internships (2013).

Emily Schnebele, Ph.D. Dissertation Committee (2009 - 2014).

Mehdi Shahiari, Ph.D. Dissertation Committee (2015 - 2017).

Mehdi Shahriari, Master's Thesis (2016).

Rosa Sicignano, Master's Thesis Committee (2016).

Mark Simpson, Master's Thesis Committee (2016).

Kristen Stephans, Ph.D. Dissertation Committee (2019 - 2021).

Jian Sun, Postdoctoral Mentorship (2019 - 2021).

Gabriel Tamariz, Ph.D. Candidacy Committee (2016).

Nastaran Tebyanian, Ph.D. Dissertation Committee (2018 - 2022).

Ramzi Tubbeh, Ph.D. Dissertation Committee (2017 - 2020). Ph.D. Candidacy Committee (2017).

Caixia Wang, Ph.D. Dissertation Committee (2009 - 2012).

Jenell Welsh-Thomas, Master's Thesis (2013).

Fangao Xu, Ph.D. Dissertation Committee (2019 - 2021). Master's Thesis Committee (2018).

Liping Yang, Postdoctoral Mentorship (2016 - 2018).

Travis Young, Ph.D. Candidacy Committee (2015 - 2016).

Yu Zhong, Undergraduate Research/Teaching/Internships (2018 - 2020).

Suzanne Zick, Master's Thesis (2016).

RESEARCH

Intellectual Contributions

Articles Published in Refereed Journals

Sun, J., Xu, F., Cervone, G. (Author), Gervais, M., Wauthier, C., & Salvador, M. (2021). Automatic atmospheric correction for shortwave hyperspectral remote sensing data using a time-dependent deep neural network. *ISPRS Journal of Photogrammetry and Remote Sensing, 174*, 117-131. DOI: 10.1016/j.isprsjprs.2021.02.007, ISBN/ISSN: 09242716

Fanfarillo, A., Roozitalab, B., Hu, W., & Cervone, G. (Author) (2021). Probabilistic forecasting using deep generative models. *GEOINFORMATICA, 25*(1), 127-147. DOI: 10.1007/s10707-020-00425-8, ISBN/ISSN: 1384-6175

Yu, M., Xu, F., Hu, W., Sun, J., & Cervone, G. (Author) (2021). Using Long Short-Term Memory (LSTM) and Internet of Things (IoT) for Localized Surface Temperature Forecasting in an Urban Environment. *IEEE Access, 9*, 137406-137418. DOI: 10.1109/ACCESS.2021.3116809

Archer, C. L., Cervone, G. (Author), Golbazi, M., Al Fahel, N., & Hultquist, C. (2020). Changes in air quality and human mobility in the USA during the COVID-19 pandemic. *Bulletin of Atmospheric Science and Technology*, 1--24. DOI: DOI: 10.1007/s42865-020-00019-0

Hultquist, C., & Cervone, G. (Author) (2020). Integration of Crowdsourced Images, USGS Networks, Remote Sensing, and a Model to Assess Flood Depth during Hurricane Florence. *Remote Sensing, 12*(5). DOI: 10.3390/rs12050834

Xu, F., Cervone, G. (Author), Franch, G., & Salvador, M. (2020). Multiple geometry atmospheric correction for image spectroscopy using deep learning. *Journal of Applied Remote Sensing, 14*(2). DOI: 10.1117/1.JRS.14.024518, ISBN/ISSN: 1931-3195

Yu, M., Bambacus, M., Cervone, G. (Author), Clarke, K., Duffy, D., Huang, Q., Li, J., Li, W., Li, Z., Liu, Q., Resch, B., Yang, J., & Yang, C. (2020). Spatiotemporal event detection: a review. *International Journal of Digital Earth*. DOI: 10.1080/17538947.2020.1738569, ISBN/ISSN: 1753-8947

Shahriari, M., Cervone, G. (Author), Clemente-Harding, L., & Delle Monache, L. (2020). Using the analog ensemble method as a proxy measurement for wind power predictability. *Renewable Energy, 146*, 789-801. ISBN/ISSN: 09601481

Yang, L., & Cervone, G. (Author) (2019). Analysis of remote sensing imagery for disaster assessment using deep learning: a case study of flooding event. *Soft Computing, 23*(24), 13393-13408. ISBN/ISSN: 14327643

Hu, W., & Cervone, G. (Author) (2019). Dynamically Optimized Unstructured Grid (DOUG) for Analog Ensemble of numerical weather predictions using evolutionary algorithms. *Computers and Geosciences, 133*. ISBN/ISSN: 00983004

Kugler, T. A., Grace, K., Wrathall, D. J., de Sherbinin, A., Van Riper, D., Aubrecht, C., Comer, D., Adamo, S. B., Cervone, G. (Author), Engstrom, R., Hultquist, C., Gaughan, A. E., Linard, C., Moran, E., Stevens, F., Tatem, A. J., Tellman, B., & Van Den Hoek, J. (2019). People and Pixels 20 years later: the current data landscape and research trends blending population and environmental data. *Population and Environment, 41*(2), 209-234. ISBN/ISSN: 01990039

Hultquist, C., & Cervone, G. (Author) (2019). Comparison of simulated radioactive atmospheric releases to citizen science observations for the Fukushima nuclear accident. *Atmospheric Environment, 198*, 478-488. ISBN/ISSN: 13522310

Shahriari, M., Cervone, G. (Author), Clemente-Harding, L., & Delle Monache, L. (2019). Using the analog ensemble method as a proxy measurement for wind power predictability. *Renewable Energy, 146*, 789-801. ISBN/ISSN: 09601481

Cervone, G. (Primary Author), & Hultquist, C. (2018). Calibration of Safecast Dose Rate Measurements. *Journal of Environmental Radioactivity, 190*, 51-65.

Pan, Y., Zhang, X., Cervone, G. (Co-Author), & Yang, L. (2018). Detection of Asphalt Pavement Potholes and Cracks Based on the Unmanned Aerial Vehicle Multispectral Imagery. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing, 1*, 1-12.

Panteras, G., & Cervone, G. (Co-Author) (2018). Enhancing the Temporal Resolution of Satellite-Based Flood Extent Generation Using Crowdsourced Data for Disaster Monitoring. *International Journal of Remote Sensing, 39*(5), 1459-1474.

Wang, H., Skau, E., Krim, H., & Cervone, G. (Co-Author) (2018). Fusing Heterogeneous Data: A Case for Remote Sensing and Social Media. *IEEE Transactions on Geoscience and Remote Sensing, PP*(99), 1-13.

Wang, H., Skau, E., Krim, H., & Cervone, G. (Author) (2018). Fusing heterogeneous data: A case for remote sensing and social media. *IEEE Transactions on Geoscience and Remote Sensing, 56*(12), 6956-6968. ISBN/ISSN: 01962892

Hunter, H., & Cervone, G. (Student Author) (2017). Analysing the Influence of African Dust Storms on the Prevalence of Coral Disease in the Caribbean Sea Using Remote Sensing and Association Rule Data Mining. *International Journal of Remote Sensing, 38*(6), 1494-1521.

Cao, Y., Cervone, G. (Student Author), Barkley, Z., Lauvaux, T., Deng, A., & Taylor, A. H. (2017). Analysis of Errors Introduced by Geographic Coordinate Systems on Weather Numeric Prediction Modeling. *Geoscientific Model Development, 10*(9), 3425-3440.

Hultquist, C., & Cervone, G. (Student Author) (2017). Citizen Monitoring During Hazards: Validation of Fukushima Radiation Measurements. *GeoJournal, 18-Jan*, 189-206.

Barkley, Z.R., Lauvaux, T., Davis, K. J., Deng, A., Miles, N. L., & Cervone, G. (Student Author), et al. (2017). Quantifying Methane Emissions from Natural Gas Production in North-Eastern Pennsylvania. *Atmospheric Chemistry and Physics, 17*(22), 13941-13966.

Cervone, G. (Primary Author), Clemente-Harding, L., Alessandrini, S., & Delle Monache, L. (2017). Short-Term Photovoltaic Power Forecasting Using Artificial Neural Networks and an Analog Ensemble. *Renewable Energy, 108*, 274-286.

Petrozziello, A., Cervone, G. (Student Author), Franzese, P., Haupt, S. E., & Cerulli, R. (2017). Source Reconstruction of Atmospheric Release with Limited Meteorological Observations Using Genetic Algorithms. *Applied Artificial Intelligence, 10*(1080), 1-16.

Sava, E., Clemente-Harding, L., & Cervone, G. (Student Author) (2017). Supervised Classification of Civil Air Patrol (CAP). *Natural Hazards, 10*(1007), 535-556.

Coletti, M., Hultquist, C., Kennedy, W. G., & Cervone, G. (Student Author) (2017). Validating Safecast Data by Comparisons to a U.S. Department of Energy Fukushima Prefecture Aerial Survey. *Journal of Environmental Radioactivity, 171*, 9-20.

Medina, R.M., Cervone, G. (Co-Author), & Waters, N.M. (2016). Characterizing and Predicting Traffic Accidents in Extreme Weather Environments. *The Professional Geographer, 69*(1), 126-137.

Leone, V., Cervone, G. (Co-Author), & Iovino, P. (2016). Impact Assessment of PM10 Cement Plants Emissions on Urban Air Quality Using the Scipuff Dispersion Model. *Environmental Monitoring and Assessment, 188*(9), 499.

Ferruzzi, G., Cervone, G. (Student Author), Delle Monache, L., Graditi, G., & Jacobone, F. (2016). Optimal Bidding in a Dayahead Energy Market for Micro Grid Under Uncertainty in Renewable Energy Production. *Energy, 106*, 194-202.

Cervone, G. (Primary Author), Sava, E., Huang, Q., Schnebele, E., Harrison, J., & Waters, N. (2016). Using Twitter for Tasking Remote-Sensing Data Collection and Damage Assessment: 2013 Boulder Flood Case Study. *International Journal of Remote Sensing, 37*(1), 100-124.

Alessandrini, S., Delle Monache, L., Sperati, S., & Cervone, G. (Co-Author) (2015). An Analog Ensemble for Short-Term Probabilistic Solar Power Forecast. *Applied Energy, 157*(1), 95-110.

Junk, C., Delle Monache, L., Alessandrini, S., Cervone, G. (Co-Author), & von Bremen, L. (2015). Predictor-Weighting Strategies for Probabilistic Wind Power Forecasting with an Analog Ensemble. *Energy Meteorology, 24*(4), 361-379.

Schnebele, E., Tanyu, B., Cervone, G. (Student Author), & Waters, N. (2015). Review of Remote Sensing Methodologies for Pavement Management and Assessment *European Transport Research Review, 7*(2), 1-19.

Sava, E., Edwards, B., & Cervone, G. (Student Author) (2014). Chlorophyll Increases Off the Coasts of Japan After the 2011 Tsunami Using NASA/MODIS Data. *Natural Hazards and Earth System Science, 14*(8), 3073-3097.

Manca, G., Cervone, G. (Co-Author), & Klarke, K. (2014). Combined Approach of a Coupled Fire Model with Atmospheric Releases: The Case of the 2003 Glacier Wildfires. *European Journal of Remote Sensing, 47*, 181-193.

Shnebele, E., Cervone, G. (Student Author), Kumar, S., & Waters, N. (2014). Real Time Estimation of the Calgary Floods Using Limited Remote Sensing Data. *Water, 6*, 381-398.

