

Curriculum Vita

Robin Elizabeth Bell

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Education:

<u>School</u>	<u>Degree</u>	<u>Date</u>
Middlebury College	B.A. magna cum laude (Geology)	1980
Columbia University	M.A	1984
Columbia University	M. Phil	1985
Columbia University	Ph.D (Geophysics)	1989

Principal Fields of Interest:

Ice Sheet Dynamics, Continental Dynamics, Estuarine Processes

Research Interest:

Ice Sheet Dynamics and Mass Balance, Continental Dynamics, Estuarine Processes
Linkages between ice sheet processes and subglacial geology. Interaction of ecosystems and geologic systems from microbes to benthic habitats. Tectonic uplift and feedback mechanisms Interaction of tectonics and ice sheet dynamics. Gravity and magnetic measurement techniques for marine and airborne applications. Gravity gradiometry.

Career History:

<u>Employer</u>	<u>Title</u>	<u>Dates</u>
USGS Woods Hole	Geophysicist	1980-1982
Columbia University	Graduate Research Assistant	1982-1989
Columbia University	Post-Doctoral Research Associate	1989-1991
Columbia University	Associate Research Scientist	1991-1996
Columbia University	Research Scientist	1996-1999
Columbia University	Doherty Senior Research Scientist	1999-2008
Columbia University	PGI Senior Research Scientist	2008-2010
Columbia University	Earth Institute Faculty	2011-present
Columbia University	PGI Senior Research Professor	2010-present

Publications Summary:

87	Reviewed Journal Papers
5	Book Chapters
2	U.S. Senate Testimonies
5	National Academy Reports
2	Popular Media Publications
9	Professional Periodicals
2	Education and Professional Development Publications

- 4 Workshop Reports
- 2 Major NY State Reports

Awards/Honors Received:

<u>Award</u>	<u>Date</u>
AGU Fellow	2011
USGS Names Antarctic Ridge After R.E. Bell	2006
Middlebury College, Honorary Doctorate of Science	2006
Emma Willard School Young Alumnae Award	1996
Stroke Doherty Junior Scientist Award	1992
Outstanding Student Paper, Geodesy - Fall AGU	1988

Major Accomplishments

Scientific

- Discovered Widespread Basal Freeze-on that Alters View of Ice Sheets
- Discovered Major Subglacial Lakes Linked to Onset Fast Ice Flow
- Advanced Concept of Geologic Control on Ice Stream Onset
- Developed First Systemic Flux Estimates Through Subglacial Lake Vostok

Technological

- Co-Founded First Aerogeophysical Research Facility
- Conducted First Academic Experimental Demonstration of Gravity with Small Aircraft
- Founded Start-up using Gravity Gradiometry Technology for Oil and Gas Exploration

Leadership

- Major Player in US and Global Development of International Polar Year
- Assembled Team That Mapped Hudson River and Developed Process Based Analysis
- Lead NSF Supported Program to Enhance Diversity in Science and Engineering
- US Leader of Major International Polar Year Program to the Gamburtsev Mountain, Antarctica

Education and Outreach

- Developed Innovative Class in Exploring the Poles With S. Pfirman at Barnard

Professional Society Memberships

<u>Organizations</u>	<u>Dates</u>
American Geophysical Union	1984
American Association for the Advancement of Science	2005

Advisory Committees and Directorships

<u>Activity</u>	<u>Dates</u>
LDEO Computer Planning Committee	1990-1993
National Academy of Science Committee on Geodesy	1990-1994
NAS Committee on Geodesy Airborne Geophysics Sub-committee (chair)	1990-1994
JGR Associate Editor	1992-1994

