

# CURRICULUM VITAE

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## Scott L. Nooner

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### PERSONAL:

Date of Birth: June 1, 1974  
Place of Birth: Conway, Arkansas, U.S.A

### EDUCATION:

2005 Ph.D. (Earth Sciences), **Scripps Institution of Oceanography, Univ. of California, San Diego**, La Jolla, CA  
1999 M.S. (Physics) **Texas A&M University**, College Station, TX  
1996 B.A. (Physics/Fine Arts) Cum Laude with Honors, **Hendrix College**, Conway, AR

### EMPLOYMENT:

2015-present *Associate Professor of Geology*  
**University of North Carolina Wilmington**  
2012-2015 *Assistant Professor of Geology*  
**University of North Carolina Wilmington**  
2012-present *Adjunct Research Professor*  
**Lamont-Doherty Earth Observatory, Columbia University**  
2011-2012 *Adjunct Professor*  
**Earth and Environmental Studies Dept., Montclair State University**  
2010-2012 *Palisades Geophysical Institute / Doherty Foundation*  
*Lamont Assistant Research Professor*  
**Lamont-Doherty Earth Observatory, Columbia University**  
2009-2010 *Palisades Geophysical Institute Junior Research Scientist*  
**Lamont-Doherty Earth Observatory, Columbia University**  
2008-2009 *Doherty Associate Research Scientist*  
**Lamont-Doherty Earth Observatory, Columbia University**  
2006-2008 *Post-doctoral Research Scientist*  
**Lamont-Doherty Earth Observatory, Columbia University**  
Supervisor – Spahr Webb  
2005-2006 *Post-doctoral Scholar*  
**Scripps Institution of Oceanography, Univ. of California, San Diego**  
Advisor – Mark Zumberge

- 1999-2005 *Graduate Student Researcher*  
**Scripps Institution of Oceanography, Univ. of California, San Diego**  
 Advisor – Mark Zumberge
- 1996-1999 *Teaching Assistant*  
**Texas A&M University**  
 Advisor – Joseph Ross
- 1994-1996 *Research Assistant*  
**Hendrix College**  
 Advisor – Pradip Bandyopadhyay

### MAJOR RESEARCH INTERESTS:

- Mid-ocean ridges and continental rifting
- Magma dynamics in the crust
- Crustal deformation, rheology, and structure
- Geologic CO<sub>2</sub> Sequestration
- Hazards from flooding and tectonics
- Development of new geophysical instrumentation

### HONORS/AWARDS:

- 2009 **Palisades Geophysical Institute Junior Research Professor**  
 The only endowed junior research position in earth sciences at Columbia University
- 2003 **Best paper in *Geophysics*, ‘A new sea-floor gravimeter’**  
 Only one selected per year out of hundreds of papers published
- 2002 **CALIT Fellowship**, Scripps Institution of Oceanography
- 1999-2000 **Folsom Fellowship**, Scripps Institution of Oceanography  
 Only one awarded per year out of 30-40 entering graduate students
- 1996-1997 **Dean’s Graduate Scholar Fellowship**, Texas A&M University
- 1992-1996 **Dean’s Scholarship**, Hendrix College
- 1992-1996 **Arkansas Academic Challenge Scholarship**, Hendrix College

### SOCIETIES:

American Geophysical Union (AGU), Society for Exploration Geophysicists (SEG),  
 American Association for the Advancement of Science (AAAS)

### SERVICE (EXTERNAL):

- **Reviewer:** *Journal of Geodesy, Geophysical Journal International, G-cubed, Geophysical Review Letters, Advances in Space Research, International Journal of Greenhouse Gas Control, IEEE Journal of Oceanic Engineering*
  - **Reviewer:** numerous NSF MG&G, NSF EAR, NOAA OE, and the French National Research Agency (ANR) proposals
- 2014 **Panel Member**, NSF-OCE-MG&G
- 2011 **Co-Chair:** Session in Volcanology at AGU December, 2011 meeting
- 2008 **Panel Member**, NSF-OCE-MG&G
- 2008 **Presenter:** UNOLS Deep Submergence Science Committee
- 2008 **Participant:** RIDGE2000 EPR Integration workshop
- 2008 **Participant:** RIDGE2000 workshop

2005            **Participant:** NanTroSEIZE workshop  
2004            **Participant:** ORION workshop

### **SERVICE (INTERNAL):**

2016-present    Annual Evaluations committee chair  
2016            Faculty Senator  
2015-2016      Annual Evaluations committee  
2014-2016      UNCW Parking Appeals Committee  
2013-2016      Oceanography curriculum group chair  
2009-2010      LDEO Earth Science Colloquium Organizer  
2007-2008      Designed, built and deployed a hydrophone bouy array for the  
                    Langseth airgun calibration  
2007            Guest Lecturer for Earth Institute Fellows' Visit to Lamont  
2006-2008      MG&G seminar organizer, LDEO  
2006-2008      Lamont-Doherty Earth Observatory Open House exhibits, including  
                    *Exploring the deep ocean: Dive in Alvin and shrink your own cup*  
2001-2002      IGPP seminar organizer, Scripps Institution of Oceanography