Shnebele, E., Cervone, G. (Student Author), & Waters, N. (2014). Road Assessment After Flood Events Using Non-Authoritative Data. *Natural Hazards and Earth System Science, 14*(4), 1007-1015.

Owusu, A.B., Cervone, G. (Student Author), & Beach, S. (2013). Analysis of Desertification in the Upper East Region (UER) of Ghana Using Remote Sensing, Field Study, and Local Knowledge. *Cartographica: The International Journal for Geographic Information and Geovisualization, 48*(1), 22-37.

Cervone, G. (Primary Author) (2013). Combined Remote-Sensing, Model, and In Situ Measurements of Sea Surface Temperature as an Aid to Recreational Navigation: Crossing the Gulf Stream. *International Journal of Remote Sensing, 34*(2), 434-450.

Schnebele, E., & Cervone, G. (Student Author) (2013). Improving Remote Sensing Flood Assessment Using Volunteered Geographical Data. *Natural Hazards Earth System Science, 13*, 669-677.

Manca, G., & Cervone, G. (Co-Author) (2013). The Case of Arsenic Contamination in the Sardinian Geopark, Italy, Analyzed Using Symbolic Machine Learning. *Environmetrics, 24*(6), 400-406.

Lattner, A.D., & Cervone, G. (Co-Author) (2012). Ensemble Modeling of Transport and Dispersion Simulations Guided by Machine Learning Hypotheses Generation. *Computers & Geosciences, 48*, 267-279.

Walsh-Thomas, J.M., Cervone, G. (Student Author), Agouris, P., & Manca, G. (2012). Further Evidence of Impacts of Large-Scale Wind Farms on Land Surface Temperature. *Renewable and Sustainable Energy Reviews, 16*(8), 6432-6437.

Cervone, G. (Primary Author), & Haack, B. (2012). Supervised Machine Learning of Fused RADAR and Optical Data for Land Cover Classification *Journal of Applied Remote Sensing, 6*(1), 1-18.

Cervone, G. (Primary Author), & Manca, G. (2011). Damage Assessment of the 2011 Japanese Tsunami Using High Resolution Satellite Data. *Cartographica: The International Journal for Geographic Information and Geovisualization, 46*, 200-203.

Cervone, G. (Primary Author), & Franzese, P. (2011). Non-Darwinian Evolution for the Source Detection of Atmospheric Releases. *Atmospheric Environment, 45*(26), 4497-4506.

Cervone, G. (Primary Author), Franzese, P., & Keesee, A.P. (2010). Algorithm Quasi-Optimal (AQ) Learning. *Wiley Interdisciplinary Reviews: Computational Statistics, 2*(2), 218-236.

Cervone, G. (Primary Author), Franzese, P., & Grajdeanu, A. (2010). Characterization of Atmospheric Contaminant Sources Using Adaptive Evolutionary Algorithms. *Atmospheric Environment, 44*(31), 3787-3796.

Cervone, G. (Primary Author), & Franzese, P. (2010). Monte Carlo Source Detection of Atmospheric Emissions and Error Functions Analysis. *Computers & Geosciences, 36*(7), 902-909.

Cervone, G. (Primary Author), Franzase, P., Ezber, Y., & Boybeyi, Z. (2008). Risk Assessment of Atmospheric Emissions Using Machine Learning. *Natural Hazards Earth System Science, 8*, 991-1000.

Kayetha, V.K., Kumar, S., Prasad, A.K., Cervone, G. (Co-Author), & Singh, R.P. (2007). Effect of Dust Storm on Ocean Color and Snow Parameters *Journal of the Indian Society of Remote Sensing, 35*(1), 1-9.

Singh, R.P., Cervone, G. (Co-Author), Singh, V.P., & Kafatos, M. (2007). Generic Precursors to Coastal Earthquakes: Inferences from Denali Fault Earthquake. *Tectonophysics, 431*(1), 231-240.

Singh, R.P., Cervone, G. (Co-Author), Kafatos, M., Prasad, A.K., Sahoo, A., Sun, D., Tang, D., & Yang, R. (2007). Multisensor Studies of the Sumatra Earthquake and Tsunami of 26 December 2004. *International Journal of Remote Sensing, 28*(13-14), 2885-2896.

Ouzounov, D., Liu, D., Chunli, K., Cervone, G. (Co-Author), Kafatos, M., & Taylor, P. (2007). Outgoing Long Wave Radiation Variability from IR Satellite Data Prior to Major Earthquakes. *Tectonophysics, 431*(1), 211-220.

Sun, D., Kafatos, M., Cervone, G. (Co-Author), Boybeyi, Z., & Yang, R. (2007). Satellite Microwave Detected SST Anomalies and Hurricane Intensification. *Natural Hazards, 43*(2), 273-284.

Cervone, G. (Primary Author), Kafatos, M., Napoletani, D., & Singh, R.P. (2006). An Early Warning System for Coastal Earthquakes. *Advances in Space Research, 37*(4), 636-642.

Singh, R.P., Dey, S., Bhoi, S., Sun, S., Cervone, G. (Co-Author), & Kafatos, M. (2006). Anomalous Increase of Chlorophyll Concentrations Associated with Earthquakes. *Advances in Space Research, 37*(4), 671-680.

Sun, D., Gautam, R., Cervone, G. (Co-Author), Boybeyi, Z., & Kafatos, M. (2006). Comment on "Satellite Altimetry and the Intensification of Hurricane Katrina". *Eos, Transactions American Geophysical Union, 87*(8), 89-89.

Papasimakis, N., Cervone, G. (Co-Author), Pallikari, F., & Kafatos, M. (2006). Multifractal Character of Surface Latent Heat Flux. *Physica A: Statistical Mechanics and its Applications, 371*(2), 703-718.

Kafatos, M., Sun, D., Gautam, R., Boybeyi, Z., Yang, R., & Cervone, G. (Co-Author) (2006). Role of Anomalous Warm Gulf Waters in the Intensification of Hurricane Katrina *Geophysical Research Letters, 33*(17), 1-5.

Cervone, G. (Primary Author), Maekawa, S., Singh, R.P., Hayakawa, M., Kafatos, M., & Shavets, A. (2006). Surface Latent Heat Flux and Nighttime LF Anomalies Prior to the Mw = 8.3 Tokachi-Oki Earthquake. *Natural Hazards and Earth System Science, 6*(1), 109-114.

Pulinets, S., Ouzounov, D., Ciraolo, L., Singh, R.P., Cervone, G. (Co-Author), Leyva, A., Dunajecka, M., Karelin, A., Boyarchuk, K., & Kotsarenko, A., et al. (2006). Thermal, Atmospheric and Ionospheric Anomalies Around the Time of the Colima m7. 8 Earthquake of 21 January 2003. *Tectonophysics, 24*(3), 835-849.

Sarkar, S., Chokngamwong, R., Cervone, G. (Co-Author), Singh, R.P., & Kafatos, M. (2006). Variability of Aerosol Optical Depth and Aerosol Forcing Over India. *Advances in Space Research, 37*(12), 2153-2159.

Gautam, R., Cervone, G. (Co-Author), Singh, R.P., & Kafatos, M. (2005). Characteristics of Meteorological Parameters Associated with Hurricane Isabel. *Geophysical Research Letters, 32*(4), 1-4.

Cervone, G. (Primary Author), Singh, R.P., Kafatos, M., & Yu, C. (2005). Wavelet Maxima Curves of Surface Latent Heat Flux Anomalies Associated with Indian Earthquakes. *Natural Hazards and Earth System Science, 5*(1), 87-99.

Cervone, G. (Primary Author), Kafatos, M., Napoletani, D., & Singh, R.P. (2004). Wavelet Maxima Curves of Surface Latent Heat Flux Associated with Two Recent Greek Earthquakes. *Natural Hazards and Earth System Science, 4*(3), 359-374.

Books

Cervone, G. (Primary Author), Lin, J., & Waters, N. (2014). *Data Mining for Geoinformatics: Methods and Applications.* Dordrecht, Netherlands: Springer., ISBN/ISSN: 13: 978-1-4614-7668-9

Lin, J., Cervone, G. (Co-Editor), & Waters, N. (2010). *1st International Workshop on Data Mining for Geoinformatics.* New York, New York: Association for Computing Machinery., ISBN/ISSN: 13: 978-1-4503-0430-6

Parts of Books

Cervone, G. (Primary Author), Dallmeyer, J., Lattner, A., Franzese, P., & Waters, W. (2018). Coupling Traffic Simulation and Gas Dispersion Simulation for Atmospheric Pollution Estimation. In S. Wang and M.F. Goodchild (Eds.), *CyberGIS: Fostering a New Wave of Geospatial Discovery and Innovation* (pp. 13-32). Dordrecht, Netherlands: Springer. Peer-reviewed/refereed.

Hultquist, C., Sava, E., Cervone, G. (Student Author), & Waters, N. (2017). 18 Damage Assessment of the Urban Environment. In L. A. Schintler, Z. Chen (Eds.), *Big Data for Regional Science* (pp. 214-228). Abingdon: Routledge. Peer-reviewed/refereed.

Huang, Q., & Cervone, G. (Co-Author) (2016). Usage of Social Media and Cloud Computing During Natural Hazards. In C.T. Vance, N. Merati, C. Yang, M. Yuan (Eds.), *Cloud Computing in Ocean and Atmospheric Sciences* (pp. 297-324). New York, New York: Elsevier. Peer-reviewed/refereed.

Cervone, G. (Primary Author), Schnebele, E., Waters, N., Moccaldi, M., & Sicignano, R. (2016). Using Social Media and Satellite Data for Damage Assessment in Urban Areas During Emergencies. In P. Thakuriah, N. Tilahun, M. Zellner (Eds.), *Seeing Cities Through Big Data* (pp. 443-457). Dordrecht, Netherlands: Springer. Peer-reviewed/refereed.

Schnebele, E., Oxendine, C., Cervone, G. (Student Author), Ferreira, C.M., & Waters, N. (2015). Using Non-Authoritative Sources During Emergencies in Urban Areas. In M. Helbich, J. A. Jamal, M. Leitner (Eds.), *Computational Approaches for Urban Environments* (pp. 337-361). Dordrecht, Netherlands: Springer. Peer-reviewed/refereed.

Cervone, G. (Primary Author), & Franzese, P. (2014). Source Term Estimation for the 2011 Fukushima Nuclear Accident. In G. Cervone, J. Lin, N. Waters (Eds.), *Data Mining for Geoinformatics* (pp. 49-64). Dordrecht, Netherlands: Springer. Peer-reviewed/refereed.

Conference Proceeding

Clemente, L., & Cervone, G. (Author) (2020). A New Technique for Spatio-Temporal Reconstruction of Analog Ensemble Predictions. *AGU Fall Meeting 2020.*

Sun, J., Xu, F., Cervone, G. (Author), Gervais, M., Wauthier, C., & Salvador, M. (2020). Automatic atmospheric correction for shortwave hyperspectral remote sensing data using a time-dependent deep neural network. *AGU Fall Meeting 2020.*

Bodini, N., Optis, M., Hu, W., & Cervone, G. (Author) (2020). Machine learning and Analog Ensemble techniques for temporal extrapolation of wind resource uncertainty. *AGU Fall Meeting 2020.*

Hu, W., & Cervone, G. (Author) (2020). Predictability Index for Renewable Energy and Uncertainty Quantification with Analog Ensemble. *AGU Fall Meeting 2020.*

Diaz, J., Cervone, G. (Author), & Wauthier, C. (2020). Volcanic Forecasting with Intermittent Infrared Images via Deep Learning. *AGU Fall Meeting 2020.*

Salvador, M., Cervone, G. (Author), & Xu, F. (2019). Expanded dimensionality for image spectroscopy via machine learning. *Proceedings of IAMG 2019 - 20th Annual Conference of the International Association for Mathematical Geosciences.* (pp. 148-152).

