W. John Schmelz

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Piscataway, NJ 08854

EDUCATION

Rutgers University, New Brunswick, NJ 2021
PhD in Earth and Planetary Sciences (Ken Miller – kgm@eps.rutgers.edu)

- Selected coursework: Sequence Stratigraphy; Marine Seismic Reflection: Processing and Interpretation; History of Earth Systems; Marine Geology; Geophysical Data Analysis; Physical Oceanography; Statistics of Earth Systems

Connecticut College, New London, CT 2010
B.A. in Environmental Science, Minor in Economics

PROFESSIONAL EXPERIENCE

Stratigraphy – Earth History Group, Dept. of Earth and Planetary Sciences, Rutgers Univ.
Postdoctoral Research Associate Sept. 2021 –

- Expanding on the geodynamic and sea-level studies that comprised my graduate research
- Applying stratigraphic modeling for the purpose of CO2 reservoir identification offshore NJ and MD
- Generating earth models of reservoir systems offshore NJ and MD to simulate carbon injection

Stratigraphy – Earth History Group, Dept. of Earth and Planetary Sciences, Rutgers Univ.
Graduate Assistant Sept. 2016 – Sept. 2021

- Evaluated the viability of Early- to Mid-Cretaceous strata in the Baltimore Canyon Trough off the coast of Maryland and Southern New Jersey as sequestration reservoirs for supercritical CO_2 using seismic stratigraphy
- Probabilistically modeled the region specific total costs of carbon capture and storage (CCS) in subsurface geological formations for emissions from northeastern and midwestern electricity-generating power plants
- Statistically modeled the influence of changes in mantle dynamic topography on estimates of global mean geocentric sea-level derived from the sediments of the Mid-Atlantic continental margin
- Numerically modeling the deltaic stratigraphy offshore New Jersey to reconcile independent but interrelated estimates of margin specific relative sea-level, global sea-level, and thermal and non-thermal margin subsidence

Sandy Hook Cooperative Research Programs, Institute of Marine and Coastal Sciences, Rutgers Univ.
Research Assistant June 2012 – Sept. 2016

- Analyzed geospatial change using topographical datasets for research examining coastal morphology
- Interpreted topography from remote sensing data to create geomorphological maps for coastal National Parks
- Quantified dimensional change of coastal geomorphological features occurring as a result of Hurricane Sandy
- Planned and executed GPS topographical surveys and processed, reviewed, and managed the collected data

Geological Society of America GeoCorps, Sandy Hook, NJ May 2012 – August 2012
Geology/GIS Specialist

- Generated reports documenting coastal topography and shoreline position in Gateway National Recreation Area
- Collected topographical data using GPS survey equipment
- Processed and managed the storage of collected survey data

TECHNICAL SKILLS

- Geophysical: seismic and ground penetrating radar data collection and processing, stratigraphic interpretation
- Survey: land surveying, differential GNSS, UAV-based photogrammetry
- Software: Agisoft Metashape, ArcGIS, Generic Mapping Tools (GMT), GS Surfer, IHS Kingdom, Illustrator, Leica GeoOffice, MATLAB, Petrel, Pix4D, Seismic Unix, Trimble Business Center, and u-blox u-center
- Programming: Python
- Other: digitization, cartography, data management

SCHOLARSHIP orcid.org/0000-0002-2588-7985

Peer-Reviewed Publications

- **Schmelz, W.J.** and Psuty, N.P., 2022, Application of Geomorphological Maps and LiDAR to Volumetrically Measure Coastal Geomorphological Change from Hurricane Sandy at Fire Island National Seashore. *Geomorphology*, 408(2022).

