

Nathan L. B. Bangs

ADDRESS

Institute for Geophysics
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EDUCATION

B.A. Williams College, 1983, Geology and Physics
M.A. Columbia University, 1986, Marine Geophysics
M. Phil. Columbia University, 1987, Marine Geophysics
Ph.D. Columbia University, 1991, Marine Geophysics

PROFESSIONAL POSITIONS

2007- Lecturer, Department of Geological Science, University of Texas, Austin, TX
2002- Senior Research Scientist, Institute for Geophysics, University of Texas, Austin, TX
1998-02 Research Scientist, Institute for Geophysics, University of Texas, Austin, TX
1992-98 Research Associate, Institute for Geophysics, University of Texas, Austin, TX
1991-92 Post-Doctoral Fellow, Institute for Geophysics, University of Texas, Austin, TX
1990-91 Post-Doctoral Research Scientist, Lamont-Doherty Geological Observatory, Columbia University, Palisades, New York
1983-90 Graduate Research Assistant, Columbia University, New York, New York

GEOPHYSICAL EXPERIENCE

<i>R/V Brooks McCall</i>	Cruise BM1403	Gulf of Mexico P-cable survey number 3, April, 2014
<i>R/V Brooks McCall</i>	Cruise BM1306	Gulf of Mexico P-cable survey number 2, Oct., 2013
<i>R/V Iron Cat</i>	Cruise IC1201	Gulf of Mexico P-cable survey number 1, July, 2012
<i>R/V Langseth</i>	Cruise MGL1106 (Co-Chief Scientist)	CRISP 3D Seismic Imaging Project Offshore Costa Rica, April/May, 2011
<i>R/V Kairei</i>	KR09-08	Vertical Seismic Profiling offshore SW Japan, July, 2009
<i>R/V Thompson</i>	Cruise TN220 (Chief Scientist)	Ultra High Resolution 3-D Seismic Surveying of Active Hydrate Ridge Vents, June-July, 2008
<i>S/V Nordic Explorer</i>	PGS Cruise 2006020 (Co-Chief Scientist)	3-D imaging of the Kumano Basin- NanTroSEIZE Site Survey April-May, 2006
<i>R/V Ewing</i>	Cruise EW0208 (Co-Chief Scientist)	Shear-wave investigation of Hydrate Ridge August-September, 2002
<i>JOIDES Resolution</i>	Leg 204	Hydrate Ridge Logging While Drilling, July, 2002
<i>JOIDES Resolution</i>	Leg 196	Nankai Trough Logging While Drilling, May, 2001
<i>R/V Thompson</i>	Cruise TTN112 (Co-Chief Scientist)	3-D Seismic Imaging of an Active Margin Hydrate System Oregon Continental Margin, June-July, 2000
<i>R/V Ewing</i>	Cruise 9907/08 (Co-Chief Scientist)	US-Japan Collaborative 3-D Seismic Experiment, Nankai Trough, June – August, 1999
<i>R/V Ewing</i>	Cruise 9803 (Chief Scientist)	Lesser Antilles Subduction Zone Backstop Seismic Experiment, March, 1998
<i>JOIDES Resolution</i>	Leg 171A	Barbados Ridge Logging While Drilling, January, 1997
<i>R/V Ewing</i>	Cruise 9409	Pacific to Bering Shelf Deep Seismic Experiment, July, 1994
<i>R/V Ewing</i>	Cruise 9207	Barbados Ridge 3-D Seismic Survey, June 1992
<i>JOIDES Resolution</i>	Leg 141	Chile Margin Triple Junction, Nov. 1991
<i>RRS Darwin</i>	Cruise 36/88	Investigation of Tectonics and Sedimentation of Chile Ridge, Dec. 1988
<i>R/V Conrad</i>	Cruise 2901	Chile Ridge/Chile Trench Geophysical Survey, Jan. 1988
<i>R/V Conrad</i>	Cruise 2604	Deformational Processes in the Lesser Antilles Subduction Zone, April 1985
<i>R/V Conrad</i>	Cruise 2312	ATT North Atlantic Cable Survey, July 1984

COMMUNITY SERVICE

ODP-Science Steering and Evaluation Panel (Interior), 1997 - 2000
Joint Oceanographic Institutions - United States Science Advisory Committee (JOI-USSAC), 2001 – 2004
IODP-Site Survey Panel, 2006 – 2009
MARGINS Steering Committee, 2007 – 2010
UT – Graduate Studies Committee, 2009- present
National Research Council Research Associateship Programs Panel Member, Engineering Panel, 2007- 2016
Reviewer of National Research Council Report: Realizing the Energy Potential of Methane Hydrates for the United States, 2010
Nature Index Panel Member 2011 – 2016
Marcus Langseth Steering and Oversight Committee, 2010 – 2016 (Chair 2015)
Ocean Leadership Distinguished Lecturer, 2012 – 2013
Tectonophysics guest editor
G-cubed guest editor 2010; 2013-2015
Jackson School Appointments Committee 2013 - 2016
UTIG Annual Performance Evaluation Committee (APEC) 2014 – 2015