Cervone, G. (Primary Author), & Hultquist, C. (2018). Citizens as Indispensable Sensors During Disasters. *Proceedings of the Population - Environment Research Network Cyberseminar, People and Pixels Revisited.* (pp. 1-5). Palisades, New York: Population-Environment Research Network.

Carley, K., Cervone, G. (Co-Author), Agrawal, N., & Liu, H. (2018). Social Cyber-Security. *Proceedings of the International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation.* (pp. 389-394). Washington, D.C.: George Washington University.

Ferruzzi, G., Cervone, G. (Student Author), Monache, L.D., Graditi, G., & Jacobone, F. (2015). Bidding Strategy of a Microgrid in the Deregulated Electricity Market. *Proceedings of the International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2015).* (pp. 1-6). New York, New York: Association for Computing Machinery.

Huang, Q., Cervone, G. (Co-Author), Jing, D., & Chang, C. (2015). Disastermapper: A CyberGIS Framework for Disaster Management Using Social Media Data. *Proceedings of the International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2015).* (pp. 1-6). New York, New York: Association for Computing Machinery.

Hultquist, C., Simpson, M., Cervone, G. (Student Author), & Huang, Q. (2015). Using Nightlight Remote Sensing Imagery and Twitter Data to Study Power Outages. *Proceedings of the International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2015).* (pp. 1-6). New York, New York: Association for Computing Machinery.

Ciaramella, A., Staiano, A., Cervone, G. (Co-Author), & Alessandrini, S. (2015). Bayesian Based Neural Network Models for Solar Photovoltaic Forecasting. *Proceedings of the Workshop on Neural Networks (WIRN-2015).* (pp. 1-8). Torino, Italy: SIREN.

Cervone, G. (Primary Author), Schnebele, E., Waters, N., Harrison, J., Moccaldi, M., & Sicignano, R. (2014). Using Social Media to Task Data Collection and Augment Observations in Urban Areas During Emergencies: 2013 Boulder Floods Case Study. *Proceedings of Big Data for Urban Informatics Conference (BDUIC).* (pp. 1-14). Chicago, Illinois: University of Illinois.

Oxendine, C.E., Schnebele, E., Cervone, G. (Student Author), & Waters, N. (2014). Fusing Non-Authoritative Data to Improve Situational Awareness in Emergencies. *Proceedings of the*

11th Information Systems for Crisis Response and Management (ISCRAM) Conference. (pp. 1-5). Darmstat, Germany: ISCRAM.

Dallmeyer, J., Lattner, A.D., Cervone, G. (Student Author), & Timm, I.J. (2013). Simulation Von Schadstoemissionsverteilungen Auf Basis Multimodalen, Akteursorientierten Verkehrs. *Proceedings of ASIM Simulation in Den Umwelt- und Geowissenshaften.* (pp. 1-12). Hanover, Germany: Hochschule.

Coletti, M., & Cervone, G. (Co-Author) (2012). Analysis of Emergent Selection Pressure in Evolutionary Algorithm and Machine Learner Offspring Filtering Hybrids. *Proceedings of the Third Swarm, Evolutionary, and Memetic Computing.* (pp. 721-728). Dordrecht, Netherlands: Springer.

Manca, G., Cervone, G. (Co-Author), Manca, G., & Clarke, K.C. (2012). Atmospheric Releases During the 2003 Glacier Wildfires: Mapping, Analysis and Modeling. *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium (IGARSS).* (pp. 5360-5363). Piscataway, New Jersey: Institute of Electrical and Electronics Engineers.

Cervone, G. (Primary Author), Lin, J., & Franzese, P. (2011). Addressing Wind Direction Uncertainty in Source Estimation Through Dynamic Time Warping. *Proceedings of the 91st American Meteorological Society Annual Meeting, Session 2: Computational Intelligence Methods and Their Applications to Environmental Science.* (J2.5), (pp. 1-6). Washington, D.C.: American Meteorological Society.

Cervone, G. (Primary Author), & Franzese, P. (2011). Non-Darwinian Evolution for Source Estimation. *Proceedings of the 9th Conference on Artificial Intelligence Applications to Environmental Science.* (J1.5), (pp. 1-6). Washington, D.C.: American Meteorological Society.

Lin, J., Cervone, G. (Co-Author), & Franzese, P. (2010). Assessment of Error in Air Quality Models Using Dynamic Time Warping. *Proceedings of the 1st ACM SIGSPATIAL International Workshop on Data Mining for Geoinformatics (DMG).* (pp. 38-44). New York, New York: Association for Computing Machinery.

Cervone, G. (Primary Author), & Franzese, P. (2010). Machine Learning for the Source Detection of Atmospheric Emissions. *Proceedings of the 8th Conference on Artificial Intelligence Applications to Environmental Science.* (J1.7), (pp. 1-6). Washington, D.C.: American Meteorological Society.

Cervone, G. (Primary Author), Stefanidis, A., Franzese, P., & Agouris, P. (2009). Spatiotemporal Modeling and Monitoring of Atmospheric Hazardous Emissions Using Sensor Networks. *Proceedings of the Spatial and Spatio Temporal Data Mining (SSTDM) Workshop.* (pp. 571-576). Piscataway, New Jersey: Institute of Electrical and Electronics Engineers.

Bowman, M., & Cervone, G. (Co-Author) (2009). The Next Generation of Remote Sensing of Natural Hazards and Environmental Monitoring: National Polar-Orbiting Operational Environmental Satellite System (NPOESS). *Proceedings of the 33rd International Symposium on Remote Sensing of Environment (ISRSE).* (3), (pp. 19-22). Cape Town, South Africa.

Cervone, G. (Primary Author), Franzese, P., Ezber, Y., & Boybeyi, Z. (2008). Risk Assessment of Atmospheric Emissions Using Machine Learning. *Proceedings of the Spatial and Spatio Temporal Data Mining (SSTDM) Workshop.* (8), (pp. 991-1000). Piscataway, New Jersey: Institute of Electrical and Electronics Engineers.

Lattner, A.D., Kim, S., Cervone, G. (Co-Author), & Grefenstette, J.J. (2003). Experimental Comparison of Symbolic Learning Programs for the Classification of Gene Network Topology Models. *Proceedings of the Annual Meeting of the GI Working Group Machine Learning, Knowledge Discovery, Data Mining (FGML)*. (2), (pp. 1). Washington, D.C.: American Association for Artificial Intelligence.

Cervone, G. (Primary Author), & Michalsky, R.S. (2002). Modeling User Behavior by Integrating AQ Learning with a Database: Initial results. *Proceedings of the International Symposium on Intelligent Information Systems.* (pp. 43-56). Dordrecht, Netherlands: Springer.

Cervone, G. (Primary Author), Panait, L.A., & Michalsky, R.S. (2001). The Development of the AQ20 Learning System and Initial Experiments. *Proceedings of the International Symposium on Intelligent Information Systems.* (pp. 13). Dordrecht, Netherlands: Springer.

Cervone, G. (Primary Author), & Zucchelli, M. (2001). An Application of Machine Learning to the Optimization of Disparity Maps. *Proceedings of International Association of Science and Technology for Development (IASTED).* (pp. 20-28). Calgary, Ontario, Canada: International Association of Science and Technology for Development.

Cervone, G. (Primary Author), Michalsky, R.S., Kaufman, K.K., & Panait, L.A. (2000). Combining Machine Learning with Evolutionary Computation: Recent Results on LEM. *Proceedings of the 5th International Workshop on Multistrategy Learning (MSL).* (pp. 41-58). Porto, Portugal: University of Porto.

Cervone, G. (Primary Author), Kaufman, K.K., & Michalsky, R.S. (2000). Experimental Validations of the Learnable Evolution Model. *Proceedings of the Congress on Evolutionary Computation.* (2), (pp. 1064-1071). Piscataway, New Jersey: Institute of Electrical and Electronics Engineers.

Michalsky, R.S., Cervone, G. (Co-Author), Michalsky, R., & Kaufman, K.K. (2000). Speeding Up Evolution Through Learning: LEM. *Proceedings of the International Symposium on Intelligent Information Systems.* (pp. 243-256). Dordrecht, Netherlands: Springer.

Short Papers and Technical Reports

Goolsby, R., & Cervone, G. (Co-Author) (2013). Using Social Media to Fill the Gaps in Observations During Emergencies. *Innovation.* (11), (pp. 19-22). Arlington, Virginia: Office for Naval Research.

Research Reports to Sponsor

Cervone, G., *Computational Analysis of the Analog Ensemble Technique*. 30 pp. Quarterly Report, United States Army. (December 2019).

Cervone, G., Salvador, M., *Expanded Dimensionality Image Spectroscopy Using Machine Learning*. 15 pp. Progress Report. (November 2019).

Cervone, G., *Computational Analysis of the Analog Ensemble Technique*. 30 pp. Quarterly Report, United States Army. (August 2019).

Cervone, G., Salvador, M., *Expanded Dimensionality Image Spectroscopy Using Machine Learning*. 15 pp. Progress Report. (August 2019).

Cervone, G., *Computational Analysis of the Analog Ensemble Technique*. 30 pp. Quarterly Report, United States Army. (April 2019).

Cervone, G., Salvador, M., *Expanded Dimensionality Image Spectroscopy Using Machine Learning*. 15 pp. Progress Report. (February 2019).

Cervone, G., *Computational Analysis of the Analog Ensemble Technique*. 30 pp. Quarterly Report, United States Army. (January 2019).

Cervone, G., *Using UAVs to Monitor Radiation*. 158 pp. Project Report, Office of Naval Research. (2018).

Cervone, G., *Fusing Social Media and Aerial Radiological Measurements of Study CBRNE Emergencies*. 22 pp. Project Report, Office of Naval Research. (2017).

Cervone, G., *Quantifying the Uncertainty of Social Media During CBRNE Emergencies*. 19 pp. Project Report, Office of Naval Research. (2016).

Cervone, G., *Filling the Gaps in Remote Sensing Data using Social Media During CBRNE Emergencies*. 24 pp. Project Report, Office of Naval Research. (2015).

Editorial and Advisory Boards

International Journal of Granular Computing, Rough Sets and Intelligent Systems, Editorial Board. (January 2017 - Present).

Peer Reviewer of Grant Proposals, Manuscripts, Etc.

U.S. Army Corps of Engineers' Engineer Research and Development Center (ERDC), Panel Member. (2022).

National Science Foundation, Panel Member. (2021).

Proceedings of the Improving Scientific Software Conference (ISS-2021), Reviewer. (2021).

National Science Foundation, Panel Member. (2020).

Applied Energy, Reviewer. (2019).

International Journal of Remote Sensing. (2005 - 2019).

National Science Foundation, Panel Member. (2018).

New York Sea Grant, Panel Member. (2018).

Deutsche Forschungsgemeinschaft (German Research Foundation), Panel Member. (2017).

Narodowe Centrum Nauki - NCN (National Science Centre), Panel Member. (2017).

National Institute for Standards in Technology, Panel Member. (2017).

Environmental Pollution. (2017).

Journal of Environmental Research. (2017).

UK Natural Environment Research Council (NERC), Panel Member. (2016 - 2017).

International Journal of Geographical Information Science. (2014 - 2017).

Austrian National Science Foundation, Panel Member. (2016).