- Baldwin, K.E., Miller, K.G., **Schmelz, W.J.**, Mountain, G.S., Jordan, L.M., and Browning, J.V., 2022, Cretaceous sequence stratigraphy of the northern Baltimore Canyon Trough: Implications for basin evolution and carbon storage: *Geosphere*, 18.
- Jordan, L.M., Browning, J.V., Miller, K.G., and **Schmelz, W.J.**, *in press*, Quantitative Biostratigraphic Analysis and Age Estimates of Middle Cretaceous Sequences in the Baltimore Canyon Trough, Offshore Mid-Atlantic U.S. Margin. *Journal of Foraminiferal Research*.
- **Schmelz, W.J.**, Miller, K. G., Kopp, R. E., Mountain, G. S., & Browning, J. V., 2021. Influence of Mantle Dynamic Topographical Variations on US Mid-Atlantic Continental Margin Estimates of Sea-level Change. *Geophysical Research Letters*, 48.
- Miller, K.G., Browning, J.V., **Schmelz, W.J.**, Kopp, R.E., Mountain, G.S. and Wright, J.D., 2020. Cenozoic sea-level and cryospheric evolution from deep-sea geochemical and continental margin records. *Science Advances*, 6(20).
- **Schmelz, W.J.**, Hochman, G. and Miller, K.G., 2020. Total cost of carbon capture and storage implemented at a regional scale: northeastern and midwestern United States. *The Royal Society Interface Focus*, 10(5).
- Miller, K.G., **Schmelz, W.J.**, Browning, J.V., Kopp, R.E., Mountain, G.S. and Wright, J.D., 2020. Ancient sea level as key to the future. *Oceanography*, 33(2), pp.33-41.
- **Schmelz, W.J.**, Miller, K.G., Mountain, G.S., Browning, J.V. and Baldwin, K.E., 2020. Onshore–offshore correlations of Cretaceous fluvial-deltaic sequences, southern Baltimore Canyon trough. *AAPG Bulletin*, 104(2), pp.411-448.
- **Schmelz, W.J.** and Psuty, N.P., 2019. Quantification of Airborne Lidar Accuracy in Coastal Dunes (Fire Island, New York). *Photogrammetric Engineering & Remote Sensing*, 85(2), pp.133-144.
- Miller, K.G., Lombardi, C.J., Browning, J.V., **Schmelz, W.J.**, Gallegos, G., Mountain, G.S. and Baldwin, K.E., 2018. Back to basics of sequence stratigraphy: early Miocene and mid-Cretaceous examples from the New Jersey paleoshelf. *Journal of Sedimentary Research*, 88(1), pp.148-176.
- Psuty, N.P., **Schmelz, W.J.**, Spahn, A.J., D. Skidds, 2017. Northeast Coastal and Barrier Network Geomorphological Monitoring Protocol: Part III - Coastal Landform Elevation Models. Natural Resource Report NPS/NCBN/NRR—2017/1712. National Park Service, Fort Collins, Colorado.
- Psuty, N.P., Ames, K., Habeck, A. and **Schmelz, W.J.**, 2018. Responding to coastal change: Creation of a regional approach to monitoring and management, northeastern region, USA. *Ocean & Coastal Management*, 156, pp.170-182.
- Psuty, N.P., **Schmelz, W.J.**, Spahn, A. and Greenberg, J., 2016. Geotemporal vectors of coastal geomorphological change interacting with National Park Service management policy at Great Kills Park, Gateway National Recreation Area, USA. *Geomorphology*, 252, pp.5-16.
- Psuty, N.P., Spahn, A., Silveira, T.M. and **Schmelz, W.J.**, 2014. Sediment budget as a driver for sediment management at plumb beach, New York, USA: vectors of change and impacts. *Journal of Coastal Conservation*, 18(5), pp.515-528.

Geospatial Datasets

- Fukai, I., Baldwin, KE., Miller, KG., and **Schmelz, WJ**. Characterization of Carbon Sequestration Targets of the Mid-Atlantic Coastal Plain and Adjacent Offshore Region (2020).
- Psuty, N. P., **Schmelz, W.J.**, Greenberg, and A. Spahn, 2015, Geomorphological Map for Gateway National Recreation Area (Post-Hurricane Sandy), Rutgers University, Sandy Hook Cooperative Research Programs, New Jersey Agricultural Experiment Station, 1:12,000 scale.
- Psuty, N. P., **Schmelz, W.J.**, Beal, I., Greenberg, J., and Spahn, A., 2015, Geomorphological Map for Fire Island National Seashore (Post-Hurricane Sandy), Rutgers University, Sandy Hook Cooperative Research Programs, New Jersey Agricultural Experiment Station, 1:12,000 scale.
- Psuty, N. P., Beal, I., **Schmelz, W.J.**, and Spahn, A., 2015, Geomorphological Map for Assateague Island National Seashore, Rutgers University, Sandy Hook Cooperative Research Programs, New Jersey Agricultural Experiment Station, 1:12,000 scale.
- Psuty, N. P., **Schmelz, W.J.**, and Spahn, A., 2014, Geomorphological Map for Governors Island, Ellis Island, Liberty Island, Upper New York Bay, Rutgers University, Institute of Marine and Coastal Sciences, 1:12,000 scale.
- Psuty, N. P., S. McLoughlin, **W. Schmelz**, and A. Spahn, 2014, Geomorphological Map for Gateway National Recreation Area, Rutgers University, Institute of Marine and Coastal Sciences, 1:12,000 scale.
- Psuty, N. P., Patel, M., Freeman, J., **Schmelz, W.J.**, Robertson, W., and Spahn, A., 2014, Geomorphological Map for Fire Island National Seashore, Rutgers University, Institute of Marine and Coastal Sciences, 1:12,000 scale.

