Perry C. Oddo

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Professional Experience

Present – June 2017 | **Research Scientist** | NASA Goddard Space Flight Center | Greenbelt, MD
Currently contracted through Science Systems and Applications, Inc.
- Supported flood prediction and mitigation applications in Ellicott City, MD using convolutional neural networks
- Performed logistical support and developed research programming for launch of University Space Research Association's Earth from Space Institute
- Conducted study on the economic value of geographic information in disaster response by evaluating emergency vehicle response times
- Developed method to assess socioeconomic impacts of flooding in near real-time
- Collaborated with end-user the Asian Disaster Preparedness Center (ADPC) to improve flood monitoring and response in the Lower Mekong Basin

Mar 2017 – Sept 2016 | **DEVELOP Consultant** | NASA Goddard Space Flight Center | Greenbelt, MD
- Implemented machine-learning approach to more efficiently manage Protected Areas and forecast carbon sequestration in Kenya
- Developed cloud-based crop monitoring system to improve adaptive management practices in the Chesapeake Bay watershed
- Delivered geospatial products to project partners to integrate into existing workflow

July 2014 – June 2013 | **Project Research Analyst** | Industrial Economics, Inc. | Cambridge, MA
- Supported logistics for the Deepwater Horizon natural resource damage assessment
- Assisted coordination of Water Column and Plankton Processing working groups
- Performed sample collection in the Gulf Coast region
- Managed records for subcontractor performance, resource tracking, and metrics

June 2013 – Aug 2011 | **Environmental Specialist III** | Triumvirate Environmental, Inc. | Somerville, MA
- Managed a team of 6 employees as lead compliance specialist for pharmaceutical company in Cambridge, MA
- Maintained facility-wide inspections and developed multiple safety initiatives
- Performed site remediation as member of 24-hour Emergency Response team

Education

Aug 2016 | **Pennsylvania State University** | University Park, PA
MSc Geosciences

May 2011 | **Franklin & Marshall College** | Lancaster, PA
BA Environmental Science
Magna cum laude

Skills

Computing	R, Python, Unix, Fortran 90, Data science, Data visualization, Statistical analysis, Machine learning techniques
Geospatial	QGIS, ArcGIS, GDAL/OGR, Google Earth Engine, Leaflet, Remote Sensing methods
Development	Git, Shiny, Adobe Creative Suite, Graphic design, LaTeX, Web development, Video production
Professional	Science communication, Project evaluation, Team management, Microsoft Office Suite
Languages	English (native), French (beginner), Portuguese (beginner)

Research & Field Experience

Jan 2017 | **Biodiversity Field Evaluation** | Global Environment Facility — Washington, DC
- Supported field evaluation of GEF-funded protected areas in Mt. Kenya region
- Collected georeferenced field observations to validate land-cover models
- Performed qualitative interviews with several affected community groups

Project Evaluation | International Development | Climate Change | Field Work | Report Preparation

Aug 2016 – July 2014 | **Graduate Research Assistant** | Pennsylvania State University — University Park, PA
- Designed research for Sustainable Climate Risk Management (SCRiM) group
- Developed model for defining flood protection under uncertainty for risk-prone areas
- Evaluated effects of multiple objectives and model uncertainties when identifying optimal risk management strategies

Climate Change | Risk Analysis | Decision-Making | Optimization | Data Visualization | Cost-Benefit Analysis

Apr 2011 – June 2010 | **National Park Impact Assessment** | Keck Geology Consortium — Minneapolis, MN
- Investigated the geochemical signature of lake sediments from Swiftcurrent Lake (Glacier National Park, MT) to determine the impact of anthropogenic development
- Cored 3 glacial lakes and prepared samples at LacCore National Lacustrine Core Facility

Field Work | Impact Assessment | Sample Preparation | Data Analysis

Apr 2010 – Mar 2010 | **Water Quality Study** | School for International Training (SIT) — Santarém, Brazil
- Designed independent field study to determine the effects of large-scale agriculture on water quality in Santarém, Brazil
- Collaborated with researchers from the Brazilian Agricultural Research Corporation (EMBRAPA) to analyze samples for contaminants

Project Coordination | Independent Research | Field Work | Sustainable Development | International Work

Publications

Thieme, A., Yadav, S., **Oddo, P.C.**, Fitz, J.M., McCartney, S., Keppler, J., McCarty, G., and W.D. Hively. (2020). Using NASA Earth observations and Google Earth Engine to map winter cover crop conservation performance in the Chesapeake Bay watershed. *Remote Sensing of the Environment,* 248. 10.1016/j.rse.2020.111943.

Oddo, P.C. and J.D. Bolten. (2019). The Value of Near Real-Time Earth Observations for Improved Flood Disaster Response. *Frontiers in Environmental Science,* 7, 11. 10.3389/fenvs.2019.00127.

Thieme, A., Glennie, E., **Oddo, P.C.**, McCartney, S., Ruid, M., and A. Anand. (2019). Application of Remote Sensing for Ex-ante Decision Support and Evaluating Impact. *In Review for The American Journal of Evaluation*.

Oddo, P.C., Ahamed, A., and J.D. Bolten. (2018). Socioeconomic Impact Evaluation for Near Real-Time Flood Detection in the Lower Mekong River Basin. *Hydrology,* 5(2), 23. 10.3390/hydrology5020023.

Oddo, P.C., Lee, B.S., Garner, G.G., Srikrishnan, V., Reed, P.M., Forest, C.E., and K. Keller. (2017). Deep Uncertainties in Sea-Level Rise and Storm Surge Projections: Implications for Coastal Flood Risk Management. *Risk Analysis*. 10.1111/risa.12888.

Ruckert, K.L., **Oddo, P.C.**, and K. Keller. (2017). Impacts of representing sea-level rise uncertainty on future flood risks: An example from San Francisco Bay. *PLOS ONE,* 12(3). 10.1371/journal.pone.0174666.

Press

Merzdorf, Jessica. "NASA Space Data Can Cut Disaster Response Times, Costs." *NASA Feature*. Web. 22 November, 2019. https://go.nasa.gov/2XKJ6ZS.

Merzdorf, Jessica. "Scientists Deploy Damage Assessment Tool in Laos Relief Efforts." *NASA Feature*. Web. 17 August, 2018. https://go.nasa.gov/2ybm8ih.