European Research Council - Space Science proposals, Panel Member. (2016).

National Science Foundation (NSF), Panel Member. (2016).

Geomatics, Natural Hazards and Risk. (2016).

IET Radar, Sonar & Navigation. (2016).

International Journal of Information Systems for Crisis Response and Management. (2016).

Marine Geodesy. (2016).

Springer Plus. (2016).

Natural Hazards. (2015 - 2016).

Renewable & Sustainable Energy Review. (2015 - 2016).

Journal of Hazardous Materials. (2012 - 2016).

Atmospheric Environment. (2009 - 2016).

Singapore Office for Space Technology and Industry (OSTIn), Panel Member. (2015).

University of Texas, San Antonio, NSF proposal selection, Panel Member. (2015).

Advanced Engineering Informatics. (2015).

Knowledge and Information Systems. (2015).

Remote Sensing of the Environment. (2015).

National Science Foundation (NSF), 2 different panels, Panel Member. (2014 - 2015).

NASA Earth Science Division / Science Mission Directorate, Panel Member. (2012 - 2014).

Foundation for Polish Science, Panel Member. (2013).

Cartographica. (2011 - 2013).

Advances in Space Research. (2012).

Applied Geography. (2012).

International Journal of Applied Geospatial Research. (2012).

Journal of Applied Remote Sensing. (2012).

NASA Earth Science Technology Office (ESTO), Panel Member. (2011).
2008

Journal of Applied Meteorology. (2011).

Boundary-Layer Meteorology. (2010 - 2011).

Environmental Science & Technology. (2010).

Journal of Geodynamics. (2009).

Environmental Modelling & Software. (2008).

International Journal of Applied Earth Observation and Geoinformation. (2008).

Measurements. (2008).

Photogrammetric Engineering & Remote Sensing Journal. (2008).

Indian Journal of Remote Sensing. (2006).

Advances in Space Research. (2005).

Consulting/Advising

Software Development, Stormcenter Communications, Dave Jones, Ellicott City, Maryland, Compensated, approximately 240 hours spent per year, Contract Period (wks): 364 (7 Years). (September 2005 - December 2012).
Software Development for Remote Sensing Spatio-Temporal data analysis.

Presentations Given

Cervone, G. (November 10, 2021). "Analog ensemble forecasts guided by machine learning," Mathematics and Applications, Department of Mathematics, University of Salerno, Fisciano, Italy, Invited.

Cervone, G., Calovi, M., & Hu, W. (October 20, 2021). "Assessing the Impact of Extreme Heat events on vulnerable population in New York City," EMBEDS Seminar, Instituto Sant' Anna, Pisa, Italy, Invited.

Cervone, G. (May 27, 2021). "Did COVID Stay-at-home Restrictions Affect Atmospheric Emissions?," Conversation with Colleagues, John Hellmann, The Village, State College, PA, Invited.

Cervone, G. (April 20, 2021). "Using Remote Sensing for Natural Hazards Early Warning," Japanese Geophysical Union Human Hazards, Japanese Geophysical Union, Tokyo, Japan, Invited.

Tedesco, M. (Columbia University), & Cervone, G. (Author). (February 5, 2021). "The costs of floods and how rising waters will reshape our lives and our economy," Earth Networking, AIR CENTRE, Online Webinar, Invited.

Hultquist, C., & Cervone, G. (Author). (January 26, 2021). "Looking at the atmosphere or through it: atmospheric characterization in remote sensing via machine learning," Comos Climate Change Meeting, Instituto Sant' Anna, Pisa, Italy, Invited.

Cervone, G. (May 2020). "Atmospheric Characterization via Deep Learning," Observing the Earth from Space, AIR Centre, Remote, Invited.

Hultquist, C., & Cervone, G. (Author). (August 2018). "Validation of Citizen Science Environmental Monitoring: A Case Study of Fukushima Radiation Dose Rate Measurements," Pacific Northwest National Lab (PNNL), Richland, Washington, Invited. National.

Santos, L., & Cervone, G. (Author). (July 2018). "Investigation of Atmospheric Attenuation and Influences for Interpreting MSI Imagery Using Sentinel-2," 42nd Committee on Space Research of the International Council for Science (ICSU) Scientific Assembly, Committee on Space Research (COSPAR), Pasadena, California, peer-reviewed/refereed, Accepted. International.

Cervone, G. (Author and Presenter). (July 2018). "Citizens as Essential Sensors During Hazards," International Research Institute for Disaster Science, Tohuku University, Sendai, Japan, Invited. International.

Cervone, G. (Author and Presenter). (July 2018). "Stochastic Evolutionary Algorithms Guided by Machine Learning for Atmospheric Source Detection," Computational Information Systems Laboratory, National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Hu, W., & Cervone, G. (Author). (June 2018). "Dynamically Optimized Unstructured Grid for Analog Ensemble of Numeric Weather Predictions Using Evolutionary Algorithms," Earthcube All Hands Meeting, National Science Foundation, Alexandria, Virginia, peer-reviewed/refereed, Invited. National.

Cervone, G. (Author and Presenter). (June 2018). "Filling Gaps in Remote Sensing Data Using Social Media During CBRNE Emergencies," Office of Naval Research (ONR) HA/DR Operations Program Review, Charleston, South Carolina, Invited. National.

Hu, W., Cervone, G. (Author and Presenter), Jha, S., Balasubramanian, V., & Turilli, M. (June 2018). "Automatic Unstructured Grid Refinement Using Machine Learning for the Analog Ensemble of Numeric Weather Prediction," 2018 All Hands Meeting for EarthCube, Washington, D.C., Accepted. National.

Hultquist, C., & Cervone, G. (Author). (June 2018). "Validation and Use of Citizen Science Environmental Data," European Citizen Science Association (ECSA), Geneva, Switzerland, Accepted. International.

Cervone, G. (Author and Presenter). (April 2018). "Citizens as Essential Sensors During Hazards," Department of Geography, University of Delaware, Newark, Delaware, Invited. National.

Hultquist, C., & Cervone, G. (Author). (April 2018). "Monitoring Radioactive Releases from Fukushima: A Comparison of Data and Models," United States Geospatial Intelligence Foundation (USGIF) Conference, Tampa, Florida, Accepted. National.

Cervone, G. (Author and Presenter). (February 2018). "Stochastic Evolutionary Algorithms Guided by Machine Learning for Atmospheric Source Detection, Stochastic Modeling and Computational Statistics (SMAC)," Department of Statistics, Penn State University, University Park, Pennsylvania, Invited. Local.

Cervone, G. (Author and Presenter). (January 2018). "Grand Challenge: Combining Remote Sensing, Models and Citizen Science to Understand Sea Level Rise," Lamont-Doherty Earth Observatory, Columbia University, New York, New York, Invited. National.

Hultquist, C., & Cervone, G. (Author and Presenter). (December 2017). "Bayesian Modelling to Assess Populated Areas Impacted by Radiation from Fukushima Adaptive Computing on

Dynamic Scales," American Geophysical Union (AGU) fall meeting, New Orleans, Louisiana, Accepted. National.

Hu, W., Cervone, G. (Author), Jha, S., Balasubramanian, V., & Turilli, M. (December 2017). "Short-Term Temperature Prediction Using Adaptive Computing on Dynamic Scales," American Geophysical Union (AGU) fall meeting, New Orleans, Louisiana, Accepted. National.

Cervone, G. (Author and Presenter), & Hultquist, C. (December 2017). "Analysis and Calibration of Safecast Data Relative to the 2011 Fukushima Daiichi Nuclear Accident," American Geophysical Union (AGU) fall meeting, New Orleans, Louisiana, Accepted. National.

Sava, E., Cervone, G. (Author), Kalyanapu, A., & Sampson, K. (December 2017). "Integrating Heterogeneous Earth Observation Data for Assessment of High-Resolution Inundation Boundaries Generated During Flood Emergencies," American Geophysical Union (AGU) fall meeting, New Orleans, Louisiana, Accepted. National.

Cervone, G. (Author and Presenter). (December 2017). "The Role of Citizen Science During the Fukushima-Dahichi Nuclear Accident," Department of Management, Intituto Sant' Anna, Pisa, Italy, Invited. International.

Cervone, G. (Author and Presenter). (November 2017). "Citizen Science During Nuclear Emergency: Analysis of The Fukushima-Dahichi Nuclear Accident," Department of Geography, Penn State University, University Park, Pennsylvania, Invited. Local.

Cervone, G. (Author and Presenter). (November 2017). "Geoinformatic Applications for Source Characterization," Department of Meteorology, Penn State University, University Park, Pennsylvania, Invited. Local.

Cervone, G. (Author and Presenter). (September 2017). "Remote Sensing and Data Fusion: A Big Data Challenge," 2017 Fall Meeting of Experiment Station Sections, Penn State University, College of Agriculture, Philadelphia, Pennsylvania, Invited. State.

Cervone, G. (Author and Presenter). (September 2017). "Using Remote Sensing and GIS to Study and Potentially Prevent Atrocities," Mass Atrocity Education Workshop (MAEW), United States National Holocaust Memorial Museum, Washington, D.C., Invited. National.

Calovi, M., Shahriar, M., & Cervone, G. (Author). (August 2017). "A High Resolution Extreme Heat Forecasting Product Based on an Analog Ensemble of Atmospheric Model and Volunteered Geographic Information," 8th Conference of the International Society for Integrated Disaster Risk Management, IDRiM2017, Reykjavik, Iceland, Accepted. International.

Calovi, M., & Cervone, G. (Author). (May 2017). "Dynamic Downscaling of Extreme Temperature," Department of Computer Science, University of Salerno, Salerno, Italy, Invited. International.

Hultquist, C., & Cervone, G. (Author). (May 2017). "Unsteady Source Term Estimation of the Fukushima Daiichi Release Using Contributed Radiological Measurements," Session on Dynamics of Radionuclides Emitted from Fukushima Daiichi Nuclear Power Plant in the Environment, Japan Geoscience Union (JpGU), Chiba, Japan, Accepted. International.

Hultquist, C., & Cervone, G. (Author). (April 2017). "Radiation from Fukushima: Policy, Information, and Technology," American Association of Geographers (AAG) annual meeting, Boston, Massachusetts, Accepted. National.

Clemente-Harding, L., Cervone, G. (Author), Monache, L.D., & Haupt, S.E. (January 2017). "Examination of Spatial Relationships Using Machine Learning," American Meteorological Society annual conference, Seattle, Washington, Accepted. National.

Hultquist, C., & Cervone, G. (Author). (January 2017). "Geoinformatics and Earth Observation for Understanding Human-Environment Processes," American Meteorological Society annual conference, 12th Symposium on Societal Applications: Policy, Research and Practice - Uses of Earth Observations and Geospatial Information to Support Progress on Sustainable Development Goals, Seattle, Washington, Accepted. National.

Clemente-Harding, L., Cervone, G. (Author), Fisher, A., Lewis, M., Smith, C., & Eylander, J. (January 2017). "Use of the Cosmic-Ray Soil Moisture Observing System to Verify and Improve Land Surface Model Output," American Meteorological Society annual conference, Seattle, Washington, Accepted. National.

