VITA

DALLAS ABBOTT, Adj. Research Scientist
Addresses: Office: Lamont-Doherty Earth Obs. 845-365-8664
Palisades, NY 10964
Home: 75 Pine Tree Lane 845-359-0058
Tappan, NY 10983
Email: dallas@ldeo.columbia.edu

Education

B.S. Massachusetts Institute of Technology (Earth and Planetary Sciences)	1974
M.S. Lamont-Doherty Geol. Obs. of Columbia University (Marine Geology)	1978
Ph. D. Lamont-Doherty Geol. Obs. (Marine Geology with a Geophysics minor)	1982

Professional Experience

Visiting Assistant Professor and Adjunct Professor, Barnard College	1997-2006
Adj. Research Scientist, Lamont-Doherty Earth Obs., Columbia University	1996-now
Research Scientist, Lamont-Doherty Earth Obs. Columbia University	1995-1996
Associate Research Scientist, Lamont-Doherty Earth Obs., Columbia University	1986-1995
Assistant Professor, College of Oceanography, Oregon State University	1982-1986
Graduate Research Assistant and Teaching Assistant, Columbia University	1975-1982
Research Assistant to Prof. John Sclater, M.I.T.	1974-1975

Honors

Varsity Letter in Crew - M.I.T.	1974
Graduate Fellow of the Faculty of Columbia University	1975-1976
Boris Bakmeteff Fellowship in Fluid Mechanics-Columbia	1978-1979
Bruce Heezen Prize for Outstanding Student-Columbia	1981
Invited Speaker: Symposium on Locating Old Mantle Plumes	1998
Invited Key Note Speaker: Fourth Archean Symposium: Perth, WA	2001
Board of Editors: Precambrian Research	2001-2006

Sea Experience

47 weeks cumulative sea experience on 15 research projects conducted on board the R/V Chain, Conrad, Endeavor, Jeannie, Surveyor, Kelez, Lee, Vema, and Thomas Washington. All but the first involved heat flow and coring. A majority of the cruises collected single channel seismic and magnetometer measurements.

Publications- **H-index 24**

Sclater, J.G., D.H. Abbott and J. Theide, 1977. Paleobathymetry and sediments of the Indian Ocean, in Indian Ocean Geology and Biostratigraphy, American Geophysical Union, Washington, D.C., pp. 1-24.

Abbott, D.H., W. Menke, M. Hobart, and R.N. Anderson, 1981. Evidence for excess pore pressures in Southwest Indian Ocean sediments, Journal of Geophysical Research, 86, 1813-

1827.

Embley, R. W., M. A. Hobart, R. N. Anderson, and D. Abbott, 1983. Anomalous heat flow in the Northwest Atlantic: A case of continued hydrothermal circulation in 80 million year old crust, Journal of Geophysical Research, 88, 1067-1074.

Abbott, D.H., W.H. Menke, and R. Morin, 1983. Constraints upon water advection in sediments of the Mariana Trough, Journal of Geophysical Research, 88, 1075-1093.

Abbott, D.H., W.H. Menke, M. Hobart, R.N. Anderson, and R.W. Embley, 1984. Correlated sediment thickness, temperature gradient, and excess pore pressure in a marine fault block basin, Geophysical Research Letters, 11, 485-488.

Abbott, D.H., and S.E. Hoffman, 1984. Archean plate tectonics revisited 1: Heat flow, spreading rate, and the age of subducting oceanic lithosphere, and their effects on the origin and evolution of continents, Tectonics, 3, 429-448.

Abbott, D.H., and M. Lyle, 1984. Age of oceanic plates at subduction and volatile recycling, Geophysical Research Letters, 11, 951-954.

Abbott, D.H., 1984. Archean plate tectonics revisited 2. Paleosealevel changes, continental area, oceanic heat loss, and the area-age distribution of the ocean basins, Tectonics, 3, 709-722.

Abbott, D.H., R.W. Embley, and M.A. Hobart, 1985. Correlation of shear strength, hydraulic conductivity, and thermal gradients with sediment disturbance: South Pass region, Mississippi Delta, Geomarine Letters, 5, 113-119.

Abbott, D.H., 1986. A statistical correlation between ridge crest offsets and spreading rate, Geophysical Research Letters, 13, 157-160.