### **TEACHING EXPERIENCE:**

2012-present    *Marine Geology (GLY 550), Introduction to Geophysics (GLY 465/565),  
                    Geological Oceanography (GLY 450), Environmental Geology Lab (GLYL 120),  
                    Oceanography Capstone (OCN 490), Natural Disasters (GLY 125)*  
                    Department of Geography and Geology, UNCW  
2011-2012      *Historical Geology (GEOS114)*  
                    Dept. of Earth and Environmental Studies, Montclair State University  
2009-2012      **Mentor** – Yang Zha  
2011            **Mentor** – Graduate Research Assistant Scott DeWolf  
2009            **Mentor** – Summer Undergraduate Research Assistant Wanda Vargas,  
                    Graduate Research Assistant Shou Shou Han  
2008            **Mentor** – Summer Intern and Graduate Research Assistants Phillip  
                    Kelley-Dotson, Gina Applebee, Andrea Applebee, Lindsey Doermann  
1999-2004      **Departmental Tutor** – all *Physics 1 & 2* series courses  
                    Department of Physics, University of California San Diego  
1998-1999      **Course Instructor** – *Observational Astronomy*  
                    Department of Physics, Texas A&M University, College Station, TX  
1997-1998      **Course Instructor** – *Scientific Instrument Making*  
                    Department of Physics, Texas A&M University, College Station, TX  
1996-1999      **Teaching Assistant** – *College Physics I & II*  
                    Department of Physics, Texas A&M University, College Station, TX  
1993-1996      **Departmental Tutor** – Calculus  
                    Department of Mathematics, Hendrix College, Conway, AR  
1993-1996      **Lab Assistant** – *General Physics I & II, and Astronomy*  
                    Department of Physics, Hendrix College, Conway, AR.

### **FIELD EXPERIENCE**

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Dr. Nooner has extensive sea-going experience with 26 cruises since 2000, including seafloor geodesy, compliance, and seafloor micro-gravimetry. All cruises required

custom instrumentation developed in-house and most involved submersible or ROV work. He has been Chief or co-Chief scientist on four cruises, and project leader or co-leader on nine.

Major land-based fieldwork includes gps surveys, gravity surveys, borehole strainmeter installations, and infrasound sensor installations.

#### SEA-GOING:

- 8/2017 **Project co-leader**, geodetic survey of Axial Seamount Juan de Fuca Ridge, *R/V Revelle* with Jason ROV and Sentry AUV
- 8/2015 **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca Ridge, *R/V Thomas G. Thompson* with Jason ROV and Sentry AUV
- 6/2014 **Project co-leader**, testing geodetic equipment at the Cascadia subduction zone, *R/V Thomas G. Thompson* with Jason ROV
- 10/2013 **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca Ridge, *R/V Thomas G. Thompson* with Jason ROV
- 10/2011 **Chief Scientist**, mapping and geodetic survey of 9°50'N on the East Pacific Rise, *R/V Atlantis* with ROV Jason
- 07/2011 NeMO 2011, **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca Ridge, *R/V Atlantis* with Jason ROV
- 08/2010 NeMO 2010, **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca Ridge, *R/V Thomas G. Thompson* with Jason ROV
- 07/2010 OBS test cruise on the *R/V Connecticut*
- 12/2009 **Chief Scientist**, geodetic survey of 9°50'N on the East Pacific Rise, *R/V Atlantis* with DSV Alvin
- 06/2009 TROLL, SLEIPNER, and ORMEN LANGE seafloor gravity survey on board the *Seabed Worker* and ROV
- 06/2008 **Co-Chief Scientist and lead PI**, geodetic survey of 9°50'N on the East Pacific Rise, *R/V Atlantis* with DSV Alvin
- 01/2008 Source calibration of the *R/V Langseth airguns*, Gulf of Mexico
- 12/2007 Source calibration of the *R/V Langseth airguns*, Gulf of Mexico
- 08/2007 NeMO 2007, **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca ridge, *R/V Atlantis* with Jason ROV
- 05/2007 Ocean Bottom Seismometer (OBS) tests in Long Island Sound, *R/V Seawolf*
- 02/2007 MADCAP (Melting and Diking with Compliance and Pressure) 9° to 10° N on the East Pacific Rise, *R/V Atlantis*
- 11/2006 BPR and Compliance test cruise off San Diego, *R/V Robert Gordon Sproul*
- 09/2006 BPR and Compliance test cruise off San Diego, *R/V Robert Gordon Sproul*
- 08/2006 NeMO 2006, **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca ridge, *R/V Thomas G. Thompson* and ROPOS ROV
- 08/2005 SLEIPNER, **Chief Scientist**, 2005 seafloor gravity survey, North Sea, *Normand Mjolne* and ROV
- 08/2005 TROLL 2005 seafloor gravity survey, North Sea, *Normand Mjolne* and ROV
- 03/2005 PNG, **Consultant**, seafloor gravity survey in Manus Basin, *R/V Genesis*