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Geophysical Union (AGU) Geological Society of America (GSA)

PUBLICATIONS (excluding abstracts)

Total – 78

H-index

Google Scholar – 29

ISI Web of Science – 24

2015

Austin Jr., J. A., N. Bangs, and D. S. Sawyer (2015), Better utilization of marine seismic data, *Eos*, 96, doi:10.1029/2015EO029867.

Frederick, M., S. Gulick, J. Austin, N. Bangs, U. Udrek, Investigation of Accretionary Wedge Structures off North Sumatra using 2D Multichannel Seismic and Multibeam Bathymetric Data, *Tectonics*, in press.

Bangs, N. L., K. D. McIntosh, E. A. Silver, J. W. Kluesner, C. R. Ranero, Fluid accumulation along the Costa Rica subduction thrust and development of the seismogenic zone, *Jour. Geophys. Res.*, 2015, 119, doi:10.1002/2014JB011265.

2014

Park, J.-O., H. Naruse, N. L. Bangs, Along-strike variations in the Nankai shallow Decollement properties and their implications for tsunami earthquake generation, *Geophysical Research Letters*, DOI: 10.1002/2014GL061096.

Hino, R., T. Tsuji, N. L. Bangs, Y. Sanada, J.-O. Park, R. von Huene, G. F. Moore, E. Araki and M. Kinoshita, QP structure in the Kumano basin, Nankai Trough, Japan, derived from long-offset VSP, *Earth, Planets and Space*, 2014.

2013

Kluesner, J. W., E. A. Silver, N. L. Bangs, K. D. McIntosh, J. Gibson, D. Orange, C. R. Ranero, R. von Huene, High Density of Structurally-Controlled, Shallow to Deep Water Fluid Seep Indicators Imaged Offshore Costa Rica, *Geochemistry, Geophysics, Geosystems*, v. 14, 2013, DOI: 10.1002/ggge.20058.

Crutchley, G. J., C. Berndt, S. Geiger, D. Klaeschen, C. Papenberg, I. Klaucke, M. J. Hornbach, N. L.B. Bangs, C. Maier, Drivers of focused fluid flow and methane seepage at south Hydrate Ridge, Oregon, *Geology*, 41, 551-554, 2013, DOI: 10.1130/G34057.1.

2012

Wallace, L. M., E. A. Silver, N. Bangs, R. Bell, J. Mountjoy, S. Henrys, and I. Pecher IODP Workshop on Using Ocean Drilling to Unlock the Secrets of Slow Slip Events, 14, 64-67, 2012.

Daigle, H., N. Bangs, B. Dugan, Transient hydraulic fracturing and gas release in methane hydrate settings: A case study from southern Hydrate Ridge, *Geochemistry Geophysics Geosystems*, VOL. 12, Q12022, 15 PP., 2011, doi:10.1029/2011GC003841.

Hornbach, M. J., N. L. Bangs, C. Berndt, Detecting hydrate and fluid flow from bottom simulating reflector depth anomalies, *Geology*, 40, 227-230, 2012, doi:10.1130/G32635.1.

2011

Bangs, N. L. B., M. J. Hornbach, C. Berndt, The mechanics of intermittent methane venting at South Hydrate Ridge inferred from 4D seismic surveying, *EPSL*, 2011 310, pp. 105-112, DOI: 10.1016/j.epsl.2011.06.022.

Tsuji, T., Hino, R., Sanada Y., Yamamoto K., Park J.-O., No, T., Araki, E., Bangs, N., von Huene, R., Moore, G., and Kinoshita, M., In situ stress state from walkaround VSP anisotropy in the Kumano basin south of the Kii Peninsula, Japan, *Geochemistry Geophysics Geosystems*, 2011, 12, Q0AD19, doi:10.1029/2011GC003583.

Gulick, S. P. S. J. A. Austin, Jr., N. L. B. Bangs, L. M. McNeill, K. M. Martin, T. J. Henstock, J. M. Bull, S. M. Dean, Y. S. Djajadihardja, H. Permana, Thick Consolidated Sediments Allow Significant Updip Rupture Propagation During 2004 Sumatra-Andaman Earthquake and Tsunami, *Nature Geoscience*, 2011.