Abbott, D.H., J. L. Morton, and M.L. Holmes, 1986. Heat flow measurements on a hydrothermally active, slow-spreading ridge: The Escanaba Trough, Geophysical Research Letters, 13, 678-680.

Abbott, D.H., M. A. Hobart, and R. W. Embley, 1986. Heat flow and mass wasting in the Wilmington Canyon region: U.S. Continental Margin, Geomarine Letters, 6, 131-138.

Abbott, D.H., and M. Fisk, 1986. Tectonically controlled origin of three unusual rock suites in the Woodlark Basin, Tectonics, 5, 1145-1160.

Stein, C.A., M.A. Hobart, and D.H. Abbott, 1988. Has the Wharton Basin's heat flow been perturbed by the formation of a diffuse plate boundary in the Indian Ocean? Geophysical Research Letters, 15, 455-458.

Embley, R.W., L.D. Kulm, G. Massoth, D. Abbott, and M. Holmes, 1988. Morphology, structure, and resource potential of the Blanco transform, in Geology and Resource Potential of

the Continental Margin of Western North America and Adjacent Ocean Basins-Beaufort Sea to Baja California, edited by D.W. Scholl, A. Grantz, and J.G. Vedder, Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series, Vol. 6.

Abbott, D.H., and W.H. Menke, 1990. Length of the global plate boundary at 2.4 Ga., Geology, 18, 62-66.

Stein, C.A., and D.H. Abbott, 1991. Heat flow constraints on the South Pacific superswell, Journal of Geophysical Research, 96, 16083-16100.

Abbott, D.H., 1991. The case for accretion of the tectosphere by buoyant subduction, Geophysical Research Letters, 18, 585-588.

Stein, C.A., and D.H. Abbott, 1991. Implications of estimated and measured thermal conductivity for oceanic heat flow stations, Marine Geophysical Researches, 13, 311-329.

Menke, W.H., and D.H. Abbott, 1991. Geophysical Theory, Columbia University Press, New York, 454 pp.

Abbott, D.H., C.A. Stein, and O. Diachuk, 1992. Topographic relief and sediment thickness: Their effects on the thermal evolution of the oceanic crust, Geophysical Research Letters, 19, 1975-1978.

Abbott, D.H., L. Burgess, J. Longhi, and W.H.F. Smith, 1994. An empirical thermal history of the Earth's upper mantle, Journal of Geophysical Research, 99, 13,835-13,850.

Abbott, D.H., R. Drury and W.H.F. Smith, 1994. The flat to steep transition in subduction style, Geology, 22, 937-940.

Abbott, D. H., and W. D. Mooney, 1995. The structural and geochemical evolution of the continental crust: Support for the oceanic plateau model of continental growth, Reviews of Geophysics, Supplement, 231-242, 1995.

Ricciardi, K., and D. H. Abbott, 1996. Increased mantle convection during the Mid-Cretaceous: A comparative study of potential mantle temperature, Journal of Geophysical Research, 101, 8673-8684.

Abbott, D. H., 1996. Plumes vs. hotspots as sources of unsubductable greenstone belts, Lithos, 37, 113-127.

Stoddard, P., and D.H. Abbott, 1996. The influence of the tectosphere upon plate motion, Journal of Geophysical Research, 101, 5425-5433.

Abbott, D.H., R. Drury, and W. Mooney, 1997. Continents as lithological icebergs: The importance of submerged buoyant roots in the search for the oldest continental crust, Earth and Planetary Science Letters, 149, 29-42.

Small, C. and D. H. Abbott, 1998. Subduction obstruction and the crack up of the Pacific plate, Geology, 26, 795-798.

Condie, K. C. and D. H. Abbott, 1999. Preface to Special Volume on Oceanic Plateaus and Hotspot Islands: Identification and Role in Continental Growth, Lithos, 46, 1-4.

Franco, H., and D. H. Abbott, 1999. Gravity signatures of terrane accretion, Lithos, 46, 5-15.

Isley, A. E. and D. H. Abbott, 1999. Plume-related mafic volcanism and the deposition of banded iron-formation, Journal of Geophysical Research, 104, 15461-15477.

Gavrilov, C. V. and D. H. Abbott, 1999. Termomechnicheskaya Model Teplo i Massoperenosa v Okrestnosti Zoni Subduktsii (in Russian), English translation of title: Thermomechanical models of heat and mass transfer near subduction zones, Physics of the Earth, 12, 1-10.