- 09/2004 NeMO 2004, **Project co-leader**, geodetic survey of Axial Seamount, Juan de Fuca ridge, R/V *Thomas G. Thompson* and ROPOS ROV
- 08/2002 TROLL/SLEIPNER 2002 seafloor gravity survey, North Sea, *Edda Freya* and ROV
- 11/2000 MARVEL seafloor gravity at the Atlantis Massif, Mid-Atlantic Ridge, R/V *Atlantis* using the DSV Alvin
- 07/2000 TROLL 2000 seafloor gravity survey, North Sea, *Normand Tonjer* and ROV

#### LAND-BASED:

- 02/2014 **PI**, Collect data from fiber optic borehole strainmeters in Bangladesh.
- 02/2013 **PI**, Repair and data collection of fiber optic borehole strainmeters in Bangladesh
- 06/2012 **PI**, GPS installations in Malawi and Tanzania across the East African Rift.
- 03/2012 **PI**, Collect data from fiber optic borehole strainmeters in Bangladesh.
- 03/2011 **Co-PI**, Installation of fiber optic borehole strainmeters to measure sediment compaction in Bangladesh.
- 05/2010 **Co-PI**, Malawi GPS survey and seismometer retrieval
- 10/2009 **Co-PI**, Malawi planning trip and GPS survey
- 08/2005 **Project leader**, Norway gravity survey
- 09/2004 Installation of a Fiber Optic Borehole Strainmeter in the SAFOD borehole, Parkfield, CA
- 09/2000 Gravity survey of Long Valley Caldera, Mammoth Lakes, CA
- 07/2000 Installation of a Fiber Optic Infrasound Sensor, Pinyon Flats, CA
- 07/2001 Installation of a Fiber Optic Borehole Strainmeter in the LVEW borehole, Mammoth Lakes, CA
- 08/1999 Gravity survey of Long Valley Caldera, Mammoth Lakes, CA

#### BIBLIOGRAPHY

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##### PUBLICATIONS: \*Indicates student author

- \*Sciince, M. B. and **Nooner, S. L.**, (2017) Decadal flood trends in Bangladesh from extensive hydrographic data, *Natural Hazards*, doi: 10.1007/s11069-017-3036-7.
- **Nooner, S. L.** and Chadwick Jr., W. W., (2016) Inflation-predictable behavior and co-eruption deformation at Axial Seamount, *Science*, 354(6318), 1399-1403, doi: 10.1126/science.aah4666
- Chadwick, W. W., Jr, J. B. Paduan, D. A. Clague, B. M. Dreyer, S. G. Merle, A. M. Bobbitt, D. W. Caress, B. T. Philip, D. S. Kelley, and **S. L. Nooner** (2016), Voluminous eruption from a zoned magma body after an increase in supply rate at Axial Seamount, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL071327.
- Donna J Shillington, James B Gaherty, Cynthia J Ebinger, Christopher A Scholz, Kate Selway, Andrew A Nyblade, Paul A Bedrosian, Cornelia Class, **Scott L Nooner**, ... (2016), Acquisition of a Unique Onshore/Offshore Geophysical and

Geochemical Dataset in the Northern Malawi (Nyasa) Rift, *Seismological Research Letters*, 87(6), 1406-1416, doi: 10.1785/0220160112