2010

Gulick, Sean P.S., N. L. B. Bangs, G. F. Moore, J. Ashi, K. M. Martin, D. S. Sawyer, H. J. Tobin, S. Kuramoto, A. Taira, Rapid Forearc Basin Uplift and Megasplay Fault Development from 3D Seismic Images of Nankai Margin off Kii Peninsula, Japan, *EPSL*, 2010, [10.1016/j.epsl.2010.09.034](https://doi.org/10.1016/j.epsl.2010.09.034).

Pecher, I. A., B. Milkereit, A. Sakai, M. K. Sen, N. L. Bangs, and J.-W. Huang, Vertical Seismic Profiles through Gas-Hydrate-Bearing Sediments, In [Geophysical Characterization of Gas Hydrates](#), Editor(s): Michael Riedel, Eleanor C. Willoughby, Satinder Chopra, SEG, Chapter 8, 2010, DOI: [10.1190/1.9781560802197.ch8](https://doi.org/10.1190/1.9781560802197.ch8).

Dean, S. M., L. C. McNeill, T. J. Henstock, J. M. Bull, S. P. S. Gulick, J. A. Austin, N. L. B. Bangs, Y. S. Djajadihardja, H. Permana, Contrasting décollement development and prism deformation across the Sumatra 2004/2005 earthquake rupture boundary, *Science*, 329, 207-210, 2010.

Bangs, N. L., M. Hornbach, G. F. Moore, and J.-O. Park, Massive methane release triggered by seafloor erosion offshore southwestern Japan, *Geology*, 2010;38;1019-1022, doi: 10.1130/G31491.1.

Martin, K., S. P. S. Gulick, N. L. B. Bangs, G. F. Moore, J. Ashi, J.-O. Park, S., Kuramoto, A. Taira, Possible Strain Partitioning Structure Between the Kumano Forearc Basin and the Slope of the Nankai Trough Accretionary Prism, *Geochemistry Geophysics Geosystems*, v. 11, Q0AD02, p. 15, 2010, doi:10.1029/2009GC002668.

Park, J-O, G. Fujie, L. Wijerathne, T. Hori, S. Kodaira, G. F. Moore, N. L. Bangs, S. Kuramoto, Y. Fukao, A. Taira, A low velocity zone and implications for tsunami generation along the Nankai subduction zone, *Geology*, 38, 283-286, 2010.

2009

Bangs, N. L. B., G.F. Moore, S.P.S. Gulick, E.M. Pangborn, H.J. Tobin, S. Kuramoto and A. Taira, Broad, weak regions of the Nankai Megathrust and implications for shallow coseismic slip, *EPSL*, 2009284 (1), p.44-49, 2009.

Tsuji T., J.-O. Park, G. Moore, S. Kodaira, Y. Fukao, S. Kuramoto, N. Bangs (2009), Intraoceanic thrusts in the Nankai Trough off the Kii Peninsula: Implications for intraplate earthquakes, *Geophys. Res. Lett.*, 36, L06303, doi:10.1029/2008GL036974.

Moore, G.F., Park, J.-O., Bangs, N.L., Gulick, S.P., Tobin, H.J., Nakamura, Y., Sato, S., Tsuji, T., Yoro, T., Tanaka, H., Uraki, S., Kido, Y., Sanada, Y., Kuramoto, S., and Taira, A., 2009. Structural and seismic stratigraphic framework of the NanTroSEIZE Stage 1 transect. In Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallement, S., Sreaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP*, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.102.2009

2008

Tsuji, T., Park, JO, Moore, G., Kodaira, S., Kuramoto, S., Bangs, N., Yamada, Y., Matsuoka, T, 2008, Influence of thrusts within ocean crust to the decollement: Insights from 3D seismic data off Kii peninsula. Proceedings of the 12th International Symposium on Recent Advances in Exploration Geophysics (RAEG2008). p. 29-34.

2007

Moore, G. F., N. L. Bangs, A. Taira, S. Kuramoto, E. Pangborn, H. J. Tobin, Three-Dimensional Splay Fault Geometry and Implications for Tsunami Generation, *Science*, 318, 1128 – 1131, 2007.

Kumar, D., M. K. Sen, and N. L. Bangs, Gas hydrate concentration and characteristics from multi-component seismic reflection data from Hydrate Ridge, *JGR*, 112, B12306, doi:10.1029/2007JB004993.

Johnson, J.E., Goldfinger, C., Bangs, N.L., and Tréhu, A.M., Structural vergence variation and clockwise block rotation in the Hydrate Ridge region, Cascadia accretionary wedge offshore Oregon, *Tectonics*, in revision 2007.