NSF Absolute Gravity Meter Steering Committee	1993-2000
UNAVCO Steering Committee; (1994-1997, Chair)	1993-1997
AGU Geodesy Program Committee	1993-1994
LDEO Director Search Committee;	1994-1994
NSF Antarctic Science and Technology Center Users Committee	1993-1995
NSF-U.S. Navy Gravimeter Coordinating Committee	1995-2009
LDEO Personnel Working Group (Chair)	1996-1997
Editorial board, Marine Models Online	1997-1999
UCAR - Community Relations Committee	1997-2000
Scientific Committee Geosciences (US Representative)	1998-2008
NSF Committee of Visitors – Polar Logistics (Chair)	1998
LDEO Executive Committee	1998-2007
SCAR SALE – Subglacial Lake Environment Group	1999-present
ICSU Planning Committee International Polar Year (vice chair)	2002- 2006
10th International Antarctic Earth Science Symposium Committee (chair)	2004- 2007
US NAS Polar Research Board (chair 2002-8)	2003-2008
ICSU/WMO IPY Joint Committee- International Polar Year	2002-2010
AGU Sullivan Award Committee	2006-2010
Columbia Presidential Advisory Committee on Diversity Initiatives	2004-2011
Columbia Task Force on Diversity in Science & Engineering	2004-2010
Columbia International Research Committee (co-chair)	2007-present
Earth Institute Academic Committee Subcommittee on Appointments	2008-present
National Academy of Science Study Future Antarctic Science	2010-2011
LDEO Marie Tharp Fellowship Committee	2004-2011
Syracuse University ADVANCE Advisory Board (Chair)	2011-present
LDEO Post-Doctoral Research Fellow Committee (Chair)	2012
LDEO Strategic Planning Committee (Co-Chair)	2012-2013
AGU Cryosphere President Elect	2013-2014
National Academy Strategic Vision Antarctic Science (co-Chair)	2014-2016
AGU Council Leadership Team	2013-2014
AGU Council Leadership Vice Chair & Board	2014-present
AGU Cryosphere President	2014-present
Royal Society Co-convener West Antarctica and Sea Level	2016
WAIS/NSF Co-convener West Antarctica and Sea Level Meeting	2016

Field Programs:

Airborne Geophysical Surveys:

Airborne gravity and magnetics Central Weddell Sea – P3	1986 and 1987
Airborne gravity experiment over Long Island Sound - Piper	1990
Airborne geophysics - West Antarctica – Twin Otter	1990-1991
Airborne geophysics - West Antarctica– Twin Otter	1991-1992
Airborne geophysics - West Antarctica– Twin Otter	1992-1993
Airborne geophysics - Greenland– Twin Otter	2008
Airborne geophysics - East Antarctica– Twin Otter	2008-9
Airborne geophysics – New York LC-130	2013

Airborne geophysics – Two Deployments Greenland LC-130	2013
Airborne geophysics – Greenland, LC-130	2014
Airborne geophysics – East Antarctica, LC-130	2014

Dedicated Marine Gravity Studies:

Marine gravity survey of pull-apart basins along Dead Sea Transform	1988
Marine gravity and bathymetry study of Lake Malawi, East Africa	1990

General Marine Geophysical Cruises:

Multichannel seismic and refraction Georges Banks	1981
Multichannel seismic and refraction Long Island Platform	1981
Multichannel seismic and refraction New Jersey Margin	1981
Seismic survey of the Long Island Platform	1982
Hudson Canyon and Fan – Multibeam and Gravity	1984
East Coast of the US – Side Scan Sonar	1984
Bermuda-Barcelona Bathymetry, gravity, single channel	1984
Multibeam, side scanning sonar, Chirp, and coring study Hudson	1998 & 1999

SYNERGISTIC ACTIVITIES

a) Recent Invited Talks

Wesleyan University Physics Department Seminar (2016), Cornell University – Seminar (2015), IcePod: Imaging Ice-Ocean Process from Top to Bottom, American Geophysical Union, San Francisco, CA (2014); A New Exploration Era for Our Changing Poles, Bruce Museum, Greenwich, CT; The Recovery Ice Stream East Antarctica Tectonics, Lakes and the onset of Fast-Flow. SCAR Biennial Meeting, Auckland, New Zealand (2014); The Role of Refreezing Meltwater Beneath the Antarctic and Greenland Ice Sheets. SCAR Biennial Meeting, Auckland, New Zealand (2014); Aerogravity in Antarctica, Victoria University of Wellington, New Zealand (2014); Water and the Changing Ice Sheet, Departmental Seminar Series, University of Maryland: Frontiers in Atmosphere, Ocean, Climate, and Synoptic Meteorology Research (2014); Capturing the Seasonal Evolution of Greenland Hydrology and Ice-Ocean Processes with Icepod, PARCA Meeting, Greenbelt, MD (2014).