- Psuty, N. P., J. McDermott, W. Hudacek, J. Gagnon, M. Towle, W. Robertson, A. Spahn, M. Patel, and **W. Schmelz**, 2013, Geomorphological Map for Sagamore Hill National Historic Site, Rutgers University, Institute of Marine and Coastal Sciences, 1:12,000 scale.

Technical Reports

- Miller, KG., Stanley, JN, **Schmelz, WJ**, Browning, JV, (2022). GPR Imagery of the Navesink and Hornerstown Formations at the Search Farm Site in Upper Freehold Township, NJ.
- Dinterman, P., Greb, S.F., Lewis, J.E., **Schmelz, W.J.**, Sparks, T.N., Solis, M.P., Medina, C., Carter, K.M., Barnes, D.A., Harper, J.A., Harrison, W.B., Moore, J.P., Miller, K.G., Hickman, J., Riley, R.A., McDowell, R., Rupp, J., and Browning, J.V. (2021). Regional Geologic Cross Sections for Potential Storage and Containment Zones in the MRCSP Region. MRCSP topical report prepared for DOE-NETL project DE-FC26-05NT42589, Battelle Memorial Institute, Columbus, OH.
- Gupta, N, Miller, KG., **Schmelz, WJ**, Baldwin, KE., Fukai, I. (2020). Characterization of Carbon Sequestration Targets of the Mid-Atlantic Coastal Plain and Adjacent Offshore Region, Battelle Memorial Institute, Columbus, OH.
- Baldwin, K., Fukai, I., Miller, K., and **Schmelz, W.** (2020). Mid-Atlantic Coastal Plain and Adjacent Offshore Region: Characterization of Carbon Storage Targets, MRCSP topical report prepared for DOE-NETL project DE-FC26-05NT42589, Battelle Memorial Institute, Columbus, OH.
- Psuty NP, Butler K, Ames K, Habeck A, **Schmelz WJ.** (2018). Northeast Coastal and Barrier Network topographical change (3D) monitoring: 2016-2017 report for Great Kills, Staten Island Unit, Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2018/1187. National Park Service. Fort Collins, Colorado.
- Psuty NP, McLoughlin S, **Schmelz W**, Robertson W, Spahn A. (2018). Development of the geomorphological map for Gateway National Recreation Area: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2018/1600. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Spahn A. (2018). Development of the geomorphological map for William Floyd Estate – a unit of the Fire Island National Seashore: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2018/1593. National Park Service. Fort Collins, Colorado.
- Psuty NP, Beal I, **Schmelz W**, Spahn A. (2018). Development of a geomorphological map of Assateague Island National Seashore: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2018/1592. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Plumb Beach, 2013-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1559. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, Schmelz WJ, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Roxbury Cove, 2015-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1560. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, Schmelz WJ, Blum J, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Floyd Bennett Field West, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1557. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Greenberg J. (2017). Metrics of resilience and recovery in Fort Tilden, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1527. National Park Service. Fort Collins, Colorado.
- Psuty NP, Patel M, Ames K, Habeck A, Haussner E, Schmelz WJ, Blum J, Greenberg J. (2017). Metrics of resilience and recovery in Riding Academy North & South, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1539. National Park Service. Fort Collins, Colorado.
- Psuty NP, Patel M, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in West Pond South, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1507. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Floyd Bennett Field North, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1506. National Park Service. Fort Collins, Colorado.
- Psuty NP, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Breezy Point Tip, 2015-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1515. National Park Service. Fort Collins, Colorado.