Brown, K., N. Bangs, S. Schwartz, Report on MARGINS Interdisciplinary Mini-Workshop at AGU 2006, *Margins Newsletter*, 18, Spring, 2007

2006

Kumar D., M. K. Sen, N. L. Bangs, C. Wang, I. Pecher (2006), Seismic anisotropy at Hydrate Ridge, *Geophys. Res. Lett.*, 33, L01306, doi:10.1029/2005GL023945.

Kumar, D., M. K. Sen, and N. L. Bangs, Seismic characteristics of gas hydrates at Hydrate Ridge, *The Leading Edge*, 25, 616 – 619, 2006.

Tréhu, A.M., Bangs, N.L., and Guerin, G., Near-offset vertical seismic experiments during Leg 204. In Tréhu, A.M., Bohrmann, G., Torres, M.E., and Colwell, F.S. (Eds.), *Proc. ODP, Sci. Results*, 204 [Online]. Available from World Wide Web: http://www-odp.tamu.edu/publications/204_SR/120/120.htm, 2006.

Bangs, N. L., “Earthquake genesis along the Nankai Trough”, *Imaging Earth History Beneath the Ocean Floor*, NSF Publication, 2006.

Nedimović, M. R. and N. L. Bangs, “Megathrust seismic hazards by reflection mapping”, *Imaging Earth History Beneath the Ocean Floor*, NSF Publication, 2006.

Johnson, J. E., C. Goldfinger, A. M. Tréhu, N. L. B. Bangs, M. E. Torres and J. Chevallier, North-south variability in the history of deformation and fluid venting across Hydrate Ridge, Cascadia Margin, In Tréhu, A.M., Bohrmann, G., Torres, M.E., and Colwell, F.S. (Eds.), *Proc. ODP, Sci. Results*, 204 [Online]. Available from World Wide Web: http://www-odp.tamu.edu/publications/204_SR/120/120.htm, 2006.

Chevallier, J., A. M. Tréhu, N. Bangs, J. Johnson, J. Meyer, Seismic sequence stratigraphy and tectonic evolution of southern Hydrate Ridge, In Tréhu, A.M., Bohrmann, G., Torres, M.E., and Colwell, F.S. (Eds.), *Proc. ODP, Sci. Results*, 204 [Online]. Available from World Wide Web: http://www-odp.tamu.edu/publications/204_SR/120/120.htm, 2006.

Musgrave, R. J., N. L. Bangs, E. Gràcia, J. C. Larrasoàña, J. A. Hollamby, and M. E. Vega, Rise of the base of the gas hydrate zone since the last glacial recorded by rock magnetism, *Geology*, 34, 117-120, 2006.

2005

Bangs, N., and the Nankai 3-D working group, The 3-D architecture of the Nankai Trough accretionary wedge and the development of the seismogenic zone, *Margins Newsletter*, 14, 2005.

Tsuji, T., T. Noguchi, H. Niino, T. Matsuoka, Y. Nakamura, H. Tokuyama, S. Kuramoto, N. Bangs, Two-Dimensional Mapping of Microstructures in the Kuroshio Current Using Seismic Reflection Data, *Geophys. Res. Lett.*, 14, L14609, doi:10.1029/2005GL023095, 2005.

Bangs, N. L. B., R. J. Musgrave, A. M. Tréhu, Upward Shifts in the South Hydrate Ridge Gas Hydrate Stability Zone Following Post-Glacial Warming, Offshore Oregon, *Jour. Geophys. Res.* 110, B3, B03102, doi:10.1029/2004JB003293, 2005.

Bangs, N.L.B., and Gulick, S.P.S., 2005. Physical properties along the developing décollement in the Nankai Trough: inferences from 3-D seismic reflection data inversion and Leg 190 and 196 drilling data. *In* Mikada, H., Moore, G.F., Taira, A., Becker, K., Moore, J.C., and Klaus, A. (Eds.), *Proc. ODP, Sci. Results*, 190/196 [Online]. Available from World Wide Web: <<http://www-odp.tamu.edu/publications/190196SR/354/354.htm>>.

Tsuji, T, Y. Nakamura, H. Tokuyama, T. Matsuoka, Y. Yamada, S. Kuramoto, N. Bangs, and T. Ulrych, Initiation of the plate boundary slip and the growth of the accretionary prism in Nankai Trough, *Geophys. Res. Lett.*, 11, L12306, 2004GL021861, 2005.