Abbott, D.H., C. Herzberg, W. Mooney, D. Sparks, and Y. S. Zhang, 2000, Quantifying Precambrian crustal extraction: The root is the answer, Tectonophysics, 322, 163-190, Special Issue on Continental Growth, edited by Paul Sylvester.

Condie, K. A., D. J. Des Marais, D. Abbott, 2000, Geologic evidence for a mantle superplume event at 1.9 Ga, Geochemistry, Geophysics, and Geosystems, 1, Geochemical Earth Reference Model (GERM) Special Issue, Paper number 2000GC000095.

Condie, K. A., D. Des Marais, and D. Abbott, 2001. Precambrian superplumes and supercontinents: A record in black shales, carbon isotopes, and paleoclimates?, Precambrian Research. 106, 239-260.

Abbott, D. H. and A. E. Isley, 2001, Oceanic upwelling and mantle plume activity, paleomagnetic tests of ideas on the source of the iron in early Precambrian iron formations, Geological Society of America, Special Volume on Mantle Plumes, edited by R. Ernst and K. Buchan, pp.323-339.

Isley, A. E. and D.H. Abbott, 2002. Implications of the temporal distribution of high Mg magmatism for mantle plume volcanism, Journal of Geology, 110, 141-158.

Condie, K. C., D. J. Des Marais, and D. H. Abbott, 2002. Preface to special Superplume issue of the Journal of Geodynamics, Journal of Geodynamics, 34, 1-4.

Abbott, D. H. and A. E. Isley, 2002, The duration, magnitude, and intensity of mantle plume activity over the last 3.8 Ga, Journal of Geodynamics, 34, 265-307.

Abbott, D.H, and A. E. Isley, 2002. Extraterrestrial influences on mantle plume volcanism, Earth and Planetary Science Letters, 205, 53-62.

Abbott, D. H., and A. E. Isley, 2003. Reply to discussion of ‘Extraterrestrial influences on

mantle plume activity' by Andrew Glikson, Earth and Planetary Science Letters, 215, 429-432.

Trubitsyn, V. A., W. H. Mooney, and D. H. Abbott, 2003. Cool cratons and thermal blankets: How continents affect mantle convection, in The Lithosphere of Western North America and Its Geophysical Characterization, S.L. Klemperer and W. G. Ernst (eds.) International Book Series 7, 458-475.

Abbott, D. H. and J. T. Hagstrum, 2004. Strategies for finding the record of Precambrian impact events, in Tempos and Events in Precambrian Time, Ed. P. G. Eriksson and D. R. Nelson, Developments in Precambrian Geology, pp. 45-62, Elsevier.

Abbott, D. H., W. B. Masse, L.H. Burckle, D. Breger, and P. Gerard-Little, 2005. Burckle abyssal impact crater: Did this impact produce a global deluge? Atlantis 2005 Conference, Milos, Greece, Conference Proceedings (color version on cd).

Atwater, B. F. J. Bourgeois, H. Yeh, D. Abbott, M. Cisternas, U. Glawe, B. Higman, B. Horton, R. Peters, K. Rajendran, M. P. Tuttle, 2005. Tsunami Geology and Its Role in Hazard Mitigation, EOS Trans. AGU, 86, p. 400.

Abbott, D. H., E. A. Bryant, V. Gusiakov, W. B. Masse, A. Raveloson, and H. Razafindrakoto, 2006. Report of International Tsunami Expedition to Madagascar, sponsored by WAPPMER, posted to International Tsunami Bulletin Board.

Bryant, T., G. Walsh, and D. Abbott, 2007. Cosmogenic mega-tsunami in the Australia region: Authenticating Aboriginal and Maori legends, in Myth and Geology, Geological Society of London Special Publication 273, W. B. Masse and L. Piccardi (eds.) , pp. 203-214.

Abbott, D. H. and R. Mazumder, 2007, Using Magnetic Susceptibility to Find Precambrian Impact Ejecta: A Proposal, Gondwana Research, 12, 571-575.

Abbott, D. H., W. B. Masse, L.H. Burckle, D. Breger, and P. Gerard-Little, 2007. Burckle abyssal impact crater: Did this impact produce a global deluge? In The Atlantis Hypothesis: Searching for a Lost Land, Heliotopos Publications, St. P. Papmarinopoulous, Ed., pp. 179-190. (black and white version in book with Appendix added).