- Psuty NP, Ames K, Habeck A, Haussner E, **Schmelz WJ**, Butler K, Greenberg J. (2017). Metrics of resilience and recovery in Floyd Bennett Field South, 2014-2016: Jamaica Bay Unit, Gateway National Recreation Area. Natural Resource Report. NPS/NCBN/NRR—2017/1517. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Greenberg J, Beal I, Spahn A. (2017). Development of the geomorphological map of Fire Island National Seashore (post-Hurricane Sandy) and metrics of change. Natural Resource Report. NPS/NRSS/GRD/NRR—2017/1420. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Greenberg J, Spahn A. (2017). Development of the geomorphological map for Gateway National Recreation Area (post-Hurricane Sandy): (1) Principal characteristics and components and (2) metrics of change. Natural Resource Report. NPS/NRSS/GRD/NRR—2017/1416. National Park Service. Fort Collins, Colorado.
- Psuty NP, Hudacek W, **Schmelz W**, Spahn A. (2016). Development of the Geomorphological Map for Governors Island, Ellis Island, and Liberty Island, Upper New York Bay: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2016/1346. National Park Service. Fort Collins, Colorado.
- Psuty NP, McDermott J, Hudacek W, Gagnon J, Towle M, Robertson W, Spahn A, Patel M, **Schmelz W.** (2016). Development of the geomorphological map for Sagamore Hill National Historic Site: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2016/1348. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Towle M, Spahn A. (2016). Shoreline change monitoring at Gateway National Recreation Area: 2007–2012 trend report. Natural Resource Data Series. NPS/NCBN/NRDS—2016/1030. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Spahn A, Riddell D, Ames K, Nicholas K. (2016). Northeast Coastal and Barrier Network shoreline position (1D) and coastal topographic (2D) change monitoring: 2013-2014 annual summary report for Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2016/1000. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Spahn A. (2016). Northeast Coastal and Barrier Network shoreline position (1D) and coastal topographic (2D) change monitoring: 2014-2015 annual summary report for Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2016/1003. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Spahn A. (2015). Northeast Coastal and Barrier Network coastal topographic change monitoring: 2010-2011 annual data summary report for Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2015/993. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Carvajal CP, Spahn A. (2015). Northeast Coastal and Barrier Network coastal topographic change monitoring: 2011-2012 annual data summary report for Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2015/994. National Park Service. Fort Collins, Colorado.
- Psuty NP, **Schmelz W**, Spahn A, Riddell D, Ames K, Nicholas K. (2015). Northeast Coastal and Barrier Network shoreline position (1D) and coastal topographic (2D) change monitoring: 2012-2013 annual data summary report for Gateway National Recreation Area. Natural Resource Data Series. NPS/NCBN/NRDS—2015/992. National Park Service. Fort Collins, Colorado.
- Psuty NP, Patel M, Freeman J, **Schmelz W**, Robertson W, Spahn A. (2015). Development of the geomorphological map for Fire Island National Seashore: Principal characteristics and components. Natural Resource Report. NPS/NRSS/GRD/NRR—2015/941. National Park Service. Fort Collins, Colorado.
- Psuty, N. P, A. Spahn, R. Fullmer, C. Carvajal, and **W. Schmelz**, 2013. Geomorphological Site and Situation: Miller Field, Great Kills 2, and Fort Wadsworth. National Park Service, Ft. Collins, Colorado.
- Psuty, N. P, A. Spahn, R. Fullmer, C. Carvajal, and **W. Schmelz**, 2013. Staten Island Unit Revegetation Considerations, Gateway National Recreation Area. National Park Service, Ft. Collins, Colorado.

Posters and Presentations

- Liu, J., Schmelz, W.J., and Miller, K.G., 2022. Characterization of Historical Storm Events from the Stratigraphy of a Modern Barrier Spit Using Ground Penetrating Radar and RTK-GNSS Topography. AGU Fall Meeting 2022.
- Stanley, J.N., Schmelz, W.J., Miller, K.G., and Browning, J.V., 2022. Using Topographical Data and Ground Penetrating Radar to Evaluate Periods of Growth at North Beach, Sandy Hook, New Jersey. 19th International Conference on Ground Penetrating Radar. Golden, Colorado. June 2022.
- Schmelz, W.J., Spector, A., Adamo, L.N., Rowan, C.M., and Miller, K., 2020, December. Using low-cost Arduino based GNSS boards to collect centimeter accurate topography from drone orthophotography. AGU Fall Meeting 2020.