Widespread Refreezing of both surface and basal water melt beneath the Greenland ice sheet, American Geophysical Union (2013); Airborne Measurements of Glaciers and Fjords, CLIVAR Meeting (2013); Basal Deformation and Freeze-on, University of Copenhagen (2013); Water and Ice, Princeton Seminars (2013)

Princeton Seminar Series, University of Copenhagen Radar Workshop, WHOI Geodynamics Seminar (2012), The Geophysics of the Cryosphere and Glacial Products: Properties, Processes and Technical Advances: New Advances in Geophysics Meeting 2012, British Geophysical Association/Royal Astronomical Society/The Geological Society(keynote), Scientific 10th International

Symposium for Antarctic Earth Science (keynote), Institute of Ecosystem Studies, NSF Antarctic Integrated Systems Science Planning Workshop (keynote), Bush 2007 US-China (invited)

Exploring Antarctica's Gamburtsev Mountain Province (AGAP): A Flagship Program of the International Polar Year 2007-8, March 19, 2009 East Antarctic Workshop, Cambridge England. Invited.

Antarctica's Hidden Mountains Colliding Continents and Growing Ice Sheets, March 30, 2009, Geology Department Lecture Series, Colorado College, Invited.

Antarctica's Subglacial Lakes Beneath a Changing Polar Ice Sheet, March 31, 2009, The Harold D. and Rhoda N. Roberts Memorial Lecture in the Natural Sciences, Colorado College, Invited.

Antarctica Gamburtsev Province: The Last Unexplored Mountain Range on Earth, April 26, 2009, Proctors Theatre Schenectady, Invited

Keynote Speaker, Peering Beneath the Ice Sheet: AGAP Evidence for a More Dynamic East Antarctica, First Antarctic Climate Evolution (ACE) Symposium, September 9, 2009, Granada, Spain, Invited.

Teachers	GIFT Workshop at AGU, Teaching the Hudson Valley, Channel Thirteen – Celebration of Teaching and Learning, NYS Assoc. of Science Teachers.
Public	AGU Hill Briefing on Polar Issues, AAAS Polar Science Talk, Explorers Club (2016&2000), New York State Assembly Climate Change Briefing, National Maritime Historical Society, Fort Montgomery Historical Society, Palisades Library, LDEO Open House, Polar Weekend – American Museum of Natural History, Kirkland Museum of the National Academy of Sciences.

c) Reviewer: Geophysics, Nature, NSF, NASA EPSL, Geophysical Prospecting and JGR. NASA Panels, Helmholtz Society for Alfred Wegner Institute

d) Outreach Activities:

Active Program Development:

World Science Festival – Using polar data to understand the Earth (May 31, 2014); LDEO Open House (October 11, 2014), NSF funded American Museum of Natural History Polar Weekend, Siemens Discover Day at Columbia University (2013).

Recent Press Coverage of Work:

The 51%: Conversations with Creative Women (October 15, 2013).

Government Shutdown: New York Times; NPR; Nature; Here and Now on WBUR; livescience.com.

Nyack Sketch Log: Earth Day Action Near and Far (April 13, 2013).

Research: Voice of America (January 9, 2012), Academic Minute (December 12, 2011), Lake Vostok Feb. 2012 (All Thing Considered, Fox News, N.Y. Times, British Radio, Brazilian Newspaper) Changing Polar Climates: NBC Nightly News (Jan. 2008)

International Polar Year: Scientific American (March 1, 2007), CNN, Voice of America (March 1, 2007), Chronicle of Higher Education (February 27, 2007), Christian Science Monitor (February 26, 2007), Reuters (March 1, 2007), NewsHour with Jim Lehrer On-line (February 23, 2007), Nature.

Hudson River Work: Featured articles in New York Times (Jan. 2000, April 2000)

Interviews: BBC, WNYC, Columbia University Web Page

Subglacial Lake Work: Featured articles in: Nature (21 Feb 2007), Discover (December 27, 2006), New Scientist (December 2, 2006), National Geographic, Illustreret Videnskab (May 2005), Popular Science (Nov. 2004), Japanese Journal Global Voice (Oct. 2004), AGU Geotimes (Sept. 2004), La Recherche (Sept. 2004), New Scientist (July 2004), Los Angeles Times, Science, Science News, Scientific American, Wired Magazine, Smithsonian, Top 100 Discoveries Discover Magazine (2006), BBC

ADVANCE Program: WNYC Leonard Lopate Show on differences in gender and science aptitude, Columbia Record.