- Webb, S. C., and **S. L. Nooner** (2016), High Resolution Seafloor Absolute Pressure Gauge Measurements Using a Better Counting Method, *Journal of Atmospheric and Oceanic Technology*, doi: 10.1175/JTECH-D-15-0114.1.
- **Nooner, S. L.**, S. C. Webb, W. R. Buck, and M.-H. Cormier (2014), Post Eruption inflation of the East Pacific Rise at 9°50' N, *Geochemistry, Geophysics, Geosystems*, 15(6), 2676–2688, doi: 10.1002/2014GC005389.
- Zha, Y., S. C. Webb, **S. L. Nooner**, and W. C. Crawford (2014), Spatial distribution and temporal evolution of crustal melt distribution beneath the East Pacific Rise at 9°-10°N inferred from 3-D seafloor compliance modeling, *Journal of Geophysical Research: Solid Earth*, 119(6), 4517–4537, doi:10.1002/2014JB011131.
- Chadwick, W. W., Jr., **S. L. Nooner**, D. A. Butterfield, and M. D. Lilley (2012), Seafloor deformation and forecasts of the April 2011 eruption at Axial Seamount, *Nature Geoscience*, 5, doi: 10.1038/NNGEO1464.
- Dziak, R. P., Haxel, J. H., Bohnenstiehl, D. R., Chadwick, W. W., **Nooner, S. L.**, Fowler, M. J., Matsumoto, H., and D. A. Butterfield (2012), Seismic precursors and magma ascent before the April 2011 eruption at Axial Seamount, *Nature Geoscience*, 5, doi: 10.1038/NNGEO1490.
- Alnes, H., O. Eiken, **S. Nooner**, G. Sasagawa, T. Stenvold, and M. Zumberge (2011), Results from Sleipner gravity monitoring: Updated density and temperature distribution of the CO<sub>2</sub> plume, *Energy Procedia*, 4, 5504–5511, doi: 10.1016/j.egypro.2011.02.536.
- Diebold, J., Tolstoy, M., Doermann, L., Webb, S. C., **Nooner, S.**, and Crone, T. J. (2010), R/V Marcus G. Langseth Seismic source: Modeling and Calibration, *Geochemistry Geophysics Geosystems*, 11, doi: 10.1029/2010GC003216.
- Steckler, M. S., **Nooner, S. L.**, Akhter, S. H., Chowdhury, S. K., Bettadpur, S., Seeber, L., and Kogan, M. G. (2010), Modeling Earth Deformation from Monsoonal Flooding in Bangladesh using Hydrographic, GPS and GRACE Data, *Journal of Geophysical Research*, 115, B08407, doi:10.1029/2009JB007018.
- Chadwick, W. W., Butterfield, D. A., Embley, R. W., Tunnicliffe, V., Huber, J. A., **Nooner, S. L.**, and Clague, D. A. (2010), Spotlight 1 – Axial Seamount, *Oceanography*, 23, 1, 38-39 (invited).
- Tolstoy, M., Diebold, J., Doermann, L., **Nooner, S.**, Webb, S. C., Bohnenstiehl, D. R., Crone, T. J., and Holmes, R. C. (2009), Broadband calibration of the R/V Marcus G. Langseth four string seismic sources, *Geochemistry Geophysics Geosystems*, 10, 8, doi: 10.1029/2009GC002451.
- **Nooner, S. L.**, Bennati, L., Calais, E., Buck, W. R., Hamling, I. J., Wright, T. J., and Lewi, E. (2009), Post-rifting relaxation in the Afar region, Ethiopia, *Geophysical Research Letters*, 36, L21308, doi: 10.1029/2009GL040502.
- **Nooner, S. L.** and Chadwick, W. W. (2009), Vertical uplift measured in the caldera of Axial Seamount: implications for magma supply and future eruptions, *Geochemistry Geophysics Geosystems*, 10, Q02002, doi:10.1029/2008GC002315.
- Arts, R., Chadwick, A., Eiken, O., Thibeau, S., and **Nooner, S.** (2008), Ten years' experience of monitoring CO<sub>2</sub> injection in the Utsira sand at Sleipner (offshore Norway), *First Break*, 26, 65-72.
- Blum, J. A., **Nooner, S. L.**, and Zumberge, M. A. (2008), Recording Earth

- strain with optical fibers, *IEEE Sensors Journal*, 8 (7), 1152-1160 (invited).
- **Nooner, S. L.**, Eiken, O., Hermanrud, C., Sasagawa, G. S., Stenvold, T., and Zumberge, M. A. (2007), Constraints on the *in situ* density of CO<sub>2</sub> within the Utsira formation from time-lapse seafloor gravity measurements, *International Journal of Greenhouse Gas Control*, 1, 198-214.
  - Chadwick, W. W., **Nooner, S. L.**, Zumberge, M. A., Embley, R. W., and Fox, C. G. (2006), Vertical deformation monitoring at Axial Seamount since its 1998 eruption using deep-sea pressure sensors, *Journal of Volcanology and Geothermal Research*, 150, 313-327.
  - Stenvold, T., Eiken, O., Zumberge, M. A., Sasagawa, G., and **Nooner, S.** (2006), High-precision depth and subsidence mapping from seafloor water pressure measurements, *SPE Journal*, 11, 380-381.
  - Blackman, D. K., Karson, J. A., Kelley, D. S., Cann, J. R., Fru-Green, G. L., Gee, J. S., Hurst, S. D., John, B. E., Morgan, J., **Nooner, S. L.**, Ross, D. K., Schroeder, T. J., and Williams, E. A. (2003), Geology of the Atlantis Massif (Mid-Atlantic Ridge, 30° N): Implications for the evolution of an ultramafic oceanic core complex, *Marine Geophysical Researches*, 23, 443-469.
  - **Nooner, S. L.**, Sasagawa, G. S., Blackman, D. K., and Zumberge, M. A. (2003), Structure of oceanic core complexes: Constraints from seafloor gravity measurements made at the Atlantis Massif, *Geophysical Research Letters*, 30, 1446-1449.
  - Sasagawa, G. S., Crawford, W., Eiken, O., **Nooner, S.**, Stenvold, T., and Zumberge, M. A. (2003), A new sea-floor gravimeter, *Geophysics*, 68, 544-553.
  - Zumberge, M. A., Berger, J., Hedlin, M. A., Husmann, E., **Nooner, S.**, Hilt, R., and Widmer-Schnidrig, R. (2003), An optical fiber infrasound sensor: A new lower limit on atmospheric pressure noise between 1 and 10 Hz, *Journal of the Acoustical Society of America*, 113, 2474-2479.
  - Blackman, D. K., Applegate, B., Bacher, N., Fruh-Green, G. L., Gee, J., Hanna, H., Hurst, S., John, B., Lyons, S., Morgan, J., **Nooner, S.**, Rivizzigno, P., Ross, D., Sasagawa, G., and Schroeder, T. (2000), Seafloor mapping and sampling of the MAR 30° N oceanic core complex-MARVEL (Mid-Atlantic Ridge vents in extending lithosphere), *InterRidge News*, 10, 33-36.