2004

Gulick, S.P.S., and Bangs, N.L.B., 2004. Negative polarity at the frontal thrust—is free gas the culprit?: insights from Nankai accretionary prism off Cape Muroto using seismic-logging integration. *In* Mikada, H., Moore, G.F., Taira, A., Becker, K., Moore, J.C., and Klaus, A. (Eds.), *Proc. ODP, Sci. Results*, 190/196

Tréhu, A. M., P. B. Flemings, N. L. Bangs, J. Chevallier, E. Gràcia, J. E. Johnson, C.-S. Liu, X. Liu, M. Riedel, M. E. Torres, Feeding methane vents and gas hydrate deposits at south Hydrate Ridge, *Geophysical Research Letters*, 31, L23310, doi:10.1029/2004GL021286, 2004.

Gulick, S. P. S., N. L. Bangs, T. H. Shipley, Y. Nakamura, G. F. Moore, and S. Kuramoto, 3-D architecture of the Nankai accretionary prism's imbricate thrust zone off Cape Muroto, Japan: En echelon thrust accommodation of along strike stress regime changes, *Jour. Geophys. Res.*, 109, B02105, doi:10.1029/2003JB002654, 2004.

Bangs, N. L., T. Shipley, S. Gulick, G. Moore, S. Kuromoto, and Y. Nakamura, Evolution of the Nankai Trough décollement from the trench into the seismogenic zone: Inferences from three-dimensional seismic reflection imaging, *Geology*, 32, 4, 273–276, 2004.

Tréhu, A.M., G. Bohrmann, F.R. Rack, T.S. Collett, D.S. Goldberg, P. E. Long, A.V. Milkov, M. Riedel, P. Schultheiss, M.E. Torres, N.L. Bangs, S.R. Barr, W.S. Borowski, G.E. Claypool, M.E. Delwiche, G.R. Dickens, E. Gracia, G. Guerin, M. Holland, J.E. Johnson, Y-J. Lee, C-S. Liu, X. Su, B. Teichert, H. Tomaru, M. Vanneste, M. Watanabe, J.L. Weinberger, Three-dimensional distribution of gas hydrate beneath the seafloor: constraints from ODP Leg 204, *EPSL*, 222, 845–862, 2004.

Heffernan, A.S., Moore, J.C., Bangs, N.L., Moore, G.F., and Shipley, T.H., Initial deformation in a subduction thrust system: polygonal normal faulting in the incoming sedimentary sequence of the Nankai subduction zone, southwestern Japan, application to the exploration of sedimentary basins. *In* Davies, R.J., et al. (Eds.), *3D Seismic Technology: Application to the Exploration of Sedimentary Basin*. Geol. Soc. London Memoir, 29, 143-148, 2004.

Morita, S., Y. Nakamura, S. Kuramoto, N. Bangs, A. Taira, Gas hydrate BSR and possible fluid migration in the Nankai accretionary prism off Muroto. *Proc. Int'l. Symposium, Prism Fluid*, 34-41, 2004.

Tsuji, T., T. Matsuoka, Y. Nakamura, H. Tokuyama, S. Kuramoto, N. L. Bangs, Physical properties along the plate boundary decollement in the Nankai Trough using seismic attributes analysis with kohonen self-organizing map, *BUTSURI TANSU*, 57, 2, 121-134, 2004.

2003

Bangs, N., Geophysical Site Characterization and Needs (GeoSCAN) Workshop, JOI/USSAC Newsletter, v. 16, n. 2, 22 – 23, 2003.

Christeson, G. L., N. L. Bangs, and T. H. Shipley, Deep Structure of an Island Arc Backstop, Lesser Antilles Subduction Zone, *J. Geophys. Res.*, 108(B7), 2327, doi:10.1029/2002JB002243, 2003.

Bangs, N. L., G. L. Christeson, and T. H. Shipley, The role of the island arc backstop in shaping the Lesser Antilles subduction zone, *J. Geophys. Res.*, 108(B7), 2358, doi:10.1029/2002JB002040, 2003.

2002

Tréhu, A., M., N.L. Bangs, M.A. Arsenault, G. Bohrmann, C. Goldfinger, J.E. Johnson, Y. Nakamura, M.E. Torres, Complex subsurface plumbing beneath the southern Hydrate Ridge, Oregon continental margin, from high-resolution 3D seismic reflection and OBS data, *Fourth Int. Conf. Gas Hydrates: Yokohama, Japan, 19023*, 90-96, 2002.

Lizarralde, D., W. S. Holbrook, S. McGeary, N. Bangs, and J. Diebold, Crustal Construction of a Volcanic Arc, Wide-Angle Seismic Results from the Western Alaska Peninsula, *J. of Geophys. Res.*, 107,8, 2002.