REVIEWED PUBLICATIONS:

- 2016 Committee on the Development of a Strategic Vision for the U.S. Antarctic Program, A Strategic Vision for NSF Investments in Antarctic and Southern Ocean Research, (2016), DOI: 10.17226/21741.
- Robin E. Bell, Changes on the Ice, Nature, v530, 507.
- Lora Koenig, Christina Hulbe, Robin Bell and Derrick Lampkin, Cryosphere Diversity and Awards, (2016), EOS.
- Winnie Chu, Timothy T. Creyts, and Robin E. Bell, Rerouting of Subglacial Water Flow between Neighboring Glaciers in West Greenland, Journal of Geophysical Research: Solid Earth (in press).
- Scheinert, M., Ferraccioli, F., Schwabe, J., Bell, R., Studinger, M., Damaske, D., Jokat, W., Aleshkova, N., Jordan, T., Leitchenkov, G. and Blankenship, D.D., New Antarctic gravity anomaly grid for enhanced geodetic and geophysical studies in Antarctica, Geophysical Research Letters (2016).
- 2015 Boghosian, Alexandra, et al., Resolving bathymetry from airborne gravity along Greenland fjords, Journal of Geophysical Research: Solid Earth 120.12 (2015): 8516-8533.

M. J. Willis, B. G. Herried, M. G. Bevis; R. E. Bell (2015). Recharge of Subglacial Lake by Surface Meltwater in Northeast Greenland. *Nature*, Vol (518) 223-227 (2015), DOI:10.1038/14116

Cochran, James R., Kirsty J. Tinto, and Robin E. Bell, Abbot Ice Shelf, structure of the Amundsen Sea continental margin and the southern boundary of the Bellingshausen Plate seaward of West Antarctica. *Geochemistry, Geophysics, Geosystems* (2015), 1421-1438.

Tinto, Kirsty J., Bell RE, Cochran JR, Münchow A. Bathymetry in Petermann fjord from Operation IceBridge aerogravity, *Earth and Planetary Science Letters* 422 (2015), 58-66.

2014

Robin E. Bell, Kirsteen Tinto, Indrani Das, Michael Wolovick, Winnie Chu, Timothy T. Creyts, Nicholas Frearson, Abdulhakim Abdi, and John D. Paden (2014). Deformation, warming and softening of Greenland's ice by refreezing meltwater. *Nature Geoscience* 7,497–502.

James R. Cochran, Stanley S. Jacobs, Kirsty J. Tinto and Robin E. Bell (2014) Bathymetric and oceanic controls on Abbot Ice Shelf thickness and stability, *The Cryosphere*, 8(3), 877-889.

T. T. Creyts, F. Ferraccioli, R. E. Bell, M. Wolovick, H. Corr, K. C. Rose, N. Frearson, D. Damaske, T. Jordan, D. Braaten, and C. Finn (2014). Freezing of ridges and water networks preserves the Gamburtsev Subglacial Mountains for millions of years. *Geophys. Res. Letters*. doi:10.1002/2014GL061491.

Helen A. Fricker, Sasha P. Carter, Robin E. Bell, Ted Scambos. (2014). Active Lakes of Recovery Ice Stream, East Antarctica: a bedrock-controlled subglacial hydrological system. *Journal of Glaciology*, 11/2014; 60(223).

K. Langley, K. Tinto, A. Block, R. Bell, J. Kohler, Ted Scambos (2014) Onset of Fast-Flow in Recovery Ice Stream, East Antarctica: A Comparison of Potential Causes, *Journal of Glaciology*, Vol 60(223), 1007-1014; doi:10.3189/2014.

David F. Porter, Kirsty Tinto, Alexandra Boghosian, James R. Cochran, Robin E. Bell, Serdar S. Manizade, John Sonntag. Bathymetric Control of Tidewater Glacier Mass Loss In Northwest Greenland, *Earth and Planetary Sciences*, 401(2014) 40-46.

Michael J. Wolovick, T. T. Creyts, W. Roger Buck, Robin E. Bell. (2014). Traveling Slippery patches produce thickness-scale folds in ice sheets. *Geophysical Research Letters*. DOI: 10.1002/2014GL062248.