Clemente-Harding, L., Cervone, G. (Author), Monache, L.D., Haupt, S.E., & Alessandrini, S. (December 2016). "Analog Ensemble: Optimal Predictor Weighting and Exploitation of Spatial Characteristics in AnEn Generation," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Sava, E., Thornton, J., Cervone, G. (Author), & Kalyanapu, A. (December 2016). "Integration of Contributed Data with HEC-RAS Hydrodynamic Model for Flood Inundation and Damage Assessment: 2015 Dallas Texas Case Study," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Hultquist, C., & Cervone, G. (Author). (December 2016). "Situation Awareness of Hazards: Validation of Multi-source Radiation Measurements," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Hultquist, C., & Cervone, G. (Author). (October 2016). "Citizen Monitoring During Hazards: Validation of Fukushima Radiation Measurements," Institute for CyberScience, Penn State University, University Park, Pennsylvania, Accepted. Local.

Sava, E., Thornton, J., Kalyanapu, A., & Cervone, G. (Author). (October 2016). "Integration of Contributed Data with HEC-RAS Hydrodynamic Model for Flood Inundation and Damage Assessment: 2015 Dallas Texas Case Study," Institute for CyberScience, Penn State University, University Park, Pennsylvania, Accepted. Local.

Cervone, G. (Author and Presenter), Clemente-Harding, L., Alessandrini, S., & Delle Monache, L. (June 2016). "Analog Ensemble for Renewable Energy Forecasts," Department of Mathematics and Computer Science, University of Salerno, Salerno, Italy, Invited. International.

Cervone, G. (Author and Presenter). (June 2016). "Filling the Gaps in Remote Sensing Data using Twitter, Flickr and Instagram," NASA SEDAC User Working Group, NASA SEDAC User Working Group, Washington, D.C., Invited. National.

Cervone, G. (Author and Presenter), Clemente-Harding, L., Alessandrini, S., & Delle Monache, L. (June 2016). "Photovoltaic Power Forecast Using Neural Networks and Analog Ensemble," Department of Environmental Science, The Second University of Naples, Caserta, Italy, Invited. International.

Cervone, G. (Author and Presenter), & Hultquist, C. (June 2016). "Using Volunteer Geographical Information for Situation Awareness During Hazards," Division of Environmental Hazards, CRS4, Cagliari, Italy, Invited. International.

Cervone, G. (Author and Presenter), Panteras, G., Clemente-Harding, L., Sava, E., Hultquist, C., & Cao, Y. (May 2016). "Application of GIS in Environmental Science," GIS Program, National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Cervone, G. (Author and Presenter). (March 2016). "Fusion of Remote Sensing and Social Media During Emergencies," Lamont-Doherty Earth Observatory, Columbia University, New York, New York, Invited. National.

Alessandrini, S., Delle Monache, L., Cervone, G. (Author), Harding, L., & Haupt, S.E. (January 2016). "Gridded Probabilistic Forecasts of Weather Parameters with an Analog Ensemble," American Meteorological Society annual conference, Seattle, Washington, Accepted. National.

Harding, L., Cervone, G. (Author), & Delle Monache, L. (December 2015). "Analog Ensemble Methodology: Expansion and Optimization for Renewable Energy Applications," American Geophysical Union fall meeting, San Francisco, California, Accepted. National.

Hultquist, C., & Cervone, G. (Author). (December 2015). "Citizen Monitoring During Hazards: The Case of Fukushima Radiation After the 2011 Japanese Earthquake," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Cao, Y., Barkley, Z., Cervone, G. (Author), & Lauvaux, T. (December 2015). "Fusion Geographic Information System Data with State-of-the-Art Atmospheric Systems: Application to Methane Source Mapping Over the Marcellus Shale Formation," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Sava, E., Harding, L., & Cervone, G. (Author). (December 2015). "Supervised Classification of Aerial Imagery and Multisource Data Fusion for Flood Assessment," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Ferruzzi, G., & Cervone, G. (Author). (November 2015). "Bidding Strategy of a MicroGrid in the Deregulated Market under Uncertain Photovoltaic Production," International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Workshop on Smart Cities and Urban Analytics, Seattle, Washington, Accepted. International.

Huang, Q., Cervone, G. (Author), Jing, D., & Chang, C. (November 2015). "DisasterMapper: A CyberGIS Framework for Disaster Management Using Social Media Data," International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Workshop on Analytics for Big Geospatial Data 2015, Seattle, Washington, Accepted. International.

Hultquist, C., Simpson, M., Cervone, G. (Author), & Huang, Q. (November 2015). "Using Nightlight Remote Sensing Imagery and Twitter Data to Study Power Outages," International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Workshop on the Use of GIS in Emergency Management (EM-GIS), Seattle, Washington, Accepted. International.

Jackson, C., Cervone, G. (Author), Huang, Q., Oxendine, C., & Waters, N. (October 2015). "CyberGIS and Cloud Computing to Study Environmental Disasters," The 10th International Workshop on Information Search, Integration, and Personalization (ISIP 2015), The University of North Dakota, Grand Forks, North Dakota, Accepted. International.

Cervone, G. (Author and Presenter), Sava, E., & Huang, Q. (September 2015). "A CyberGIS Framework for the Study of Environmental Hazards," CyberGIS Meeting, U.S. Geological Survey, Reston, Virginia, Accepted. National.

Cervone, G. (Author and Presenter). (August 2015). "Data Fusion of Remote Sensing and Volunteer Geographical Information," Workshop on Disaster Tools, Carnegie Mellon University, Pittsburgh, Pennsylvania, Accepted. State.

Cervone, G. (Author and Presenter). (July 2015). "Filling Gaps in Remote Sensing Data Using Social Media During CBRNE Emergencies," ONR HA/DR Operations Program Review, Carnegie Mellon University, Pittsburgh, Pennsylvania, Invited. National.

Hultquist, C., Coletti, M., & Cervone, G. (Author). (May 2015). "Citizen Monitoring During Hazards: The Case of Fukushima Radiation After the 2011 Japanese Earthquake," University Consortium for Geographic Information Science (UCGIS) annual meeting, Alexandria, Virginia, Accepted. National.

Coletti, M., & Cervone, G. (Author). (April 2015). "A Python QGIS Plugin for Twitter Analysis During Emergencies," Software Engineering Application Conference (SEA-2015), National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Harding, L., & Cervone, G. (Author). (April 2015). "Application of the Analog Ensemble Methodology to Renewable Energy: Predictor Weighting Strategies for Short-Term Wind Forecasting," no)Boundaries Meeting, Session: New Methods in GIScience, Penn State University, University Park, Pennsylvania, Accepted. Local.

Harding, L., & Cervone, G. (Author). (April 2015). "Application of the Analog Ensemble Methodology Using Predictor Weighting for Renewable Energy," Association of American Geographers (AAG) annual meeting, Chicago, Illinois, Accepted. National.

Hultquist, C., Coletti, M., & Cervone, G. (Author). (April 2015). "Citizen Monitoring During Hazards: The Case of Fukushima Radiation After the 2011, Japanese Earthquake," no)Boundaries Meeting, Penn State University, University Park, Pennsylvania, Accepted. Local.

Sava, E., Clemente-Harding, L., & Cervone, G. (Author). (April 2015). "Classification of Civil Air Patrol Imagery for Flood Damage Assessment," American Association of Geographers (AAG) annual meeting, Chicago, Illinois, Accepted. National.

Harding, L., Cervone, G. (Author and Presenter), & Brothers, M. (March 2015). "Application of the Analog Ensemble Methodology to Renewable Energy: Visualization of Optimized Parameter Weighting," Spatial Cognition Symposium, Penn State University, University Park, Pennsylvania, Accepted. Local.

Cervone, G. (Author and Presenter). (February 2015). "Geoinformatics Approaches for Environmental Hazards Damage Assessment and Renewable Energy Optimization," Department of Geography, University of Wisconsin at Madison, Madison, Wisconsin, Invited. National.

Cervone, G. (Author and Presenter). (January 2015). "Power Metered Forecasts for Renewable Energy," Department of Mathematics, University of Salerno, Salerno, Italy, Invited. International.

Cervone, G. (Author and Presenter). (December 2014). "High Performance Computation for Probabilistic Forecasts," National Science Foundation (NSF) Workshop on Polar CyberInfrastructure, Rutgers University, New Brunswick, New Jersey, Invited. National.

Cervone, G. (Author and Presenter), Rocco, G., & Radzikowski, J. (July 2014). "Assessing the Potential Impact of Shale Gas Extraction on Rattlesnakes in Rural Areas Using UAVs," Boulder Linux User Group, Boulder, Colorado, Accepted. National.

Cervone, G. (Author and Presenter). (July 2014). "From Big Data to Big Knowledge: The Revolution of CyberScience and GeoInformatics," Research Application Laboratory, National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Cervone, G. (Author and Presenter). (July 2014). "GeoInformatics Approach for the Analysis of Big Data from Atmospheric Models, Remote Sensing and Social Media," Research Application Laboratory, National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Cervone, G. (Author and Presenter). (June 2014). "Using Geoinformatics for the Analysis of Remote Sensing, Model and Social Media 'Big Data' to Study Environmental Hazards," Department of Environmental Engineering, Second University of Naples, Caserta, Italy, Invited. International.

Cervone, G. (Author and Presenter). (May 2014). "Fusing Remote Sensing and Social Media for Situation Awareness During Emergencies," Office of Naval Research (ONR) Science Meeting, Office of Naval Research, Washington, D.C., Accepted. National.

Cervone, G. (Author and Presenter). (April 2014). "Code Testing in a Distributed Environment: Lessons Learned from a Joint University NCAR Project," Software Engineering Application Conference (SEA-2014), National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Cervone, G. (Author and Presenter). (October 2013). "A Geoinformatics Approach for the Analysis of Remote Sensing, Model and Social Media Big Data to Study Environmental Hazards," `Taming the Data' series, Department of Computer Science, North Carolina State University, Durham, North Carolina, Invited. National.

Cervone, G. (Author and Presenter), & Franzese, P. (October 2013). "Non-Steady Source Term Estimation for the 2011 Fukushima Nuclear Accident," Italian Scientists and Scholars in North America Foundation (ISSNAF) Meeting, Embassy of the Republic of Italy, Washington, D.C., Accepted. International.

Cervone, G. (Author and Presenter). (October 2013). "Filling the Gaps in Remote Sensing Data Using Social Media," Office of Naval Research Workshop at NATO Headquarters, North Atlantic Treaty Organization (NATO), Brussels, Belgium, Accepted. International.

Cervone, G. (Author and Presenter). (July 2013). "Spatio-Temporal Data Mining for Geoinformatics," Department of Computer Science, University of Salerno, Salerno, Italy, Accepted. International.

Cervone, G. (Author and Presenter). (May 2013). "Using Social Media for Filling the Gaps in Remote Sensing Data," Department of Machine Learning, Carnegie Mellon University, Pittsburgh, Pennsylvania, Invited. State.

Cervone, G. (Author and Presenter). (March 2013). "Application of Geoinformatics and Remote Sensing to Study Environmental Hazards," Department of Geography, Penn State University, University Park, Pennsylvania, Accepted. Local.

Cervone, G. (Author and Presenter). (July 2012). "Machine Learning Based Evolution for Optimization and Anomaly Detection," Department of Computer Science, University of Salerno, Salerno, Italy, Accepted. International.

Mandable, L., Cervone, G. (Author), & Franzese, P. (June 2012). "Application of the HYSPLIT Model for Source Term Estimation," American Geophysical Union (AGU) Chapman Conference on Volcanism and the Atmosphere, Selfoss, Iceland, Accepted. International.

Cervone, G. (Author and Presenter). (February 2012). "Source Term Estimation for the 2011 Fukushima Nuclear Accident," National Science Foundation Workshop on Methods for Estimating Radiation Release from Fukushima Daiichi, National Center for Atmospheric Research, Boulder, Colorado, Invited. National.