- Schmelz, W.J., Miller, Kenneth G., Kopp, Robert E., Mountain, Gregory S. and Browning, James V., 2020. Statistical Modeling to Measure the Influence of Mantle Dynamic Topography on Cenozoic Mid-Atlantic Margin Sea-level Records. Geological Society of America, 2020 GSA Annual Meeting, October 2020.
- Stanley, J.N., Schmelz, W.J., Miller, Kenneth G., Browning, James V., 2020. Preliminary Sub-surface Investigation at Sandy Hook, New Jersey Using Ground Penetrating Radar from Dune to Swash. Geological Society of America, 2020 GSA Annual Meeting, October 2020.
- Schmelz, W.J., Miller, K.G., Mountain, G.S., Baldwin, K., Jordan, L. and Browning, J.V., 2019. Cretaceous sequence stratigraphy of the Baltimore Canyon trough: Implications for evaluating the distribution of offshore carbon storage reservoirs. AGU Fall Meeting 2019, San Francisco, CA. December 2019.
- Miller, Kenneth G., Browning, J.V., Kopp, R.E., Schmelz, W.J., Wright, J.D., 2019. Global Mean Sea-level and Cryospheric Evolution from Deep-sea δ18O and Continental Margin Records: Hothouse, Cool Greenhouse, and Icehouse Worlds. AGU Fall Meeting 2019, San Francisco, CA. December 2019.
- Miller, Kenneth G., Schmelz, W.J., Browning, J.V., Wright, J.D., 2018. Influence of global mean sea level and mantle dynamic topography variations on passive-aggressive continental margins. Conjugate Margins Conference 2018, Halifax, Nova Scotia, Canada. August 2018.
- Schmelz, W.J., Miller, K.G., and Mountain, G.S., 2018. Numerically modelling Miocene stratigraphic sequences on the New Jersey shelf. Conjugate Margins Conference 2018, Halifax, Nova Scotia, Canada. August 2018.
- Schmelz, W., Miller, Kenneth G., Mountain, Gregory S. and Browning, James V. Revised Stratigraphic Synthesis of the Baltimore Canyon Trough: Implications for Reservoir Identification and Analysis. AAPG ACE, Salt Lake City, UT. May, 2018.
- Schmelz, W., Miller, Kenneth G., Mountain, Gregory S. and Browning, James V. Sequence Stratigraphic Analysis of Cretaceous Strata in the Southern Baltimore Canyon Trough: An Integration of Geological and Geophysical Data. Geological Society of America, GSA Annual Meeting 2017, Denver, Co. October 2017.
- Schmelz, W., Miller, Kenneth G., Mountain, Gregory S. and Browning, James V. Cretaceous Sedimentation Patterns in the Southern Baltimore Canyon Trough: Correlating the Maryland Coastal Plain to the Continental Rise. Geological Society of America, 2017 GSA Southeastern Section Annual Meeting, Richmond, VA. March 2017.
- Schmelz, W., Spahn, A., Ames, K., Greenberg, J., Haussner, E., Endicott, M., and Psuty, N. P. Monitoring Coastal Geomorphology through Volumetric Quantifications of Topographical Change: Establishment of a Regional Protocol, Geological Society of America, GSA Annual Meeting 2016, Denver, Co. September 2016.
- Schmelz, W., Greenberg, J., Beal, I., Psuty, N.P. Comparative Analysis of Geomorphological Maps to Generate Metrics of Change Caused by Hurricane Sandy on Fire Island. 10th Biennial Science Conference, Fire Island National Seashore, Patchogue, NY. April 2016.
- Schmelz, W., Psuty, N.P., Spahn, A., The Intersection of Measurement Accuracy and Process Scales in the LiDAR Based Quantification of Coastal Geomorphological Change. 10th Biennial Science Conference, Fire Island National Seashore, Patchogue, NY. April 2016.
- Psuty, N. P, Schmelz, W., Greenberg, J., Beal, I., and Spahn, A. Geomorphological Maps as a Tool to Track Change: Metrics of Impacts of Hurricane Sandy at Fire Island National Seashore. Geological Society of America, GSA Annual Meeting 2015, Baltimore, MD. November 2015.
- Schmelz, W., Silveira, T., Beal, I., Greenberg, J., Spahn, A., Ames, K., and Psuty, N. P. Trends of Dune Crest Displacement 1976-2012, Fire Island, New York, Geological Society of America, GSA Annual Meeting 2015, Baltimore, MD. November 2015.
- Schmelz, W., Spahn, A., Ames, K., Greenberg, J., Beal, I., and Psuty, N. P. Interactions of Sediment Supply and Coastal Topography at Sandy Hook, New Jersey. (Gateway National Recreation Area). Geological Society of America, GSA Annual Meeting 2015, Baltimore, MD. November 2015.
- Psuty, N. P, Schmelz, W., Greenberg, J., Beal, I. Displacement and Recovery: The Post-Hurricane Sandy Geomorphological Evolution of the Fort Tilden Site, Gateway National Recreation Area. Geological Society of America, GSA Annual Meeting 2015, Baltimore, MD. November 2015.
- Psuty, N. P, Schmelz, W., Greenberg, J., Beal, I., Spahn, A., Ames, K. Geomorphological Maps Incorporating Impacts of Hurricane Sandy at Fire Island National Seashore, Gateway National Recreation Area, and Assateague Island National Seashore: Research and Management Applications. Geological Society of America, GSA Annual Meeting 2015, Baltimore, MD. November 2015.
- Psuty, N. P., Schmelz, W., Spahn, A., Greenberg, J., and Beal, I. Metrics of Dune-Beach System Evolution, Gateway National Recreation Area: Responding to Superstorm Sandy. George Wright Society, George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. Sacremento, CA. March 2015.