Kennicutt et al. (2014). Six Priorities for Antarctic Science, *Nature*, Vol 512, 23-25; DOI:10.1038/512023

Kennicutt, M. C., S. L. Chown, J. J. Cassano, D. Liggett, L. S. Peck, R. Massom, S. R. Rintoul et al. "A roadmap for Antarctic and Southern Ocean science for the next two decades and beyond." *Antarctic Science* 27, no. 01 (2015): 3-18.

- 2013 Indrani Das, Robin E. Bell, Ted A. Scambos, Michael Wolovick, Timothy T. Creyts, Michael Studinger, Nicholas Frearson, Julien P. Nicolas, Jan T. M. Lenaerts, Michiel R. van den Broeke, Influence of persistent wind scour on the surface mass balance of Antarctica *Nature Geoscience* doi:10.1038/ngeo1766
- Wolovick, M. J., R. E. Bell, T. T. Creyts, and N. Frearson (2012), Identification and Routing of Subglacial Water Networks Under Dome A, Antarctica, *J. Geophys. Res.*, DOI:10.1029/2012JF002555.
- Fretwell, P., Pritchard, H. D., Vaughan, D. G., Bamber, J. L., Barrand, N. E., Bell, R., Bianchi, C., Bingham, R. G., Blankenship, D. D., Casassa, G., Catania, G., Callens, D., Conway, H., Cook, A. J., Corr, H. F. J., Damaske, D., Damm, V., Ferraccioli, F., Forsberg, R., Fujita, S., Gogineni, P., Griggs, J. A., Hindmarsh, R. C. A., Holmlund, P., Holt, J. W., Jacobel, R. W., Jenkins, A., Jokat, W., Jordan, T., King, E. C., Kohler, J., Krabill, W., Riger-Kusk, M., Langle, K. A., Leitchenkov, G., Leuschen, C., Luyendyk, B. P., Matsuoka, K., Nogi, Y., Nost, O. A., Popov, S. V., Rignot, E., Rippon, D. M., Riviera, A., Roberts, J., Ross, N., Siegert, M. J., Smith, A. M., Steinhage, D., Studinger, M., Sun, B., Tinto, B. K., Welch, B. C., Young, D. A., Xiangbin, C., and Zirizzotti, A., Bedmap2: improved ice bed, surface and thickness datasets for Antarctica, *The Cryosphere*, 7.1.
- Kathryn C. Rose, Fausto Ferraccioli, Stewart S.R. Jamieson, Robin E. Bell, Hugh Corr, Timothy C. Creyts, David Braaten, Tom A. Jordan, Peter Fretwell, Detlef Damaske arly East Antarctic Ice Sheet Growth Recorded in the Landscape of the Gamburtsev Subglacial Mountains *Earth and Planetary Science Letters*, DOI: 10.1016/j.epsl.2013.03.53.
- 2012 James R. Cochran and Robin E. Bell, Inversion of Icebridge gravity data for continental shelf bathymetry beneath the Larsen Ice Shelf, *Journal of Glaciology*, *Journal of Glaciology* V58 (209) 550-554.
- 2011 K. J. Tinto And Robin E. Bell, Progressive Unpinning Of Thwaites Glacier From Newly Identified Offshore Ridge: Constraints From

Aerogravity, *Geophysical Research Letters*, Vol. 38, L20503, 6 Pp., 2011, DOI:10.1029/2011gl049026.

Fausto Ferraccioli, Carol A. Finn, Tom A. Jordan, Robin E. Bell, Lester M. Anderson, Detlef Damaske, East Antarctic Rifting Triggers Uplift of the Gamburtsev Mountains, *Nature*, 479, 388–392, (17 November 2011) DOI:10.1038/nature10566

Robin E. Bell, Fausto Ferraccioli, Timothy T. Creyts, David Braaten, Hugh Corr, Indrani Das, Detlef Damaske, Nicholas Frearson, Thomas Jordan, Kathryn Rose, Michael Studinger, Michael Wolovick. Widespread, Persistent Thickening of the East Antarctic Ice Sheet by Freezing from the Base. *Science* DOI: 10.1126/science. 1200109