#### NON-PEER REVIEWED PUBLICATIONS:

- Alnes, H., Eiken, O., **Nooner, S.**, Sasagawa, G., Stenvold, T., and Zumberge, M. (2010), Results from Sleipner gravity monitoring: updated density and temperature distribution of the CO<sub>2</sub> plume, in *10th International Conference on Greenhouse Gas Control Technologies*, GHGT-10, Amsterdam, Netherlands.
- **Nooner, S.**, Zumberge, M., Eiken, O., Stenvold, T., and Thibeau, S. (2006), Constraining the density of CO<sub>2</sub> within the Utsira formation using time-lapse gravity measurements, in *8th International Conference on Greenhouse Gas Control Technologies*, GHGT-8, Trondheim, Norway; www.ghgt-8.no.

#### PH.D. DISSERTATION:

- **Nooner, S. L.** (2005), Gravity changes associated with underground injection of CO<sub>2</sub> at the Sleipner storage reservoir in the North Sea, and other marine geodetic studies, Ph.D. thesis, 188 pp, University of California, San Diego, La Jolla, CA.

## MASTERS THESIS:

- **Nooner, S. L.** (1999), Low Temperature MFM Imaging of  $\text{Fe}_{2+x}\text{V}_{1-x}\text{Al}$  Intermetallics, 67 pp, Texas A&M University, College Station, TX.

## CONFERENCE ABSTRACTS: \*student author

- **Nooner, S.**, Chadwick, W., Caress, D., Paduan, J., Clague, D., (2017) Using high-resolution repeat AUV bathymetry to constrain magma dynamics at Axial Seamount, Abstract PE41C-4, presented at the IAVCEI 2017 Scientific Assembly, Portland, Oregon, 14-18 Aug.
- Caress, D. W., Clague, D. A., Paduan, J. B., Thomas, H. J., Chadwick, W. W., **Nooner, S. L.**, Yoerger, D., (2016), Vertical deformation of the Axial Seamount summit from repeated 1-m scale bathymetry surveys using AUVs, *Abstract OS41C-1991*, presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- \*Eisenrich, R., (2016), Sediment Compaction Estimates in The Ganges-Brahmaputra Delta Using Changes in Ground Water Velocity, *Abstract GC23D-1262*, presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- \*Knoll, R., Ghoneim, E., Reber, N., Nooner, S., Marsan, Y., Melomo, V., Beaman, T., (2016) Poster #060: Ground Penetrating Radar Survey at Selected Historical Archaeological Sites on the Lower Cape Fear River, North Carolina, AAG meeting, San Francisco, CA.
- **Nooner, S. L.**, Chadwick, W., Caress, D. W., Clague, D. A., Paduan, J. B., Yoerger, D., Sasagawa, G. S. (2015), Deformation associated with the 2015 Eruption of Axial Seamount, *Abstract OS43A-2015*, presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Chadwell, C. D., Webb, S. C., and **S. L. Nooner** (2015), A 14-year-long Measurement of the Convergence Rate of the Juan de Fuca and North America Plates Offshore Central Oregon using GPS-Acoustics, *Abstract T44B04*, presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Chadwell, C., S. Webb, and **S. L. Nooner**, (2014), A Seafloor Benchmark for 3-dimensional Geodesy, *Abstract G13A-0513* presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Baumgardt, E., **S. L. Nooner**, (2014), Magma Dynamics at Axial Seamount, Juan de Fuca Ridge, from Seafloor Deformation Data, *Abstract V31B-4744* presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Sciance, M., **S. L. Nooner**, (2014), Temporal changes in extent and duration of flooding in the Ganges-Brahmaputra Delta, Bangladesh, *Abstract H41C-0819* presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Steckler, M. S., **S. L. Nooner**, S. V. Bettadpur, S. H. Akhter, S. Chowdury, L. Seeber, (2014), Recent Advances in Modeling Earth Deformation from Monsoonal Flooding in Bangladesh using Hydrographic, GPS and GRACE Data (**Invited**), *Abstract G41C-01* presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Ntambila, D., Ngailo, E., Saria E., Shillington, D., **Nooner, S.**, Ebinger, C., Elliott, J., Liwa, E. (2014), Pre-Analysis at early Stages of Africaarray and Malawi-Tanzania Project GPS Time Series (Tectonic and magmatic processes during early-stage rifting: an integrated study of northern Lake Nyasa, Africa), Africa Array Meeting.