- Schmelz, W., Beal, I., Greenberg, J., Spahn, A., and Psuty, N. P. Investigating the Efficacy to Measure Topographical Change in Coastal Dunes (Fire Island, NY). Geological Society of America Northeastern Sectional 2015 Annual Meeting, Bretton Woods, NH. March 2015.
- Schmelz, W., Beal, I., Greenberg, J., Spahn, A., and Psuty, N. P. Conceptual Basis for Mapping Geomorphological Evolution in Coastal Parks. George Wright Society, George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. Sacremento, CA. March 2015.
- Greenberg, J., Schmelz, W., Beal, I., Spahn, A., and Psuty, N. P. Multi-dimensional Topographical Monitoring in Coastal Parks and Refuges. George Wright Society, George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. Sacremento, CA. March 2015.
- Beal, I., Schmelz, W., Greenberg, J., Spahn, A., and Psuty, N. P. George Wright Society, George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. Sacremento, CA. March 2015.
- Psuty, N. P., A. Spahn., and W. Schmelz. Geomorphological Response to Extreme Events, Great Kills Park, Gateway NRA. 2014 AAG Annual Meeting, Tampa, Florida, April 2014.
- Psuty, N. P., W. Schmelz, M. Patel, W. Hudacek, S. McLloughlin, J. Freeman, W. Robertson, and M. Towle. Geomorphological Mapping in the Coastal Parks: Application of the Conceptual Basis of Landform Evolution. Geological Society of America, 2013 GSA Annual Meeting in Denver: 125th Anniversary of GSA, Denver, October 2013.
- Psuty, N. P., W. J. Schmelz, A. Spahn, 2014. Landform Evolution as the Conceptural Basis for the Geomorphological Map of Fire Island. Fire Island National Seashore – 9th Biennial Science Conference, Patchogue, NY, March 28, 2014. Oral presentation and poster presentation.
- Carvajal, C., R. Fullmer, A. Spahn, W. Schmelz, N.P. Psuty. Coastal Topographical Change Analyses Associated With Superstorm Sandy at Miller Field, Staten Island, New York. Geological Society of America, 2013 GSA Annual Meeting in Denver: 125th Anniversary of GSA, Denver, October 2013.
- Fullmer, R., C. Carvajal, W. Schmelz, A. Spahn, N.P. Psuty. The Effects of Superstorm Sandy on Coastal Morphology: Great Kills, Staten Island, New York. Geological Society of America, 2013 GSA Annual Meeting in Denver: 125th Anniversary of GSA, Denver, October 2013.

PROFESSIONAL WORKSHOPS AND TRAINING

- **Early Career Seismic Chief Scientist Training Cruise**, Newport, OR Sept. 24th – Oct. 5th, 2017
  National Science Foundation; University-National Oceanographic Laboratory System
- **Trimble Business Center with RTK Data & Trimble Access Software with RTK Data for Topographic Surveying**, Brooklyn, NY and Sandy Hook, NJ May 16th – May 17th 2012 and updated Oct. 21st – Oct. 22nd 2014
  Trimble; National Park Service; Institute of Marine and Coastal Sciences - Rutgers University
- **LIDAR 2018 Workshop**, Rutgers University, New Brunswick, NJ November 22, 2013
  US Department of Homeland Security; Command, Control and Interoperability Center for Advanced Data Analysis; Center for Advanced Infrastructure; Edward J. Bloustein School of Planning and Public Policy - Rutgers University