Masse, W. B, R. P. Weaver, D. H. Abbott, V. K. Gusiakov, and E. A. Bryant, 2007. Missing in Action? Evaluating the Putative Absence of Impacts by Large Asteroids and Comets during the Quaternary Period, Proceedings of the Advanced Maui Optical and Space Surveillance Technologies Conference, pp. 701-710. Sept. 9-12. 2007. Wilea, Maui, Hawaii.

Geli, L., T. Lee, J. R. Cochran, J. Francheteau, D. Abbott, C. Labails, and D. Appriou, 2008, Heat flow from the Southeast Indian Ridge flanks between 80°E and 140°E: Data review and analysis, J. Geophys. Res., 113, B01101, doi: 10.1029/2007JB005001.

Scheffers, A. M., D. H. Kelletat, S. R Scheffers, D. H Abbott, and E. A Bryant, 2008. Chevrons-enigmatic sedimentary coastal features, Zeitscrift fuer Geomorphologie, 52, 375-402.

Abbott, D.H., Bryant, E.F., Gusiakov, V., Masse, W., Breger, D., 2008. Impacts, mega-tsunami, and other extraordinary claims: COMMENT. GSA Today, 18(6), e12.

Isley, A.E. and D. H. Abbott, 2009. Plumes and banded iron formation, McGraw-Hill Yearbook of Science and Technology, pp. 295-297, McGraw-Hill, New York. 473 pp.

Gusiakov, V., D. Abbott, E. Bryant, W. Masse, and D. Breger, 2010. Mega Tsunami of the World Oceans: Chevron Dune Formation, Micro-Ejecta, and Rapid Climate Change as the Evidence of Recent Oceanic Bolide Impacts, In: Geophysical Hazards: Minimising Risk, Maximizing Awareness, Tom Beer, Editor, pp.197-229. Springer Science – Business Media V.B., 262 pp.

Abbott, D. H., P. Gerard-Little, Sa. Costa, St. Costa, D. Breger, and S. Haslett, 2010. Exotic Grains in a Core from Cornwall, NY-Do They Have an Impact Source? Proceedings of Conference on the Tunguska Event, Krasnoyarsk, Russia, June 29, 2008, Journal of Siberian Federal University, Engineering and Technologies 1 (2010 3), p.5-29.

Abbott, D. H., R. Mazumder, and D. Breger, 2011. Native Iron in the Palaeoproterozoic Chaibasa Formation: Primary or Secondary? Book Chapter in: Paleoproterozoic of India, Geological Society of London. Edited by D. Saha and R. Mazumder.

Abbott, D. H., Mooney, W. D., & VanTongeren, J. A. 2013. The character of the Moho and lower crust within Archean cratons and the tectonic implications. Tectonophysics, *609*, 690-705.

Abbott, D. H., D. Breger, P. E. Biscaye and R. A. Juhl, 2014. Calendar-year dating of the GISP2 ice core from the early 6th century using historical, ion and particulate data, in G. Keller and A. Kerr (eds.), Volcanism, Impacts and Mass Extinctions: Causes and Effects, Geological Society of America Special Paper 505, p. 411-420, doi:10.1130/2014.2505(22)

Abbott, D. H., D. Breger, P. E. Biscaye, J.A. Barron, R. A. Juhl and P. McCafferty, 2014. What caused terrestrial dust loading and climate downturns between 533 and 540 A.D.? in G. Keller and A. Kerr (eds.), Volcanism, Impacts and Mass Extinctions: Causes and Effects, Geological Society of America Special Paper 505, p. 421-438, doi:10.1130/2014.2505(23)

Papers about to be submitted or submitted.

Abbott, D. H., and R. A. Juhl, Red Suns during the Day as a Proxy for Climatically Effective Volcanic Eruptions, submitted to Earth and Planetary Science Letters.

Abbott, D. H., and R. A. Juhl, Better Dates and Size Estimates for 8th-, 10th-, and 15th-century Carrington Events from Historical Accounts of Auroras, for submission to Earth and Planetary Science Letters.

Abbott, D. H., P. E. Biscaye, R. A. Juhl, J. Cole-Dai and D. Breger, Can we better source and date large silicic submarine eruptions using horizons with high Ca_{NNS} and K_{NSS} values in ion data? A problematic example from Siple Dome, for submission to Pageoph.