Cervone, G. (Author and Presenter). (May 2011). "Research Activities in Geospatial Analysis at the Department of Geography and Geoinformation Science," Annual BAE GXP conference, British Aerospace Engineering, Chantilly, Virginia, Accepted. National.

Cervone, G. (Author and Presenter). (November 2010). "Atmospheric Source Detection Through Machine Learning," Department of Computer Science, Johann Wolfgang Goethe Universitat Frankfurt, Frankfurt, Germany, Accepted. International.

Cervone, G. (Author and Presenter). (November 2010). "Overview of Geoinformatics and Machine Learning," Department of Computer Science, Johann Wolfgang Goethe Universitat Frankfurt, Frankfurt, Germany, Invited. International.

Cervone, G. (Author and Presenter), Franzese, P., Ouzonov, D., & Pulinets, S. (2008). "Analysis of SST Variations for Hurricane Katrina Using the WRF Mesoscale Model," 37th Committee on Space Research of the International Council for Science (ICSU) Scientific Assembly, Committee on Space Research (COSPAR), Montreal, Quebec, Canada, Accepted. International.

Cervone, G. (Panel Member). (September 2008). "Machine Learning and Data Mining Algorithms in Geoscience, Topical Workshop Entitled "Underground Technological Workshop" (UTW) for Subsurface Earth Mapping with Novel Techniques," Strategic Technology, Office of the Defense Advanced Research Project Agency (DARPA), Washington, D.C., Invited. National.

Cervone, G. (Author and Presenter). (July 2008). "Using Remote Sensing for Estaurine Studies," Guana Tolomato Matanzas (GTM) National Estuarine Research Reserve, East Coast Region Aquatic Preserves, Florida Department of Environmental Protection, Ponte Vedra Beach, Florida, Accepted. National.

Cervone, G. (Author and Presenter), Franzese, P., Ezber, Y., & Boybeyi, Z. (November 2007). "Atmospheric Releases Uncertainty Assessment Using Remote Sensing, Mesoscale Modeling, and Data Mining," European Space Agency (ESA), International Geohazard Week, ESRIN, Rome, Italy, Accepted. International.

Cervone, G. (Author and Presenter). (February 2007). "Using Google Earth for Near Real Time Natural Hazard Monitoring," Google, Santa Monica, California, Invited. National.

Grasso, V.F., Cervone, G. (Author), Singh, A., & Kafatos, M. (December 2006). "Global Environmental Alert Service," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Sun, D., Kafatos, M., Cervone, G. (Author), Boybeyi, Z., & Yang, R. (December 2006). "Satellite Microwave Detected SST Anomalies and Hurricane Intensification," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Kafatos, M., Boybeyi, Z., & Cervone, G. (Author). (December 2005). "Web-based Services for Earth Observing and Model Data in National Applications and Hazards," American Geophysical Union (AGU) fall meeting, San Francisco, California, Accepted. National.

Kafatos, M., & Cervone, G. (Author and Presenter). (November 2005). "Earthquake Forecasting and Risk Mitigation Using Space Remote Sensing Data," Center for the Environment, School of Foreign Service, Georgetown University, Washington, D.C., Accepted. National.

Cervone, G. (Author and Presenter). (February 2005). "Wavelet Maxima Curves of Surface Latent Heat Flux," American Association for the Advancement of Science (AAS) Scientific Meeting, Washington, D.C., Accepted. National.

Chokngamwoong, R., Cervone, G. (Author), Singh, R., & Kafatos, M. (July 2004). "Effect of the Populated and Industrial Cities on the Aerosol Optical Depth," 33rd Committee on Space Research of the International Council for Science (ICSU) Scientific Assembly, Committee on Space Research (COSPAR), Paris, France, Accepted. International.

Scorcioni, R., Cervone, G. (Author), & Ascoli, G. (July 2002). "Machine Learning Derived Rules for the Quantitative Definition of Neuromorphological Classes," Neuroscience, Society for Neuroscience, Washington, D.C., peer-reviewed/refereed, Accepted. National.

Cervone, G. (Author and Presenter). (June 2002). "Recent Results from the Experimental Evaluation of the Learnable Evolution Model," Genetic and Evolutionary Computation Conference (GECCO), Seattle, Washington, peer-reviewed/refereed, Accepted. International.

Zucchelli, M., & Cervone, G. (Author). (June 2001). "An Application of Machine Learning to the Optimization of Disparity Maps," The International Association of Science and Technology for Development (IASTED), Banff, Alberta, Canada, peer-reviewed/refereed, Accepted. International.

Cervone, G. (Author and Presenter). (July 2000). "Experimental Validations of the Learnable Evolution Model," Congress on Evolutionary Computation, Committee on Evolutionary Comptuation, San Diego, California, peer-reviewed/refereed, Accepted. International.

Cervone, G. (Author and Presenter), & Panait, L. (June 2000). "Combining Machine Learning with Evolutionary Computation," Multi Strategy Learning, University of Porto, Guimaraes, Portugal, peer-reviewed/refereed, Accepted. International.

Contracts, Grants, and Sponsored Research

Contract

Chiaromonte, F. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Cervone, G. (Co-Principal Investigator), Chiaromonte, F. (Principal Investigator), Contract, 50% credit, "Leveraging Geographical and Social Media Informatics to Explore Novel Medicare Provider Utilization and Payment Data (TSF Year 11/12)," PA Tobacco Settlement Fund (TSF), Commonwealth of Pennsylvania. Total requested: $0.00, Total Anticipated: $4551311, Amount Funded (Total or To Date, as applicable): $60000. (date funding awarded: January 5, 2015, total start and end of funding: September 1, 2014 - December 31, 2015.

Grant

Cervone, G. (Principal Investigator), Grant, 100% credit, "Collaborative Research: EAGER: Generation of high resolution surface melting maps over Antarctica using regional climate models, remote sensing and machine learning," National Science Foundation, Federal Agencies. Total requested: $73,450.00, Total Anticipated: $73450, Amount Funded (Total or To Date, as applicable): $73450. (submitted: May 24, 2021, date funding awarded: August 23, 2021, total start and end of funding: January 1, 2022 - December 31, 2023.

Cervone, G. (Principal Investigator), Wang, S. (Co-Principal Investigator), Grant, 90% credit, "Computationally Efficient Parallelized Statistical Downscaling of MAR over Greenland," Columbia University, Universities and Colleges. Total requested: $75,798.00, Total Anticipated: $44772, Amount Funded (Total or To Date, as applicable): $44772. (submitted: September 21, 2020, date funding awarded: December 10, 2020, total start and end of funding: September 15, 2020 - December 31, 2022.
Amendments:
OSP Number: 226439, Total awarded: $31,026.00. Total anticipated: $75,799.00. September 15, 2020 - December 31, 2022

Yu, M., Cervone, G., Grant, "Integrating Internet of Things (IoT) and satellite observation into localized weather forecast for urban heat island and heat wave," PSU Institute for Energy and the Environment, Penn State. Total requested: $15.00. (submitted: 2020, date not funded: 2022, total start and end of funding: April 1, 2021 - June 30, 2022.

Trusel, L., Yu, M., Cervone, G., Grant, "Studying Arctic Navigation via machine learning," Center for Security Research and Education, Penn State. Total requested: $50.00. (submitted: October 2020, total start and end of funding: January 1, 2021 - December 30, 2021.

Cervone, G., Zipp, K. Y., Cervone, G., Grant, "Data Driven Models for Economic, Environmental, and Healthy Impacts," PSU Population Research Institute, Penn State. Amount Funded (Total or To Date, as applicable): $22.5. (submitted: April 1, 2020, total start and end of funding: July 1, 2020 - June 30, 2021.

Cervone, G. (Principal Investigator), Grant, 100% credit, "High-Resolution Wind Atlas for Italy," University Corporation for Atmospheric Research, Associations, Institutes, Societies and Voluntary Health Agencies. Total requested: $25,000.00, Total Anticipated: $25000, Amount Funded (Total or To Date, as applicable): $25000. (submitted: June 3, 2020, date funding awarded: October 2, 2020, total start and end of funding: October 2, 2020 - March 31, 2021.

Cervone, G. (Principal Investigator), Grant, 100% credit, "A Computationally Efficient Spatially Aware Implementation of the Analog Ensemble (AnEn) Technique," U.S. Army Corps of Engineers, Federal Agencies. Total requested: $66,000.00, Total Anticipated: $34000, Amount Funded (Total or To Date, as applicable): $24257. (submitted: August 31, 2018, date funding awarded: October 5, 2018, total start and end of funding: September 27, 2018 - September 26, 2020.
Amendments:
OSP Number: 209549, Total awarded: $8,000.00. Total anticipated: $42,000.00. September 27, 2018 - September 26, 2020

Gervais, M. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Wauthier, C. (Co-Principal Investigator), Grant, 33% credit, "The Power of Many: Bridging the Earth Sciences Using Spatio-Temporal Deep Learning," The College of Earth and Mineral Sciences, Penn State, Penn State. Amount Funded (Total or To Date, as applicable): $100000. (total start and end of funding: September 2018 - August 2020.

Cervone, G. (Principal Investigator), Mann, M. (Co-Principal Investigator), Grant, 60% credit, "EarthCube Building Blocks: Collaborative Proposal: The Power of Many: Ensemble Toolkit for Earth Sciences," National Science Foundation, Federal Agencies. Total requested: $391,000.00, Total Anticipated: $391000, Amount Funded (Total or To Date, as applicable): $391000. (submitted: March 24, 2016, date funding awarded: September 9, 2016, total start and end of funding: September 1, 2016 - August 31, 2020.

Cervone, G. (Principal Investigator), Grant, 100% credit, "George H. Deike Jr. Research Grant: A CyberScience Solution for Imaging Spectroscopy using Deep Learning," The College of Earth and Mineral Sciences, Penn State, Penn State. Amount Funded (Total or To Date, as

applicable): $50000. (total start and end of funding: July 2018 - June 2020.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Expanded Dimensionality Imaging Spectroscopy via Deep Learning," Air Force Research Laboratory, Federal Agencies. Total requested: $225,661.00, Total Anticipated: $225661, Amount Funded (Total or To Date, as applicable): $225661. (submitted: June 8, 2018, date funding awarded: December 18, 2018, total start and end of funding: December 12, 2018 - December 10, 2019.

Shen, C. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Multi-Scale Estimates of Solar Power Water Stress by Integrating Process-Based Descriptions with Deep-Learning-Based Mapping of Solar Farms," Institute of Energy and the Environment, Penn State, Penn State. Amount Funded (Total or To Date, as applicable): $25000. (total start and end of funding: May 2018 - April 2019.