DiLeonardo, C.G., Moore, J.C., Nissen, S. and Bangs, N.L., 2002. Control of internal structure and fluid-migration pathways within the Barbados Ridge décollement zone by strike-slip faulting: Evidence from coherence and three-dimensional seismic amplitude imaging. *GSA Bulletin*, 114(1): 51-63.

2001

Moore, G.F., Taira, A., Bangs, N.L., Kuramoto, S., Shipley, T.H., Alex, C.M., Gulick, S.S., Hills, D.J., Ike, T., Ito, S., Leslie, S.C., McCutcheon, A.J., Mochizuki, K., Morita, S., Nakamura, Y., Park, J.O., Taylor, B.L., Toyama, G., Yagi, H., and Zhao, Z., 2001, Data report: Structural setting of the Leg 190 Muroto transect. In Moore, G.F., Taira, A., Klaus, A., et al., Proc. ODP, Init. Repts., 190, 1-14 [CD-ROM]. Available from: Ocean Drilling Program, Texas A&M

2000

Kuramoto, S., A. Taira, N. Bangs, T. Shipley, G. Moore, and EW99-07, 08 Scientific Parties (2000): Seismogenic Zone in the Nankai Accretionary Wedge: General summary of Japan-U.S. Collaborative 3-D Seismic Investigation, *J. Geophysics*, 109, 4, 531-539.

Zhao, Z., G. F. Moore, N. L. Bangs, and T. H. Shipley, Spatial variations of the decollement/protodecollement zone and their implications: A 3-D seismic inversion study of the northern Barbados accretionary prism, *Island Arc*, 9, 219-236, 2000.

Shipley, T.H., Bangs, N.L. and Henning, A.T., Sediment Velocity Estimation Using Iterative 3-D Migrations of Short Offset Seismic Reflection Data in Deep Water, *Marine Geophysical Researches*, 20, 479-494, 2000.

1999

Shiple, T. H., N. L. Bangs, and G. F. Moore, Shallow aseismic portion of the Barbados plate boundary, *Proc., Workshop on Recurrence of Great Interplate Earthquakes and Its Mechanism*, Sci. and Tech. Agency, Kochi, Japan, 91-96, 1999

Bangs, N. L., T. H. Shipley, J. C. Moore, and G. F. Moore, Fluid accumulation and channeling along the northern Barbados Ridge décollement thrust, *J. Geophys. Res.*, 104, 20, 399 - 20,414, 1999.

Holbrook, S. W., D. Lizarralde, S. McGeary, N. Bangs, Structure and composition of the Aleutian Island Arc and implications for continental crustal growth, *Geology*, 27, 31-34, 1999.

1998

Moore, J. C., A Klaus, N L Bangs, B A Bekins, C J Buecker, W Brueckmann, S N Erickson, O Hansen, T Horton, P Ireland, C O Major, G F Moore, S Peacock, S Saito, E J Screaton, Elizabeth, J W Shimeld, P H Stauffer, T Taymaz, P A Teas, T Tokunaga, Consolidation patterns during initiation and evolution of a plate-boundary decollement zone; northern Barbados accretionary prism, *Geology (Boulder)*, 26 (9), p. 811-814, 1998.

1997

Bangs, N. L., and S. C. Cande, Episodic development of a convergent margin inferred from structures and processes along the Southern Chile margin, *Tectonics*, 16, 489 - 503, 1997.

1996

Brown, K.M., N.L. Bangs, P. Froelich, and K. Kvenvolden, The nature, distribution, and origin of gas hydrate in the Chile Triple Junction region, *Earth and Planetary Science Letters*, 139, 471-483, 1996.

Bangs, N. L., T. H. Shipley, and G.F. Moore, Elevated fluid pressure and fault zone dilation inferred from seismic models of the northern Barbados Ridge décollement, *J. of Geophys. Res.*, 101, 627-642, 1996.

1995

Moore, G.F., Z. Zhao, T.H. Shipley, N. Bangs, and J.C. Moore, Structural setting of the Leg 156 area, Northern Barbados Ridge accretionary prism: *In Shipley, T. H., Ogawa, Y., Blum, P., et al., Proceedings Ocean Drilling Program Init. Repts.*, v. 156, College Station, Texas (Ocean Drilling Program), 13-27, 1995.

Bangs, N.L. and K.M. Brown, Regional heat flow in the vicinity of the Chile triple junction constrained by the depth of the bottom simulating reflection, *In Lewis, S.D., Behrmann, J.H., Musgrave, R.J., and Cande, S.C. (Eds.), Proc. ODP, Sci. Results*, 141: College Station, TX (Ocean Drilling Program), 253-258, 1995.