- Steckler, M. S., D. R. Mondal, **S. L. Nooner**, S. H. Akhter, L. Seeber, S. V. Bettadpur, C. S. Karim, M. Howe, F. Masson, T. Maurin, C. Rangin (2013), GPS Velocity Field in Bangladesh: Delta Subsidence, Seasonal Water Loading and Shortening Across the Burma Accretionary Prism and Shillong Massif, *Abstract T13D-2566* presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- **Nooner, S. L.**, W. W. Chadwick, Jr., S. C. Webb (2013), Vertical Seafloor Geodesy at Two Mid-ocean Ridge Sites: Recent Results and Lessons Learned (**Invited**), *Abstract G14A-04* presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- DeWolf, S., **S. L. Nooner**, M. S. Steckler, M. A. Zumberge, and S. H. Akhter (2013), Optical Fiber Borehole Strainmeter Arrays for Measuring Sediment Compaction in Bangladesh, *Abstract EP31A-0831* presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Auerbach, L. W., S. L. Goodbred, D. R. Mondal, C. Wilson; K. R. Ahmed, K. Roy, M. S. Steckler, J. M. Gilligan, and **S. L. Nooner** (2013), In the Balance: Natural v. Embanked Landscapes in the Ganges-Brahmaputra Tidal Delta Plain, *Abstract EP31A-0845* presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Steckler, M.S., S. L. Goodbred; S. H. Akhter; L. Seeber; M. D. Reitz; C. Paola; **S. L. Nooner**; S. DeWolf; E. K. Ferguson; J. Gale; S. Hossain; M. Howe; W. Y. Kim; C. M. McHugh; D. R. Mondal; A. L. Petter; J. Pickering; R. Sincavage; L. A. Williams; C. Wilson; M. A. Zumberge (2013), Ganges-Brahmaputra Delta: Balance of Subsidence, Sea level and Sedimentation in a Tectonically-Active Delta (**Invited**), *Abstract EP33D-01* presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- **Nooner, S. L.** and S.C. Webb (2012), Volcanic inflation of the East Pacific Rise at 9° 50' N from seafloor geodesy, *Abstract OS13D-1770* presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Gaherty, J.B., Shillington, D.J., Shuler, A.E., Mavrommatis, A.P., Pritchard, M.E., Lindsey, N.J., Kapanje, W., Mdala, H., Chindandali, P., **Nooner, S.L.**, Nyblade, A. (2012), Faulting processes during early-stage rifting: seismic and geodetic analysis of the 2009-2010 Northern Malawi earthquake sequence, *Abstract T52B-04* presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- **Nooner, S. L.**, and W. W. Chadwick, Jr. (2011), Quantifying the eruption cycle at Axial Seamount using submarine geodesy. *Abstract V52C-02*, presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Chadwick, W. W., Jr., **S. L. Nooner**, D. A. Butterfield, M. D. Lilley, D. A. Clague, D. W. Caress, R. P. Dziak, and J. H. Haxel (2011), Discovery of the 2011 eruption at Axial Seamount, *Abstract V41C-04*, presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Steckler, M. S., **S. L. Nooner**, S. H. Akhter, S. Chowdury, S. Bettadpur, and L. Seeber (2011), Modeling Earth deformation from monsoonal flooding in Bangladesh using hydrographic, GPS and GRACE data. *Abstract G33B-0993*, presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- Steckler, M. S., **S. L. Nooner**, S. H. Akhter, S. Chowdury, S. Bettadpur, and L. Seeber (2011), Modeling Earth deformation from monsoonal flooding in Bangladesh using hydrographic, GPS and GRACE data. GRACE Science Team

