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TERESA EILEEN JORDAN

Biography

Teresa Jordan completed a B.S. in 1974 from Rensselaer Polytechnic Institute and a Ph.D. in 1979 from Stanford University, both in Geology. She joined Cornell in 1979 in a research position, and joined the faculty in 1984. From 2003-2008 she was the Chair of Cornell University's Department of Earth and Atmospheric Sciences. During 2001-2003, she was Associate Dean of Undergraduate Programs in the Engineering College at Cornell. In 2005, Professor Jordan received the Lawrence Sloss award of the Sedimentary Geology division of the Geological Society of America, and in 2008 she was named the J. Preston Levis Professor of Engineering. She is a Fellow of the Geological Society of America and a Corresponding Member of the Asociación Geológica Argentina.



Teresa Eileen Jordan

Dept: Earth and Atmospheric Sciences

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Research Interests

An IGERT Training Program in Sustainable Energy Recovery from the Earth - Educational innovation at the intersection of geosciences and engineering

Forearc Uplift in Northern Chile

Landscape Modification in Response to Paleoclimate Variability Since ~15 Ma, Atacama Desert, Chile

Architecture of the Aquifers of the Calama Basin, Loa Catchment Basin, North Chile

Marcellus shale: Relationships of primary sedimentary facies to physical

and chemical properties in central New York State

Probing the Micromechanics of Shale Under Varying Fluid Compositions

Teaching Interests

Jordan's formal teaching responsibilities at Cornell are in the field of stratigraphy, the history of earth's surface environment, the characteristics of sedimentary rocks, and the geology of energy resources. She has helped develop a graduate level interdisciplinary curriculum focused on technologies to develop new energy sources from Earth's subsurface, which combines engineering and earth sciences.

Service Interests

Jordan's service centers on earth literacy, energy literacy, and sustainability. It is her philosophy that we must develop more sustainable manners of modern human activity, but that this will only be possible if hidden-from-view Earth materials and slow-acting Earth systems are understood in concert with more visible and faster-acting ecological trends, human needs and behavior. She is dedicated to encouraging exchanges of knowledge, perspectives, and goals between the peoples of South America and North America, as illustrated by her service during 2012 as a Fulbright Scholar in Chile. These goals have led her to undertake collaborative research into the potential for New York State to produce geothermal energy and/or to mitigate its carbon dioxide emissions through geological carbon sequestration. It also leads her to collaborate in examination of natural water systems of northern Chile. This philosophy also led her to gain experience with the geology of gas-rich shale, around which there is considerable activity and debate in which natural resource, environmental quality, climate change, and human behavior all merge or collide. Participation in the Atkinson Center for a Sustainable Future and the Energy Institute facilitate investing her geological and paleoclimate knowledge in the search for more sustainable technologies and actions.

Selected Publications

- ▶ Nester, Peter, Teresa Eileen Jordan. 2012. "A Forearc Basin in Northern Chile: The Intersection of Tectonics and Climate." In *Recent Advances in Tectonics of Sedimentary Basins*, edited by Busby, C., and Azor, A., 369-381. Oxford, England: Blackwell Publishing.
- ▶ Jordan, Teresa Eileen, C. Mpodozis, N. Munoz, N. Blanco, P. Pananont, M. Gardeweg. 2007. "Cenozoic subsurface stratigraphy and structure of the Salar de Atacama Basin, northern Chile." *Journal of South American Earth Sciences* 23 (2-3): 122-146.
- ▶ Tamulonis, K., Teresa Eileen Jordan, B. Slater. 2011. "Carbon dioxide storage potential for the Queenston Formation near the AES Cayuga coal-fired power plant in Tompkins County, New York." *Environmental Geosciences* 18: 1-17.
- ▶ Jordan, Teresa Eileen, B. L. Isacks, Richard W. Allmendinger, J. A. Brewer, V. A. Ramos, C. J. Ando. 1983. "Andean Tectonics Related to Geometry of Subducted Nazca Plate." *Geological Society of America*

Bulletin 94 (3): 341-361.

- ▶ Gayó, Eugenia M., Claudio Latorre, Teresa Eileen Jordan, Peter L. Nester, S. A. Estay, K. F. Ojeda, C. M. Santoro. 2012. "Late Quaternary hydrological and ecological changes in the hyperarid core of the northern Atacama Desert (~21°S)." *Earth-Science Reviews* 113: 120-140.

[see more publications](#)

Selected Awards and Honors

- ▶ Lawrence Sloss Award (Sedimentary Geology Division of Geological Society of America) 2005
- ▶ NSF Award, 1991-1996 (Women Faculty in Science and Engineering) 1991
- ▶ Fulbright Scholar (J. William Fulbright Foreign Scholarship Board) 2012
- ▶ J. Preston Levis Professor of Engineering (College of Engineering, Cornell University) 2008
- ▶ Doctoral Fellow, 1978-1979 (American Association of University Women) 1978

Websites

- ▶ <http://www.geo.cornell.edu/geology/faculty/TEJ/index.html>
- ▶ www.energyinstitute.engineering.cornell.edu
- ▶ <http://www.geo.cornell.edu/geology/faculty/TEJ/research/>

Education

- ▶ B. Sc. (Geology), Rensselaer Polytechnic Institute, 1974
- ▶ Ph D (Geology), Stanford University, 1979

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