Monache, L. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Industrial Air Pollution Effects on Vegetation in Proximity of the Fond du Lac Reservation, MN, Using UAS Observations," National Center for Atmospheric Research (NCAR), Universities and Colleges. Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $9830. (total start and end of funding: July 2018 - August 2018.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Optimal Selection of Ensemble Members Using Machine Learning V," National Center for Atmospheric Research (NCAR), Universities and Colleges. Total requested: $3,600.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $3600. (total start and end of funding: July 2018 - August 2018.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Fusing Social Media and Aerial Radiological Measurements to Study CBRNE Emergencies," Office of Naval Research, Federal Agencies. Total requested: $800,043.00, Total Anticipated: $366064, Amount Funded (Total or To Date, as applicable): $357300. (submitted: December 1, 2015, date funding awarded: June 30, 2016, total start and end of funding: June 1, 2016 - May 31, 2018.
Amendments:
OSP Number: 194108, Total awarded: $273,000.00. Total anticipated: $800,043.00. June 1, 2016 - May 31, 2018

Cervone, G. (Principal Investigator), Grant, 100% credit, "Using UAVs for Search and Rescue Operations," Global Programs, Penn State, Penn State. Amount Funded (Total or To Date, as applicable): $9000. (total start and end of funding: May 2017 - August 2017.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Optimal Selection of Ensemble Members using Machine Learning IV," National Center for Atmospheric Research (NCAR), Universities and Colleges. Total requested: $6,513.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $6513. (total start and end of funding: April 2017 - May 2017.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Optimal Selection of Ensemble Members using Machine Learning III," National Center for Atmospheric Research (NCAR), Universities and Colleges. Total requested: $3,500.00, Amount Funded (Total or To Date, as applicable): $3500. (total start and end of funding: May 2016.

Cervone, G. (Principal Investigator), Grant, 90% credit, "Quantifying the Uncertainty of Social Media During CBRNE Emergencies," Office of Naval Research, Federal Agencies. Total requested: $29,998.00, Total Anticipated: $29998, Amount Funded (Total or To Date, as applicable): $29998. (submitted: March 31, 2015, date funding awarded: August 19, 2015, total start and end of funding: June 1, 2015 - November 30, 2015.

Ferruzzi, G. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Optimal Bidding Strategy for Microgrids in the Day-Ahead Market," Regione Campania. Total requested: $50,000.00, Amount Funded (Total or To Date, as applicable): $50000. (total start and end of funding: November 2014 - May 2015.

Leone, V. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Source Characterization of Unknown Pollutants," Regione Campania. Amount Funded (Total or To Date, as applicable): $48000. (total start and end of funding: November 2014 - May 2015.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Filling the Gaps in Remote Sensing Data using Social Media During CBRNE Emergencies," Office of Naval Research, Federal Agencies. Total requested: $90,000.00, Total Anticipated: $90000, Amount Funded (Total or To Date, as applicable): $30000. (submitted: January 14, 2014, date funding awarded: February 11, 2014, total start and end of funding: March 1, 2014 - February 28, 2015.
Amendments:
OSP Number: 178156, Total awarded: $14,999.00. Total anticipated: $90,000.00. March 1, 2014 - February 28, 2015
OSP Number: 174696, Total awarded: $45,000.00. Total anticipated: $90,000.00. March 1, 2014 - February 28, 2015

Cervone, G. (Principal Investigator), Grant, 100% credit, "A Unmanned Aerial Vehicle to Study Natural Hazards," Schreyer Institute for Teaching Excellence, Penn State, Penn State. Amount Funded (Total or To Date, as applicable): $4923. (total start and end of funding: September 2014 - December 2014.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Advanced Study Program: Gridded Analog Ensemble Forecasts," National Center for Atmospheric Research (NCAR), Universities and Colleges. Amount Funded (Total or To Date, as applicable): $15500. (total start and end of funding: May 2014 - August 2014.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Optimal Selection of Ensemble Members using Machine Learning II," National Center for Atmospheric Research (NCAR), Universities and Colleges. Total requested: $5,000.00, Amount Funded (Total or To Date, as applicable): $5000. (total start and end of funding: July 2014.

Waters, N. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, "Using Social Networks and Commercial Remote Sensing to Assess Impacts of Natural Events on Transportation Infrastructure," Department of Transportation, Federal Agencies. Total requested: $1,050,000.00, Amount Funded (Total or To Date, as applicable): $1050000. (total start and end of funding: August 2012 - July 2014.

Waters, N. (Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Using Social Networks and Commercial Remote Sensing to Assess Impacts of Natural Events on Transportation Infrastructure," U.S. Department of Transportation, Federal Agencies. Total requested: $1,050,000.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $1050000. (total start and end of funding: August 2012 - July 2014.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Using Social Networks and Commercial Remote Sensing to Assess Impacts of Natural Events on Transportation," George Mason University, Universities and Colleges. Total requested: $16,991.00, Total Anticipated: $16991, Amount Funded (Total or To Date, as applicable): $16991. (submitted: March 4, 2014, date funding awarded: April 21, 2014, total start and end of funding: April 1, 2014 - July 31, 2014.

Cervone, G. (Principal Investigator), Grant, "Data Mining of Remote Sensing Data to Study Natural Hazards," Italian Ministry of Research and Education. Amount Funded (Total or To Date, as applicable): $60000. (total start and end of funding: July 2013 - August 2013.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Machine Learning Algorithms to Improve Wind Forecasts for Power Generation," Office of Research & Economic Development, Penn State. Amount Funded (Total or To Date, as applicable): $3000. (total start and end of funding: August 2013.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Optimal Selection of Ensemble Members using Machine Learning," National Center for Atmospheric Research (NCAR). Total requested: $14,421.00, Amount Funded (Total or To Date, as applicable): $14421. (total start and end of funding: July 2013 - August 2013.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Data Mining of Geospatial Databases," Stormcenter Communications. Amount Funded (Total or To Date, as applicable): $11000. (total start and end of funding: August 2012 - September 2012.

Cervone, G. (Principal Investigator), Salvador, M. (Co-Principal Investigator), Grant, 50% credit, "Full-Spectrum Hyperspectral Detection Through Sparse Representation in the Wavelet Packet Subspace Optimized Via Machine Learning," National Geospatial Intelligence Agency, Federal Agencies. Amount Funded (Total or To Date, as applicable): $235744. (total start and end of funding: August 2010 - August 2012.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Source Detection of Atmospheric Pollutants using Machine Learning," National Center for Atmospheric Research (NCAR). Amount Funded (Total or To Date, as applicable): $3516. (total start and end of funding: August 2012.

(Principal Investigator), Cervone, G. (Co-Principal Investigator), Grant, 50% credit, "Spatiotemporal Analysis for Geospatial Surveillance Applications: Sensor Mobility," Draper Labs. Amount Funded (Total or To Date, as applicable): $125000. (total start and end of funding: July 2011 - June 2012.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Spatiotemporal Analysis for Geospatial Surveillance Application," Draper Labs. Amount Funded (Total or To Date, as applicable): $127000. (total start and end of funding: July 2010 - July 2011.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Non-Darwinian Evolutionary Algorithms for Source Detection of Atmospheric Pollutants," Office of Research & Economic Development, Universities and Colleges. Amount Funded (Total or To Date, as applicable): $5000. (total start and end of funding: August 2010 - May 2011.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Envirocast ISS: Development of a Spatio-Temporal Database in Ruby on Rails for the Distribution of NASA Data," NASA / Stormcenter Communications. Amount Funded (Total or To Date, as applicable): $22000. (total start and end of funding: January 2009 - January 2010.

Cervone, G. (Principal Investigator), Grant, 100% credit, "Envirocast ISS: A System for the Automatic Distribution of Environmental Data," NASA / Stormcenter Communications. Amount Funded (Total or To Date, as applicable): $35000. (total start and end of funding: January 2008 - January 2009.

Cervone, G. (Principal Investigator), Grant, 100% credit, "A 16 Display Matrix for High Resolution Visualization and High Performance Computing," George Mason University, College of Science Dean's office, Universities and Colleges. Amount Funded (Total or To Date, as

applicable): $50000. (total start and end of funding: August 2006 - December 2007.

Other

Cervone, G. (Principal Investigator), 100% credit, "Spatio-temporal evolution of daily surface melting and accumulation at high spatial resolution (100 m) over Antarctic ice shelves using remote sensing data, climate models and," Columbia University, Universities and Colleges. Total requested: $90,620.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $0. (submitted: July 22, 2021.

Cervone, G. (Principal Investigator), 100% credit, "Modeling and Testing for Realistic Experiments (MATREX) (by Gov't FYs)," AeroSurvey Inc., Corporations. Total requested: $517,611.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $0. (submitted: December 18, 2019, date not funded: July 1, 2021.

Cervone, G. (Principal Investigator), 95% credit, "Booz Allen Hamilton/AFRL - Open Geospatial Innovation Center," Booz Allen Hamilton Inc [MP], Corporations. Total requested: $160,374.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $0. (submitted: January 18, 2021.

Cervone, G. (Principal Investigator), 100% credit, "Changes in air quality and human mobility in the U.S. during the COVID-19 pandemic: A nature-driven experiment," National Oceanic and Atmospheric Administration, Federal Agencies. Total requested: $54,599.00, Total Anticipated: $0, Amount Funded (Total or To Date, as applicable): $0. (submitted: November 30, 2020.

Development Activities Attended

"Incorporating GIS into Atmospheric Science Curriculum," National Center for Atmospheric Research, National Center for Atmospheric Research, 3 credit hours. (June 2015).

Impact in Society of Research Scholarship and Creative Accomplishment

Article, "Cervone elected to lead AGU natural hazards section," Internet, Penn State News. (2021).

Article, "COVID-19 SHUTDOWN EFFECT ON AIR QUALITY MIXED," Internet, Penn State News. (2020).

Article, "Model helps choose wind farm locations, predicts output," Internet, Penn State News. (2019).

Article, "Researchers Create Tool to Better Geographic Projections in Atmospheric Modeling," Internet, Penn State News, https://news.psu.edu/story/510780/2018/03/16/research/researchers-create-tool-better-geographic-projections-atmospheric. (March 16, 2018).

Article, "GEOlab Researchers Shaping Future of Energy, Disaster Forecasting," Internet, Penn State News, https://news.psu.edu/story/501251/2018/01/17/research/geolab-researchers-shaping-future-energy-disaster-forecasting. (January 17, 2018).

Article, "Geography Undergraduate Researches Tea Plantation Loss through Tea Institute," Internet, Penn State News, https://news.psu.edu/story/449934/2017/02/23/geography-undergraduate-researches-tea-plantation-loss-through-tea-institute. (February 23, 2017).

Article, "Mining Social Media to Task Satellite Data Collection During Emergencies," Internet, SPIE Newsroom (online newspaper of the International Society of Optics and Photonics), http://spie.org/newsroom/6400-mining-social-media-to-task-satellite-data-collection-during-emergencies?SSO=1. (April 14, 2016).

Article, "Mining Social Media Can Help Improve Disaster Response Efforts," Internet, Penn State News, https://news.psu.edu/story/388370/2016/01/20/research/mining-social-media-can-help-improve-disaster-response-efforts. (January 20, 2016).

Article, "Penn State, NCAR Researchers Aim to Better Predict Renewable Energy Production," Internet, Penn State News, https://news.psu.edu/story/358148/2015/05/20/research/penn-state-ncar-researchers-aim-better-predict-renewable-energy. (May 20, 2015).

Article, "Mainsim: Frankfurt Develop Computer Traffic Simulation System (in German)," Internet, Springer Professional News, https://www.springerprofessional.de/automobil---motoren/kohlenstoffdioxid/mainsim-frankfurter-informatiker-entwickeln-verkehrssimulationss/6566266?searchResult=1.mainsim&searchBackButton=true. (July 26, 2012).

Article, "Measuring Sea Surface Temperature Can Help Sailors Safely and Swiftly Cross the Gulf Stream, Scientist Finds," Internet, Mason News, https://www2.gmu.edu/news/3555. (July 3, 2012).

Article, "A New Look at the Devastation in Japan," Newspaper, Broadside Newspaper, http://broadsideonline.com/2011/04/11/a-new-look-at-the-devastation-in-japan-3307/. (April 11, 2011).

Interview, "Interview about my work on the Japanese Earthquake," Television, ABC News Channel 7. (March 22, 2011).