- Meeting, Austin, TX, 8-10 Dec.
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  - **Nooner, S. L.**, Webb, S. C., and Crawford, W. C. (2007), Shear velocities in the oceanic crust at the East Pacific Rise 9° 18' N to 10° 30' N from compliance measurements, *Eos Trans. AGU, 88(52) Fall Meet. Suppl.*, Abstract T33B-1358.
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- **Nooner, S. L.**, Zumberge, M. A., Eiken, O., Stenvold, T., and Sasagawa, G. S. (2003), Seafloor micro-gravity survey of the Sleipner CO<sub>2</sub> sequestration site, *EOS Transactions AGU*, 84, Fall Meet. Suppl. Abstract GC31A-01.
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- **Nooner, S.**, Blackman, D., Sasagawa, G., and Zumberge, M. (2001), Seafloor Gravity Measurements Made at the Atlantis Transform Fault Along the Mid-Atlantic Ridge to Study the Origin of Oceanic Core Complexes, *Eos Transactions AGU*, Fall Meet. Suppl. Abstract T11C-0864.
- Berger, J., Husmann, E., **Nooner, S.**, Widmer-Schmidrig, R., and Zumberge, M. (1999), Development of an Optical Fiber Infrasound Sensor - Comparisons with standard Instrumentation, *Eos Transactions AGU*, Fall Meet. Suppl. Abstract A12B-14. Berger, J., Husmann, E., **Nooner, S.**, Widmer-Schmidrig, R., Zumberge, M., Development of an Optical Fiber Infrasound Sensor - Comparisons with Standard Instrumentation, *Eos Trans. AGU*, Fall Meet. Suppl. Abstract A12B-14, 1999.
- Lue, C. S., Xiao, G., Ross, J. H. Jr., and **Nooner, S. L.**, (1999), Superparamagnetism in Fe<sub>2-x</sub>V<sub>1+x</sub>Al; MFM and NMR studies, paper presented at American Physical Society, Joint Fall Meetings of the Texas Section of the APS, AAPT, and Zone 13 of the SPS, October 28-30, University of Texas in Austin, TX.
- Xiao, G., Ross, J. H. Jr., and **Nooner, S.**, (1998), Low-temperature High-field Magnetic Resonance Force Microscope, paper presented at American Physical Society, Annual March Meeting, March 16-20, Los Angeles, CA.
- **Nooner, S.**, and P. Bandyopadhyay (1996), Photo-Stimulated Luminescence in Cu<sup>+</sup>:NaCl and Cu<sup>+</sup>:KCl Single Crystals, paper presented at National Conference on Undergraduate Research, University of North Carolina at Asheville, April, 1996.
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- Bandyopadhyay, P. K., Russell, G., **Nooner, S.**, Chakravarti, K., and Sharma, J., (1996), Photo-Stimulated Luminescence in CU<sup>+</sup>:KBr, International Conference on Radiation Defects in Insulating Materials, Wake Forest University, July, 1996.

## INVITED PRESENTATIONS:

- 04/2015 Appalachian State University – Geology Dept. Lecture Series – **Invited** – *Axial Seamount – Is it about to erupt?*
- 10/2014 IRIS – Amphibious Array Facility Workshop – **Invited** – *Seafloor geodesy: techniques and recent advances.*
- 12/2013 AGU – **Invited** – *Vertical Seafloor Geodesy at Two Mid-ocean Ridge Sites: Recent Results and Lessons Learned.*
- 04/2012 WHOI – Geodynamics Seminar – **Invited** – *Constraining the in situ density of sequestered CO<sub>2</sub> in the North Sea using time-lapse seafloor gravity.*
- 02/2012 UNAVCO Workshop – **Invited** – *Measuring vertical deformation of the seafloor using precise water pressure measurements: results from Axial Seamount.*
- 12/2011 WHOI – Earth Sciences Seminar – **Invited** – *Tracking the movement of magma at Axial Volcano, Juan de Fuca Ridge.*
- 06/2011 IODP Marmara-Trans Workshop, Istanbul, Turkey – **Invited** – *Seafloor Geodesy: Possibilities in the Sea of Marmara.*
- 10/2010 EPOBS Workshop – **Invited** – *Advances in Ocean Bottom Pressure Sensors.*  
Declined.
- 11/2008 LDEO – **Volcano Petrology and Plumbing Seminar** – *Geodesy and Volcanoes.*
- 03/2008 RIDGE2000 meeting, Portland – **Invited** – *Evolution of the 9° 50'N East Pacific Rise magma chamber.*
- 07/2007 LDEO – **Invited** – For the Earth Institute Fellows: *Seafloor Spreading and Submarine Volcanism.*
- 10/2006 LDEO – **MG&G Seminar** – *Monitoring the Sleiþner Project: Constraining the density of sequestered CO<sub>2</sub> using 4-D seismic and time-lapse seafloor gravity data.*
- 08/2004 U.S.-Norway CO<sub>2</sub> Capture and Storage summer school, Santa Fe – **Invited** – *Seafloor micro-gravity survey of the Sleiþner CO<sub>2</sub> Sequestration Site.*
- 04/2004 U.S. Department of Energy Program review, Pittsburgh – **Invited** – *Seafloor micro-gravity survey of the Sleiþner CO<sub>2</sub> Sequestration Site.*
- 09/2003 SACS working group, Trondheim, Norway – **Invited** – *Sleiþner CO<sub>2</sub> Sequestration: Gravity Modelling and Future Work*
- 05/2003 Exxon Mobile – **Invited** – *Seafloor gravity studies: Troll reservoir monitoring and Sleiþner CO<sub>2</sub> Sequestration.*

