




Dr. Bradley M. Battista, PhD, CGP-E


Geospatial Data Consultant

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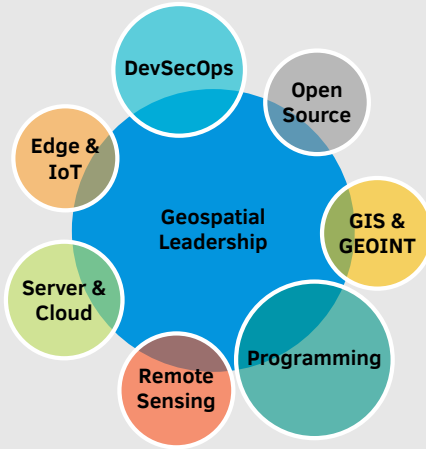
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Strengths



About

Bradley seeks personal and professional development in every challenge. His affinity for technology serves his love for nature. Most of his hobbies center on nature, a place where he combines certifications in mental, physical and spiritual wellness with an extensive academic background and professional certifications focused on geospatial sciences and technologies.

A dynamic outreach advocate, Bradley has taught STEM to children in the rural interior of Panamá, and currently serves as a geospatial liaison between residents and municipalities in North Carolina, and volunteers for Intelligence committees and working groups in service to the National Security of the United States.

Career Path

Bradley is a transdisciplinary, senior geoscientist and certified geospatial intelligence professional. His training in geosciences combines with experience in engineering, information technology and computer science, equipping him with the necessary skills and intuition for integrating data, algorithms and workflows from multiple industries to create new and advanced solutions for any industry.

Experience

Jun 2006 - Present **Owner** EnerGeo Solutions LLC

- Project design and management.
- Full Stack, Open Source geospatial software development.
- Geospatial, geophysical and remote sensing data processing, management and fusion.
- Integrate multidisciplinary statistical modeling and analysis.
- Develop centralized and distributed computing solutions.
- Develop Linux-based DevOps and DevSecOps solutions.
- Provide training services to businesses and universities.
- Publish research results.

Jun 2018 - Jun 2021 **Director, Science & Technology** Battlespace Inc

- Serve as Subject Matter Expert and Capture Manager.
- Coordinate business development serving unmanned systems and geospatial intelligence.
- Plan, execute, and document structured research endeavors to promote the interests of a diverse customer base, advancing the state of the art pertinent to data management, analysis, interpretation and data utilization.
- Conduct empirical field studies, whether independently or in partnership with established research teams.
- Publish and/or present study results in the capacity of Principal Investigator or Subject Matter Expert.
- Develop analysis methodologies and software applications to address unique end user requirements and/or problems.

Nov 2008 - Aug 2014 **Chief Marine Technology Engineer** eTrac Inc

- Develop automated vessel tracking and reporting solutions using embedded Linux.
- Train junior personnel in maintenance and safe installation procedures involving marine construction and vessel tracking equipment.
- Pilot survey boats and acquire data from hydrographic surveys.
- Serve as Lead Geophysicist in geophysical surveys.
- Train customers in the usage of tracking hardware for Environmental Protection Agency and United States Army Corps of Engineers compliance through the dredge quality management (DQM) program.
- Maintain customer relations in the marine construction industry for installation and maintenance of tracking hardware.
- Maintain high-availability web applications and databases for customer and regulatory agency access.

Aug 2008 - Dec 2008 **Postdoctoral Researcher** University of South Carolina

- Extend Doctoral research for commercial application of a new data-driven approach to locating buried methane gas hydrates in the Northern Gulf of Mexico.
- Publish results in the *Journal of Applied Geophysics*.

Aug 2002 -
Oct 2007

SigInt Engineer

Information Systems Laboratories

- Research electromagnetic characteristics of vessels and submarines in commercial shipping lanes.
- Apply nonlinear, time-domain signal processing routines to nonlinear time series data convolved with stochastic noise sources.
- Create statistical receiver operator characteristic (ROC) profiles for dynamic environmental conditions pertaining to the detection of electromagnetic dipole signatures.
- Collaborate with Scripps Institute of Oceanography and U.S. Navy Space and Warfighting Support Center to conduct surveys and publish findings.

Sep 1997 -
Aug 2002

Oceanographer

Naval Oceanographic Office

Series: 1360, Plan: GS, Grade: 11

- Serve as lead or supporting survey technician onboard Navy TAGS-60 research vessels.
- Participate in open-water acoustic and oceanographic research cruises lasting weeks to months per year.
- Manage geospatial hardware, software, and data at sea and in the office.
- Create bottom-type sediment maps of the seafloor.
- Create sub-bottom stratigraphic maps of the seafloor.
- Model and assign acoustic properties to mapped products.
- Serve as systems administrator for 60+ workstations in a secured laboratory.
- Create workflows, work breakdown structures (WBS), and design algorithms for integrating acoustic and geospatial data into geospatial databases used for Naval Fleet support.

Education

2003 - 2008

Ph.D., Geological Sciences (GPA: 4.0)

University of South Carolina, USA

Adaptation of the Empirical Mode Decomposition for Use with Very High Resolution Seismic Reflection Data from Both Acoustic and Electromagnetic Sources.

1997 - 2001

M.Sci., Marine Sciences

University of Southern Mississippi, USA

Large to Fine-scale Subduction Processes in the Middle America Trench.