Abbott, D. H., V. Gusiakov, I. Amelin, A. Kiselev, A. Kuravev, V. Bronguleev, D. Breger, P. McCafferty, L. Shaleava, V. Karavaev, N. Filin, and A. Makkaveav, New Data from a Round, Deep Basin in the Russian Heartland: the Smerdyachee Basin as a Prospective Impact Crater, for submission to G-cubed.

Monahan, K., D. H. Abbott, B. Hönisch, D. Breger, J. Stelling, T. Nelson, S. Chillrud and D. Peteet, Depositional mechanisms for tropical to subtropical foraminifera in the Hudson River, for submission to G-cubed.

Senior Theses Supervised by Dallas Abbott as Primary Mentor.

Shestakovich, Ninel, 2000. The Heat is Rising: Exploring Geothermal Resources at the Black Rock Forest Preserve; Barnard College Senior Thesis, 30 pp.

Bossewitch, Tamara, 2000. The Heat is On: Geothermal Heating and Cooling Systems, Barnard College Senior Thesis, 56 pp.

Modi, Prachi, 2001. Ground Source Geothermal Power Systems: How Well Do They Work? Barnard College Senior Thesis, 28 pp.

Glatz, Christie.

Nunes, Alice.

Gerard-Little, Perri, 2008. Establishing a Dated Stratigraphy for a core from Black Rock Forest, Hudson Highlands, New York, Columbia College Senior Thesis, 60 pp.

Goshern, Sara. 2010.

Weber, Lisa, 2011.

Stelling, Jon, 2014.

Courses Previously Taught

Geothermology (at Oregon State University): This graduate level course involved showing students the basic physics of heat flow: the heat flow equation, boundary value problems, and heat transfer by conduction, convection, and radiation. I also covered methods of measurement of heat flow on land and in the ocean.

Geophysics of Ocean Basins (at Oregon State University): This course was a graduate level seminar course involving a review of the most recent literature on the plate tectonics of ocean basins and subduction zones. Major subjects covered included: Age Dependence of Geophysical Behavior of Oceanic Crust, Tectonics of Mid-Ocean Ridges, Formation of Back Arc Basins and Island Arcs, and Hydrothermal Circulation.

Energy Resources (Barnard College): This course is an undergraduate level course exploring different sources of energy and methods of energy production and distribution. The course covers oil, coal, gas, wind, solar, nuclear, electrical, tidal, chemical, and hydroelectric power. We also discuss the relative environmental benefits and problems of different methods of energy production. I taught this course in 1997, 1999 and 2001. Renewable energy is a hobby of mine and I read everything that I can find on the subject.

Senior Seminar (Barnard College): This course is a two semester course covering the senior thesis of Barnard Environmental Science majors. Each student is required to have a individual mentor and an overall mentor. I served as overall mentor to the 36 senior majors in the Fall of 1998 and served as an overall mentor to 15 senior majors in the Fall of 1999. During the Spring of 1999, Senior Seminar was team taught by four faculty members. I was the overall mentor for 11 senior theses totaling around 50 to 80 pages each. In spring 2000, I was the overall mentor for six senior theses. I find this work refreshing and stimulating. I enjoy working with the students, editing their theses, and teaching them about data analysis. In the academic year 2000-2001, I served as the individual mentor for a senior thesis comparing the energy use of the Black Rock Forest visitors' center and Lamont buildings. In the academic year 2001-2002, I served as the individual mentor for a senior thesis on the Ewing impact crater. In the academic year 2002-2003, I served as the individual mentor for a senior thesis on the unique characteristics of oceanic impact events and as a mentor for a student at the University of Maine who is working on a senior thesis on the Eltanin impact crater. In the academic year 2003-2004, I served as the individual mentor for a Barnard student working on the Eltanin impact event.

Environmental Data Analysis (Barnard College): This course is meant as an introduction to methods of data analysis. It covers use of Excel spreadsheets to plot scientific data, make histograms, fit curves, calculate means and standard deviations, and other simple scientific mathematical operations. The course also involves experience in collecting data, tabulating data, and reading and interpreting graphs and tables. The students also are taught about common sources of error in databases. I taught this course in 1999 and in 2001.