## FUNDING HISTORY

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### CURRENT SUPPORT:

- *Collaborative Research: Advancing Deformation Monitoring Methods at Axial Seamount*, National Science Foundation, Dates: 10/01/2017 – 9/30/2020, Award: \$172,640, **Lead PI.**
- *Collaborative Research: Measuring strain along the Aleutian subduction zone trench to better constrain seismic and tsunami hazard*, National Science Foundation, Dates: 9/1/2017-8/31/2020, Award: \$116,700, **Co-PI** (Lead PI Spahr Webb at Columbia University).
- *Collaborative Research: Monitoring inflation at Axial Seamount*, National Science Foundation, Dates: 4/1/15 – 3/31/18, Award: \$135,862, **Lead PI.**

## PAST SUPPORT:

- *Collaborative Research: Continuing a unique time-series of volcanic inflation at Axial Seamount*, National Science Foundation, Dates: 10/12 – 9/13, Award: \$69,811, **Lead PI**.
- *Collaborative Research: Permanent seafloor benchmarks for geodetic measurements of horizontal and vertical plate motion*, National Science Foundation, \$88,737. **Co-PI** (Lead PI David Chadwell at University of California San Diego).
- *Establishing a long-term geodetic network at the East Pacific Rise RIDGE2000 integrated studies site*, National Science Foundation, Dates: 4/07 – 3/12, Award: \$297,602, **Lead PI**. (Co-PIs Spahr Webb and Roger Buck)
- *Collaborative research: Monitoring inflation at Axial Seamount*, National Science Foundation, Dates: 9/07 – 8/12, Award \$115,660, **Co-PI (Lead UNCW PI)**. (Lead PI William Chadwick of Oregon State University)
- *Pire: Life on a tectonically-active delta: Convergence of earth science and geohazard research in Bangladesh with education and capacity building*, Dates: 9/10 – 8/15, Award: \$4,499,996, **Co-PI** (Grant is at LDEO -- Lead PI Michael Steckler).
- *Collaborative Research: Tectonic and magmatic processes during early-stage rifting: An integrated study of northern Lake Malawi, Africa*, Dates: 1/12 – 12/16, Award: \$3,245,067, **Co-PI** (Grant is at LDEO -- Lead PI Donna Shillington).
- *Renewal of NNX08AF13G: Modeling gravity field and Earth deformation from monsoonal flooding in Brahmaputra Delta and Gangetic Plain using hydrographic, GRACE, and GPS data*, Dates: 4/12 – 3/15, Award: \$506,755, **Co-PI** (Grant is at LDEO -- Lead PI Michael Steckler).
- *Collaborative Research: Faulting processes during early-stage rifting – analysis of an unusual earthquake sequence in northern Malawi*, Dates: 12/10 – 12/11, Award: \$102,793, **Co-PI** (Lead PI James Gaherty).
- *Modeling gravity field and earth deformation from monsoonal flooding in Bangladesh using hydrographic, GRACE and GPS data*, NASA, Dates: 1/08 – 1/11, Award: \$485,000. (Lead PI Michael Steckler)
- *Developing Inexpensive, Easily Hidden Seismometers for the Afar*, LDEO OTIC, Award: \$19,000, **Co-PI**. (Lead PI Roger Buck)
- *Monitoring the in situ CO<sub>2</sub> in the Utsira formation using seafloor micro-gravity*, Department of Energy, (submitted by Scripps Institution of Oceanography with a subcontract to LDEO), \$98,199, **Co-PI (Lead LDEO PI)**. (Lead PI Mark Zumberge of UCSD)
- *US - Malawi Planning Visit: Developing a multidisciplinary, multinational study of continental rifting, seismicity and volcanism around northern Lake Malawi*. Dates: 9/09 – 8/10, Award: \$23,400, **Co-PI**. (Lead PI Donna Shillington)
- *Constraining early-stage rifting through rapid response to the Lake Malawi earthquake sequence of December 2009*, Dates: 12/09 – 12/10, Award: \$12,999, **Co-PI**. (Lead PI Jim Gaherty)
- *Statoil Summer 2009 Survey*, Dates: 3/09 – 2/10, Award: \$17,136, **Co-PI (Lead LDEO PI)**. (Lead PI Mark Zumberge of UCSD)
- *Operation and management of the LDEO Instrument Center of the National Ocean Bottom Seismometer Pool – Baseline*, National Science Foundation, Dates: 4/09 – 3/11, Award: \$2,620,000. **Co-PI** (Lead PI James Gaherty)