1993 - 1997

B.Sci., Marine Sciences

Coastal Carolina University, USA

Coastal Processes and Their Effect on Grain Size Distribution of Nearshore Myrtle Beach, SC.

Strengths & Skills

Modus Operandi: Utilize an interdisciplinary background to facilitate optimum data integrity, flow, and preservation through custom and/or advanced workflows that address efficient and innovative solutions to challenging problems involving geo-technology.

Applied

Experience

Geophysical data acquisition, processing, interpretation and fusion; nonlinear and empirical signal processing; GIS and geospatial data management; embedded hardware and software design and automation; fleet vessel tracking and reporting, terrain mapping and modeling; GIS web integration and web applications; geospatial Internet of Things (Geo-IoT); machine learning.

Technologies

DevOps

All flavors of embedded, server, desktop, container and cloud Linux; web servers and applications using Apache and Nginx; database, network, filesystem and network administration.

Geo Software

QPS, Fledermaus, FM Geocoder Toolbox, HyPack, ESRI, QGIS, Google Earth, Petrel, OpendTect, SMT Kingdom Suite, Landmark, ProMax, Vista, SioSeis, Seismic Unix, Generic Mapping Tools, GRASS, OpenDroneMap

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|-----------------|--|
| Programming | Python, Perl, PHP, Javascript, HTML, CSS, SVG, REST, MQTT, Websockets, MatLab, Octave, R, SQL. |
| Libraries/APIs | GDAL, PDAL, LAsTools, OpenCV, Proj4, RTKLib, TensorFlow, OpenLayers, Leaflet, Google Maps, OpenStreetMaps, OpenVPN, D3.js, Plotly, Wordpress, Wix, jQuery, Flot, GIMP, ImageMagick, Inkscape |
| Cloud | Amazon Web Services, Google Cloud Compute, Docker, GitHub, VPS, VNC, VPN, WebRTC |
| Certifications | TS/SCI, CGP-E, TWIC, HAZWOPER, CPR. |
| Personal | |
| Interests | Hiking, Camping, Bicycling, Kayaking, Canoeing, SCUBA, Snorkeling, Longboarding, Homebrewing, Hydroponic and Aquaponic Gardening, Biodiesel from waste-vegetable oil, Music, Audio/Video Editing, Home Theater Linux Builds, Linux Server Builds, and Creating Custom Maps |
| Certifications | Process Coaching (teaching strategies for self improvement), Raw Food/Vegan Chef (health/nutrition), PADI Open Water. |

Publications

- Bradley M. Battista, Gregory T. Foscue, and Catherine F. Cahill. **The Role of GEOINT in the Integration of Commercial, Small UAS into the National Airspace System.** *2020 State and Future of GEOINT Report, pages 10-13, 2020.*
- Ethan Anderson, Duke Brantley, Camelia Knapp, Bradley Battista, Paule Gayes, and Christina Maschmeyer. **Geomorphological Assessment of the North Myrtle Beach (SC) Continental Shelf for Wind Energy Development.** *South-eastern Geographer, Vol.58, No.2, pages 181-192, 2018.*
- Leonardo Macelloni, Bradley Battista, and Camelia Knapp. **Optimal Filtering High-Resolution Seismic Reflection Data using a Weighted-Mode Empirical Mode Decomposition Operator.** *Journal of Applied Geophysics, Vol.75, No.4, pages 603-614, 2011.*
- Bradley Battista, Adrian Addison, and Camelia Knapp. **Empirical Mode Decomposition Operator for Dewowing GPR Data.** *Journal of Environmental & Engineering Geophysics, Vol.14, No.4, pages 163-169, 2009.*
- Adrian Addison, Bradley Battista, and Camelia Knapp. **Improved Hydrogeophysical Parameter Estimation from Empirical Mode Decomposition Processed Ground Penetrating Radar Data.** *Journal of Environmental & Engineering Geophysics, Vol 14, No.4, pages 171-178, 2009.*
- Bradley Battista, Camelia Knapp, Tom McGee, and Vaughn Goebel. **Application of the Empirical Mode Decomposition and Hilbert-Huang Transform to Seismic Reflection Data.** *Geophysics, Vol.72, No.2, pages 29-37., 2007.*
- Michael L. Larsen, Jeffrey Ridgway, Cy H. Waldman, Michael Gabbay, Rodney R. Buntzen, and Brad Battista. **Transient Signal Detection Using the Empirical Mode Decomposition.** In *The Hilbert-Huang Transform in Engineering*, edited by N.E. Huang and N.O. Attoh-Okine, *CRC press, 328p, 2005.*
- Carol Lutkin, Allen Lowrie, Erika Geresi, Richard Bennett, Richard Faas, Bradley Battista, and Tom McGee. **Interpretation of High Resolution Seismic Data From a Geologically Complex Continental Margin, Northern Gulf of Mexico.** *GCSSEPM Transactions, 53:504:516, 2003.*
- Bradley Matthew Battista. **Large to Fine-Scale subduction Processes in the Middle America Trench.** *Master's Thesis, University of Southern Mississippi, December 2001.*
- L. Somoza, B.M. Battista, J. Gardner, and A. Lowrie. **Gulf of Cadiz (Western Spain): Characterized by a Complex Petroleum System.** In *Petroleum Systems of Deep-Water Basins, pages 741-754. Proceedings of the GCSSEPM Foundation, 2001.*