Case Studies in Environmental Science (Barnard College): This course is an upper level course for juniors and seniors. We did four case studies: Endocrine Disruption by Environmental

Pollutants and Naturally Occurring Substances, Mercury Pollution from Gold Mining and Rainforest Destruction in the Amazon, Rising Rates of Asthma and Their Environmental Causes, and The Arsenic Crisis in Bangladesh. These case studies reflect my own interest in medically related environmental problems. The course was taught like a graduate level seminar. Students were assigned reading and given study questions before each class. We discussed the questions during the next class.

Courses that I can teach on the undergraduate level:

Oceanography
Marine Geology
Plate Tectonics
Introduction to Geophysics
Research Methods in Earth and Environmental Science
Energy Resources
Natural Hazards and Disasters
Case Studies in Environmental Science
Introductory Geology
The Evolving Continents (Emphasis on Precambrian Geology)
Holocene Extraterrestrial Impacts and Their Effects on Human History

Experience in Teaching Research Methods and in Mentoring Undergraduates and Young PhDs

Over the past 21 summers, I have personally advised 27 summer interns on a wide variety of research projects involving petrology, marine geology, marine geophysics, tectonophysics, and physical oceanography. About one third of these projects have led to published papers with the students. In recent years, I have mentored many younger scientists. I find it to be extremely rewarding and satisfying. I have mentored 6 high school students. Of my former students, two won the local science fair and one won the Earth Science Category in the International Intel as well as winning or placing well in several science fairs on the way to competing in the International Intel. One is about to graduate college with a degree in Earth and Planetary Science.
Public Outreach Activities: I have given a lecture on her research to about 20 Earth Science Teachers for the past 10 years as part of the Earth to Class program. The program indirectly impacts about 2000 public school students each year. I also participate in the LDEO Open House for the public. I have appeared on six TV specials on impacts and/or tsunamis on the Discovery Channel, the History Channel, the National Geographic Channel and the Smithsonian Channel. I have also appeared in films made by the Russian Space Agency, Roscosmos.

Public Outreach-TV Specials

Canadian Discovery Channel -

Discovery Channel-

History Channel - Mega Disaster Series **- Comet Catastrophe**
https://www.youtube.com/watch?v=C18RengA80o

History Channel - Universe Series - **When Space Changed History**
https://www.youtube.com/watch?v=RgMpybAfPmE

National Geographic Channel- **Ancient Mega Tsunami**
http://natgeotv.com/uk/ancient-mega-tsunami

Smithsonian Channel – **Sacred Sites: Ireland**
http://www.smithsonianchannel.com/shows/sacred-sites-ireland/0/3408479

Public Outreach-Popular Articles written by Journalists

Blakeslee, Sandra (November 14, 2006), "Ancient Crash, Epic Wave", The New York Times
http://www.nytimes.com/2006/11/14/science/14WAVE.html?pagewanted=all&_r=1&

Easterbrook, Greg (June 1, 2008), "The Sky is Falling", Atlantic
http://www.theatlantic.com/magazine/archive/2008/06/the-sky-is-falling/306807/

Than, Ker (Jan. 7, 2008) "Comet Smashes Triggered Ancient Famine", New Scientist
http://www.newscientist.com/article/mg20126882.900-comet-smashes-triggered-ancient-famine.html

Lovett, Richard A. (Feb. 3, 2010) "Giant Meteorites Slammed Earth Around A.D. 500?", National Geographic News
http://news.nationalgeographic.com/news/2010/02/100203-asteroid-collision-earth-global-cooling/

Barras, Colin (Jan. 20, 2014) "AD 536: The year that winter never ended", New Scientist
http://www.newscientist.com/article/mg22129520.700-ad-536-the-year-that-winter-never-ended.html

Countries visited for field work (on land)

Australia (remote aboriginal preserves on Mornington Island and Groote Island), also Sydney and Brisbane region

Madagascar

Russia

Italy (Sardinia)

New Zealand

Countries visited for marine field work (oceanographic research vessel)

Seychelles, South Africa, Panama, Mauritius, French Polynesia (Tahiti), Bermuda

Other exotic destinations-port calls: Guam, Hawaii, Puerto Rico

Countries visited for scientific conferences:

France, England, Germany, New Zealand, Australia, Canada, Russia, Greece

Language Proficiency Levels:

Fluent: English

Able to ask for and understand directions: French, German, Russian

Able to ride subway and understand most signs: Greek, Italian