Article, "Mason Scientists Help Analyze Satellite Data of Japan's Coast," Internet, Mason News, http://news.gmu.edu/articles/5716. (March 21, 2011).

Interview, "Simulation of Japanese Earthquake Radioactive Plume," Television, ABC News Channel 7. (March 13, 2011).

Interview, "Japanese Tsunami Flooding from Space," Internet, CNN iReport, http://ireport.cnn.com/docs/DOC-571252?ref=feeds%2Fpeople%2Fconnect%2Fgcervone. (March 13, 2011).

Interview, "Landsat Satellite Images Before and After the Japanese Earthquake," Television, WUSA Channel 9. (March 13, 2011).

Interview, "Don't Rebuild on China Quake Faults, Experts Warn," Internet, National Geographic News. (June 17, 2008).

Interview, "Storm Tracker," Newspaper, Mason Spirit Newspaper. (October 24, 2006).

Interview, "Spotlight on Research: Global Change Scientists Use New Technology to Predict Intensity of Hurricanes," Internet, Mason Gazette. (September 19, 2006).

Interview, "Hurricane Ernesto Making Landfall in Florida," Television, Fox News @5. (August 29, 2006).

Interview, "George Mason Scientists Prepare for Busy Hurricane Season," Television, Fox News @5. (June 1, 2006).

Interview, "An Antenna to Track Hurricanes?," Television, ABC News. (May 3, 2006).

Interview, "From the Ground Up," Internet, Mason Spirit, George Mason University. (2005).

Interview, "Can Software Predict Earthquakes?," Internet, Washington Insider. (October 21, 2005).

Interview, "Local Scientists Detect Anomalies Prior to the October 10, 2005 Pakistan Earthquakes," Television, Fox News @5. (October 11, 2005).

Interview, "Can Earthquakes be Forecasted?," Television, NBC News. (October 11, 2005).

Interview, "Did Warm Waters Fuel Hurricane Katrina?," Internet, Physics Web, https://physicsworld.com/a/did-warm-waters-fuel-hurricane-katrina/. (October 5, 2005).

Interview, "Warm Gulf Waters Fueling Busy Hurricane Season," Television, ABC News. (September 22, 2005).

SERVICE

Service to the University

College

Assistance to Student Organizations

EMS Undergraduate Student Poster, Judge. (2017).

Committee Work

EESI Advisory Group, Earth and Environmental Systems Institute, Committee Member, Elected. (2019 - Present).

EMS Center for Security Research and Education (CSRE) Representative, Member. (2018 - Present).

EMS IT Advisory Committee, Member. (2014 - Present).

EESI Faculty Hiring Committee (Land Water Analytics), Earth and Environmental Systems Institute, Chairperson. (2019 - 2020).

EMS Information Technology, Member. (2014 - 2017).

Department

Administrative Support Work

Geography Computing Facilities / Services Officer. (2017 - 2019).

Committee Work

Geography Faculty Awards Committee, Member. (2020 - 2021).

Geography Faculty Hiring Committee (Climate Variability and Change), Member. (2018 - 2019).

Geography Graduate Fellowships and Awards Committee, Member. (2017 - 2018).

Geography Speakers Committee (Coffee Hour & Miller Lecture), Member. (2016 - 2017).

Geography Master of Geographic Information Systems (MGIS), Graduate Selection Committee, Member. (2015 - 2016).

Geography Faculty Search Committee (Human Security and Global Ethics), Member. (2014 - 2015).

Geography Graduate Fellowships and Awards Committee, Member. (2014 - 2015).

Geography Resident Graduate Selection, Member. (2014 - 2015).

University

Administrative Support Work

OSVPR Penn State Limited Submissions, Office of the Senior Vice President for Research, Member. (2020).

ICDS Seed Grants Program Manager, Institute for Computational and Data Sciences, Chairperson. (2015 - 2020).

Assistance to Student Organizations

Men's Tennis Team, Faculty Advisor. (2018 - Present).

ICDS Graduate Students Club, Faculty Advisor. (2021).

Croquet Club, Faculty Advisor. (2016).

Sailing Club, Faculty Representative. (2014 - 2015).

Committee Work

ICDS Faculty Council, Institute for Computational and Data Science, Co-Chairperson. (January 2020 - Present).

ICDS Student Scholars Selection, Institute for Computational and Data Science, Chairperson. (2020 - Present).
I supervise the program that incentivize diversity students by providing a $2000 top off salary. We also train the students to serve in leadership positions.

ICDS Coordinating committee, Institute for Computational and Data Science, Committee Member. (2016 - Present).

RCCI Executive Council, Research Computing CyberInfrastructure (RCCI), Member. (2015 - Present).

ICDS Hiring Committee (ICDS-AERO), Institute for Computational and Data Sciences, Member. (August 2021 - August 2022).

ICDS Hiring Committee (ICDS-AG), Institute for Computational and Data Sciences, Member. (August 2021 - August 2022).

ICDS Hiring Committee (ICDS-PSYED), Institute for Computational and Data Sciences, Member. (August 2021 - August 2022).

ICDS Hiring Committee (ICDS-DICKINSON_LAW), Institute for Computational and Data Sciences, Member. (January 2022 - February 2022).

ICDS Hiring Committee (ICDS-PSYED), Institute for Computational and Data Sciences, Member. (August 2020 - August 2021).

Research Integrity Office Investigation Committee, Office for Research Protections, Member. (November 2020 - March 2021).

ICDS Hiring Committee (ICDS-ME), Institute for Computational and Data Sciences, Member. (2019 - 2020).

ICDS Hiring Committee (ICDS-LAW), Institute for Computational and Data Sciences, Co-Chairperson. (2019 - 2020).

ICDS Hiring Committee (ICDS-STATS), Institute for Computational and Data Sciences, Member. (2019 - 2020).

ICDS and Geography Hiring Committee (ICS-GEOG-STATS), Institute for Computational and Data Science, Chairperson. (2018 - 2019).

ICS Hiring Committee (ICS-LAW), Institute for CyberScience, Member. (2018 - 2019).

ICS Hiring Committee (ICS-METEO-EESI), Institute for CyberScience, Member. (2018 - 2019).

ICS Hiring Committee (ICS-MNE), Institute for CyberScience, Member. (2018 - 2019).

RCCI Executive Council, Research Computing CyberInfrastructure (RCCI), Co-Chairperson. (2016 - 2019).

ICS Hiring Committee (ICS-CSE), Chairperson. (2017 - 2018).

ICS Hiring Committee (ICS-METEO), Chairperson. (2017 - 2018).

OSVPR Strategic Planning Implementation Steering Committee, Member. (2016 - 2018).

ICS Coordinating Committee for Advanced CI, Institute for CyberScience, Member. (2014 - 2018).

ICS Strategic Planning Committee, Institute for CyberScience, Member. (2014 - 2018).

OVPIT Hiring Committee, Senior Director of Infrastructure, Office of the Vice President for Information Technology, Member. (2017).

ICS Hiring Committee (ICS-CSE), Chairperson. (2016 - 2017).

ICS Hiring Committee (ICS-CSE), Chairperson. (2015 - 2016).

ICS Hiring Committee, Member. (2015 - 2016).

Research Computing Governance, Member. (2015 - 2016).

ICS Leadership Committee, Institute for CyberScience, Member. (2015 - 2016).

Contributions to Programs to Enhance Diversity, Equity, Inclusion, and Belonging

DEI Inventory Group, Diversity, Equity and Inclusion, Penn State, Committee Member. (2021 - 2022).

Participation in Governance Bodies and Related Activities

Penn State's reaffirmation of accreditation, Self-study evaluation, Standard Group I: Mission and Goals, Office of the Vice President for Commonwealth Campuses, and Vice Provost for Planning, Assessment, and Institutional Research, Committee Member. (2022 - Present).

Research Data Management Committee, Research Data Management Committee, Office of the Senior Vice President for Research (OSVPR), Committee Member. (2022 - Present).

Service to the Disciplines and to the Profession

External Evaluator for Promotion and/or Tenure

Reviewer for Promotion to Full Professor, United States Military Academy at West Point, External Reviewer. (2020).

Reviewer for Promotion to Professor, University of Arizona, External Reviewer. (2020).

Review for Promotion to Research Scientist, National Center for Atmospheric Research (NCAR), Research Application Laboratory, External Reviewer. (2018).

Reviewer for Promotion to Associate Professor, United States Military Academy at West Point, External Reviewer. (2016).

Reviewer for Promotion to Associate Professor, University of New Mexico, External Reviewer. (2016).

Reviewer for Promotion to Associate Professor, University of Utah, External Reviewer. (2016).

Reviewer for Promotion to Associate Professor, University of Delaware, External Reviewer. (2015).

Organizing Conferences and Service on Conference Committees

AGU AI/ML Ethics Workshop, AGU, Co-Organizer. (2022).

NSF Hydro-ML Workshop, NSF - PSU, Co-Organizer. (2022).

SEA-ISS 2022 Program Committee, NCAR, Co-Organizer. (2022).

SEA-ISS 2021 Program Committee, NCAR, Co-Organizer. (2021).

NSF GeoConvergence Workshop, NSF, Co-Organizer. (May 24, 2021 - May 28, 2021).

JpGU Natural Hazards Program Committee, Japanese Geophysical Union, Co-Chairperson. (August 2019 - June 2020).

GeoAI 2018 Program Committee, ACM SIGSPATIAL 2018, Co-Organizer. (2018).

AGU Program Committee for Natural Hazard, American Geophysical Union, Natural Hazards, Co-Chairperson, Elected. (January 2016 - December 2017).

Participation in or Service to Professional and Learned Societies

President of AGU Natural Hazards Section, American Geophysical Union (AGU), Elected, President. (January 2022 - December 2023).

NextADAPT, AIR Centre (Atlantic International Research Centre), Board Member. (January 2021 - 2021).

NCAR Non-NSF Proposal Review Panel (PRP), National Center for Atmospheric Research, Board Member. (January 2018 - December 2021).

NCAR Education and Outreach Advisory Board, National Center for Atmospheric Research, Chairperson. (June 2017 - 2021).

NASA/CIESIN Socioeconomic Data and Applications Center (SEDAC) User Group, National Aeronautics and Space Administration (NASA) and Center for International Earth Science Information Network (CIESIN), Earth Observing System Data and Information System (EOSDIS), Board Member. (May 2016 - June 2020).

NSF EarthCube Nomination Committee, National Science Foundation, Geosciences Directorate, Co-Chairperson, Elected. (November 2017 - March 2019).

AGU Executive Committee for Natural Hazards, American Geophysical Union, Natural Hazards, Board Member. (January 2016 - December 2017).

ISSNAF Selection Committee, Italian Scientists and Scholars of North America Foundation, Member. (2013 - 2017).
Promoting science of North-American Italian scientists.

COSPAR International Science Council, Committee on Space Research, Delegate. (January 2003 - 2004).

Service to Governmental Agencies

Subject Expert for U.S. O VISA, Zhanming Wan, Climate Corporation, Contributor. (2018).

Historical Review Board, Borough of State College, Member. (2015 - 2017).

Subject Expert for U.S. O VISA, Rajasekar Karthik, Oak Ridge National Laboratory, Contributor. (2016).

Subject Expert for U.S. O VISA, Jacek Radzikowski, George Mason University, Contributor. (2015).

UNEP Advisory Board Member, United Nations Environmental Programme, Division of Disaster and Early Warning Assessment (DEWA), Member. (January 2012 - December

2015).