Brown, K. M., and N.L. Bangs, Thermal regime of the Chile Triple Junction: Constraints provided by downhole temperature measurements and gas hydrate distribution, *In Lewis, S.D., Behrmann, J.H., Musgrave, R.J., and Cande, S.C. (Eds.), Proc. ODP, Sci. Results*, 141: College Station, TX (Ocean Drilling Program), 259-275, 1995.

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Brown, K. M., N. Bangs, K. Marsaglia, P. N. Froelich, Y. Zheng, B. M. Didyk, D. Prior, E.L. Richford, M. Torres, V. B. Kurnosov, N. Lindsley-Griffin, S. Osozawa, and A. Waseda, A summary of ODP Leg 141 hydrogeologic, geochemical, and thermal results, *In* Lewis, S.D., Behrmann, J.H., Musgrave, R.J., and Cande, S.C. (Eds.), *Proc. ODP, Sci. Results*, 141: College Station, TX (Ocean Drilling Program), 363-372, 1995.

1994

Behrmann JH, Lewis SD, Cande SC, Musgrave R, Bangs N, Boden P, Brown K, Collombat H, Didenko AN, Didyk BM, Froelich PN, Golovchenko X, Forsythe R, Kurnosov V, Lindsley Griffin N, Marsaglia K, Osozawa S, Prior D, Sawyer D, Scholl D, Spiegler D, Strand K, Takahashi K, Torres M, Vegafaundez M, Vergara H, Wasada A, Tectonics and Geology of Spreading Ridge Subduction at the Chile Triple Junction - A Synthesis of Results from Leg-141 of the Ocean Drilling Program, *Geologische Rundschau*, 83 (4): 832-852, 1994.

Shipley, T.H., G.F. Moore, N.L. Bangs, J.C. Moore, and P.L. Stoffa, Seismically inferred dilatancy distribution, northern Barbados Ridge décollement: Implications for fluid migration and fault strength, *Geology*, 22, 411-414, 1994.

Sawyer, D. S., N. L. Bangs, and X. Golovchenko, Deconvoluting ODP Temperature Logging Tool Data to Improve Borehole Temperature Estimates: Chile Triple Junction, *J. Geophys. Res.*, 99(B6), 11,995-12,003, 1994.

1993

Bangs, N.L.B., D.S. Sawyer, and X. Golovchenko, Free gas at the base of the gas hydrate zone in the vicinity of the Chile Triple Junction, *Geology*, 21, 905-908, 1993.

1992

Bangs, N.L.B., S.C. Cande, S.D. Lewis, and J. J. Miller, Structural framework of the Chile margin at the Chile Ridge collision zone: *In* Behrmann, J.H., S.D. Lewis, R. J. Musgrave et al., *Proceedings Ocean Drilling Program Init. Repts.*, v. 141, College Station, Texas (Ocean Drilling Program), 11-21, 1992.

1991

Bangs, N. and G.K. Westbrook, Seismic modeling of the décollement zone at the base of the Barbados Ridge accretionary complex, *J. of Geophys. Res.*, 96, 3853-3866, 1991.

1990

Bangs, N., G.K. Westbrook, J.W. Ladd, P. Buhl, Seismic velocities from the Barbados Ridge Complex: Indicators of high pore-fluid pressure in an accretionary complex, *J. of Geophys. Res.*, 95, 8767 - 8782, 1990.

1988

Westbrook, G.K., J.W. Ladd, P. Buhl, N. Bangs, and G. Tiley, Cross section of an accretionary wedge: Barbados Ridge Complex, *Geology*, 16, 631-635, 1988.

Students

Students supervised/co-supervised

Alison Teagan – MS student, graduated Spring 1997
John Stachowiak – MS student, graduated Spring 2000
Chenshu Wang – PhD student, graduated Spring 2003
Dhananjay Kumar – PhD student, graduated Spring 2005
Emily Pangborn – MS student, graduated Fall 2007
Hao Xun – MS student, graduated Fall 2007
Emily Graham - MS student, graduated Spring 2011
Shannon Cavanaugh - MS student, graduation Spring 2012
Stephen Graf - MS student, graduation Spring 2012
Julie Ditkof – MS student, graduation Fall 2014
Marina Frederik – PhD student, expected graduation Spring 2016
Ibrahim, Ilhan - Univ. Alaska, Fairbanks, PhD student, expected graduation Spring 2016

Graduate student committees

In addition to the students above,
Kylara Martin – PhD student, Spring 2012
Reeshidev Bansal – PhD student, graduated Spring 2007
Ganyuan Xia – PhD student, graduated Spring 1997
Peter Zamora – PhD student, expected graduation 2015.
Chang Lu – PhD student, expected graduation 2016.
Douglas Barber – PhD student, expected graduation 2017.