Igor Krupnik, Cynan Ellis-Evans, Chris Elfring, Robin Bell, Robert Bindshadler, Chris Rapley, Eduard Sarukhanian, Ian Allison, Leah Goldfarb, Ludger Muller-Wille. Early Planning for IPY: July 2003 – December 2004. Krupnik et al 2011. *Understanding Earth's Polar Challenges: International Polar Year 2007-2008*. University of the Arctic, Rovaniemi, Finland/CCI Press, Edmonton Alberta, Canada and ICSU/WMO Joint Committee for International Polar Year 2007-8

Robin Bell, Ian Allison, Keith Alverson, Kjell Danell, Eberhard Fahrbach, Igor Krupnik, Jerónimo López-Martínez, Eduard Sarukhanian and Colin Summerhayes. *Early Science Outcomes of IPY 2007–2008*. Krupnik et al 2011. *Understanding Earth's Polar Challenges: International Polar Year 2007-2008*. University of the Arctic, Rovaniemi, Finland/CCI Press, Edmonton Alberta, Canada and ICSU/WMO Joint Committee for International Polar Year 2007-8

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2009

Block, A., Studinger, M., Bell, R.E. Antarctic Crustal Thickness From Satellite Gravity: Implications for the Transantarctic and Gamburtsev

Subglacial Mountains. *Earth and Planetary Science Letters*, Volume 288, Issues 1-2, p 194-203 (2009) doi: 10.1016/j.epsl.2009.09.022

Nitsche, F.O., Slagle, A., Ryan, W.B.F., Carbotte, S., Bell, R., Flood, R. (2009) *Human Impacts on the Hudson River Valley Morphology and Sediments: Hudson River Environmental Society SUNY Press*

2008 Studinger, M.S., Robin E. Bell, N. Frearson, Comparison of AIRGrav and GT-1A airborne gravimeters for research applications, *Geophysics* 73, I51 (2008); DOI:10.1190/1.2969664

Bell, R. E., The role of subglacial water in ice sheet mass balance, *Nature Geoscience*, 1, 297 - 304 (2008) doi:10.1038/ngeo186.

Bell, R. E., Antarctic Earth Science in the International Polar Year 2007-2008, Cooper, A.K., P.J. Barrett, H.Stagg, B.Storey, E.Stump, W.Wise, and the 10th ISAES editorial team, *Antarctica: A Keystone in a Changing World.*, Washington, DC: The National Academies Press.

Wilson, Terry, Robin E. Bell, Paul Fitzgerald, Samuel B. Mukas, Ross D. Powell and Carol Finn (2008).“Summary and Highlights of the Tenth International Symposium on Antarctic Earth Sciences.” Cooper, A.K., P.J. Barrett, H.Stagg, B.Storey, E.Stump, W.Wise, and the 10th ISAES editorial team, *Antarctica: A Keystone in a Changing World.*, Washington, DC: The National Academies Press.

2007 Bell, R. E., M. Studinger, C. A. Shuman M. A. Fahnestock, and I. Joughin. (2007). Large subglacial lakes in East Antarctica at the onset of fast ice flow, *Nature*, doi 10.1038/nature05554.

Nitsche, F.O., W.B.F. Ryan, S.M. Carbotte, R.E. Bell, A. Slagle, C. Bertinardo, R. Flood, T. Kenna, and C. McHugh. (2007).Regional Patterns and Local Variations of Sediment Distribution in the Hudson River Estuary Estuarine, Coastal, and Shelf Sciences doi:10.1016/j.ecss.2006.07.021.

2006 A.L. Slagle, W.B.F. Ryan, S.M. Carbotte, R. Bell, F.O. Nitsche, T. Kenna. Late-stage estuary infilling controlled by limited accommodation space in the Hudson River, *Marine Geology*. doi:10.1016/j.margeo.2006.07.009.

M. Studinger, R.E. Bell, P.G. Fitzgerald and W.R. Buck, Crustal architecture of the Transantarctic Mountains between the Scott and Reedy Glacier Region between South Pole from aerogeophysical data, *Earth and Planetary Science Letters*, 250, 182-199.

Bell, R. E., M. Studinger, M. A. Fahnestock, and C. A. Shuman, Tectonically controlled subglacial lakes on the flanks of the Gamburtsev

Subglacial Mountains, East Antarctica, *Geophys. Res. Lett.* 33 (2) L02504
10.1029/2005GL025207.