Student Awards

“Free gas and gas hydrate saturation estimation from multi-component seismic data offshore Oregon,”
Paper by Kumar, Sen, and Bangs awarded an outstanding student paper award at the AGU fall meeting 2004 in San Francisco, California.

Classes Taught

Classes co-taught prior to Lecturer position

Spring 2005 - Tectonics I
Spring 2006 - Tectonics I

Classes co-taught as Lecturer

Spring 2007 - Tectonics I
Spring 2008 - Tectonics I
Summer 2008 – 3D at sea field class (GEO 371C unique 81555)

Spring 2009 - Tectonics I
Spring 2010 - Tectonics I
Spring 2011 - Tectonics I
Spring 2012 – GEO 354 - Physics of the Earth

Invited Lectures and Outreach Lectures in the past ~10 years

University of Houston Friday Seminar, Oct. 06
Acoustical Society of America meeting, Honolulu, Hawaii, Nov, 06
European Geophysical Union meeting, Vienna, Austria, Apr. '07
Institute for Geophysics (UTIG) Brown Bag Seminar, Austin, TX, Nov. '07
Colombia Petroleum Show, Bogota, Colombia, Dec. '09
European Geophysical Union Meeting, Vienna, Austria, May '10
Hydrates meeting – Wellington NZ, May, '10
Gordon Conference on Gas Hydrate – Waterville, ME, June '10
G-Coe Symposium – Sendai, Japan, July '10
Lamont Doherty Earth Observatory – Palisades, New York, Fri. Seminar, Oct '10
Royal Society of London, British Geophysical Association, London, England, Feb. '11
South American Forum, Cartagena, Colombia, April '11
Japan Geoscience Society Meeting, Tokyo, Japan, May, '11
Institut de Physique du Globe de Paris (IPGP) Special Seminar, Paris, France, Nov. '11
University of Houston, Special Seminar, March, '12
JAMSTEC-CDEX, Yokohama, Japan, Aug., 2012
AOGS-AGU (WPGM) Joint Assembly, Singapore, Aug. '12
State University of New York, Stony Brook, Sep. '12
University of Washington, Seattle, Sep. '12
UT LAMP (Learning Activities for Mature People), Oct., '12
Dickinson College, Carlisle, PA, Nov., '12
University of Pennsylvania, Indiana, PA, Nov. '12
United States Geological Survey, Menlo Park, Nov., '12
Querencia at Barton Creek, Dec. '12
Rice University, Houston, TX, Jan. '13
Southern Methodist University, Dallas, TX, Feb. '13
University of New Hampshire, Durham, NH, Feb., '13
University of Alaska, Fairbanks, Mar. '13
IODP Leg 334 Second Post Cruise Meeting, Heredia, Costa Rica, Mar. '13
Institut de Physique du Globe de Paris (IPGP) Special Seminar, Paris, France, Mar. '13
University of Texas, El Paso, April, '13
American Geophysical Union Fall Meeting, Dec., '13
University of Texas, Department of Geological Sciences, Feb., '14
University of Texas, Institute for Geophysics, Feb., '14
AOGS-AGU (WPGM) Joint Assembly, Sapporo, Japan, Aug. '14
UT LAMP (Learning Activities for Mature People), Oct., '14
American Geophysical Union Fall Meeting, Dec., '14
University of New Hampshire, Durham, NH, Apr., '15
Oregon State University, Corvallis, OR, July, '15
Geoprisms TEI Invited speaker, Oct. 2015

Workshop/Meeting session Convener/Co-Convener

AGU Session T15: New Alaskan continent-ocean transects, 12/1995.

USSAC - GeoSCAN workshop, Houston TX, 2003.

AGU Session T13: From the trench to the arc: subduction along South America 12/2007.

MARGINS - "The Next Decade of the Seismogenic Zone Experiment" 9/2008.

IODP – Site Survey Panel Meeting in Austin, 8/2009.

AGU Session T25: Insights into the Megathrust: Offshore Studies at Accretionary and Erosive Subduction Margins 12/2011.

Geoprisms – "Conceptual framework for ocean drilling to unlock the secrets of slow slip events" 8/2011.

Geoprisms – "Workshop to cultivate and coordinate GeoPRISMS studies of the Hikurangi subduction margin" 12/2014.

NSF - Increasing the Access to and the Relevance of Marine Seismic Data, 12/14.

AGU Session OS11: Fluid flow and gas hydrates in continental margins, 12/2014.

NSF – Portable Seismic Systems Workshop, 9/2015.