Bell, R. E., R. D. Flood, S. Carbotte, W. B. F. Ryan, C. McHugh, M. Cormier, R. Versteeg, H. Bokuniewicz, V. L. Ferrini, J. Thissen, J. Ladd and E. A. Blair, Benthic mapping in the Hudson River, in "The Hudson River Estuary" edited by Jeff Levinton, Cambridge University Press, pp. 51-64.

Strayer, D.L., H.M. Malcom, R.E. Bell, S.M. Carbotte, and F.O. Nitsche, 2006. Using geophysical information to define benthic habitats in a large river. *Freshwater Biology*, 51: 25-38.

2005 Nitsche, F.O., Bell, R.E., Carbotte, S.M., Ryan, W.B.F., Flood, R.D., Ferrini, V., Slagle, A., McHugh, C.M.G., Chillrud, S., Kenna, T., Strayer, D.L. and Cerrato, R.M., 2005. Integrative acoustic mapping reveals Hudson River sediment processes and habitats. *EOS Trans. AGU*, 86: 225, 229.

Nitsche, F.O., S. Carbotte, W.B.F. Ryan and R. Bell. A seabed classification approach based on multiple acoustic sensors in the Hudson River Estuary. In: D.M. FitzGerald and J.Knight (eds.), High resolution morpho-dynamics and sedimentary evolution of estuaries, Coastal Systems and Continental Margins, Vol. 8, Springer, Berlin, pp. 33-55.

Priscu, J. C., M.C. Kennicutt II, R. E. Bell, S. A. Bulat, J. C. Ellis-Evans, V. V. Lukin, J-R Petit, R. D. Powell, M. J. Siegert, I. Tabacco, "Subglacial Antarctic Lake Environments (SALE): Present Understanding and Plans for Future Exploration and Study" *AGU Eos*, 86(20): 193-200.

Bell, R.E., Studinger, M., Karner, G.D., Finn, C.A., and Blankenship, D.D., Identifying Major Sedimentary Basins Beneath the West Antarctic Ice Sheet from Aeromagnetic Data Analysis, in Antarctica, Contributions to Global Earth Science, Proceedings of the 9th ISAES, Springer Verlag, pp.117-121.

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Karner, G.D., Studinger, M., Bell, R.E., Gravity anomalies of sedimentary basins and their mechanical implications: Application to the Ross Sea basins, West Antarctica, *Earth Planet. Sci. Lett.*, 235:577-596. doi:10.1016/j.epsl.2005.04.016.

Bell, R.E., M. Studinger, A. Tikku, J.D. Castello, Ancient Ice and Subglacial Lake Environments: Lake Vostok as an Example, In *Life in Ancient Ice*, edited by J.D. Castello, and S.O. Rogers, Princeton University Press, ISBN: 0-691-07475-5, p 251-267.

2004

U.S. National Committee for IPY (Inc. Bell, R. E.), A VISION for the International Polar Year 2007-2008, National Research Council of the National Academy, National Academy Press. P. 110.

Nitsche, F.O., Bell, R., Carbotte, S.M., Ryan, W.B.F. and Flood, R. Process-related classification of acoustic data from the Hudson River Estuary. *Marine Geology*, 209: 131-145.

Carbotte, S. M., R. E. Bell, W. B. F. Ryan, C. M. G. McHugh, A. Slagle, F. Nitsche, and J. Rubenstone, Environmental change and oyster colonization within the Hudson River estuary linked to Holocene climate. *Geo-Marine Letters*, 24, 212-224.

Tikku, A.A., Bell, R.E., Studinger, M., Clarke, G.K.C., Ice flow over Lake Vostok, East Antarctica inferred by structure tracking, *Earth Planet. Sci. Lett.*, 227, 249-261.

Leonard, K., Bell, R.E., Studinger, M., and Tremblay, B., Anomalous accumulation rates in the Vostok ice core from ice flow over Lake Vostok, *Geophys. Res. Lett.*, 31, No. 24, L24602, doi:10.1029/2004GL021102.

Studinger, M., Bell, R.E., and Tikku, A.A., Estimating the depth and shape of subglacial Lake Vostok's water cavity from aerogravity data, *Geophys. Res. Lett.*, 31, L12401, doi:10.1029/2004 GL019801.

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