



Ring of Fire

Monday, July 26 – *Earthquake Hazards*

Brian Stump, Albritton Chair of Geological Sciences, SMU

Earthquakes are one of the most dynamic expressions of natural earth processes known. They provide the starting point for the exploration of the solid earth from the surface to the deep interior. This lecture explores how an understanding of these events and their effects provides a basis for the fundamental theory of earth evolution, Plate Tectonics. These natural phenomena have affected humans for centuries and provide a historical context for our studies as well as an opportunity to compare human and geologic time scales.

Monday, August 2 – *Generation of Geothermal Energy from Produced Fluids: Greening Texas Oil and Gas Fields*

David Blackwell, W. B. Hamilton Professor of Geophysics, SMU

The increase in price for hydrocarbon products has driven the cost of electricity up. “Green” considerations make coal and Nuclear less than attractive as new electricity sources. While wind power is green, there are serious problems and costs associated with its use. These facts have resulted in the possibility of generating electricity from moderate temperature water produced as part of the oil and gas production process or as a post hydrocarbon production new revenue stream. Dr. Blackwell will explore this form of geothermal energy, which has stirred interest and gained Stimulus package funding.

Monday, August 9 – *Plate Tectonics*

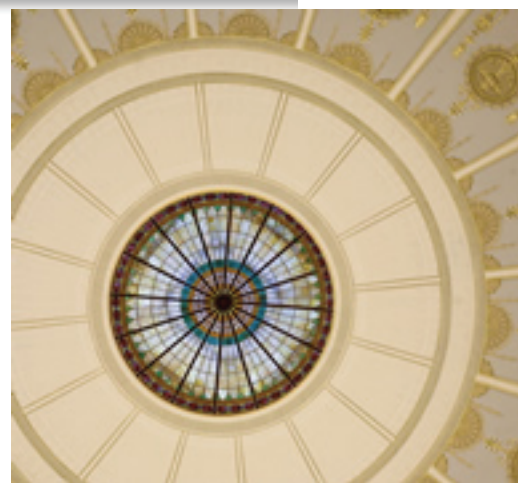
Robert Gregory, Chair, Roy M. Huffington Department of Earth Sciences, Director, Stable Isotope Laboratory, SMU

The “Ring of Fire” maps out the plate convergent boundaries that rim the Pacific Ocean from the tip of the Chilean Peninsula to volcanic arcs in the southwestern Pacific (e.g New Zealand). “Ring of Fire” margins are typified by the Andes in South America or the island arcs of the western Pacific and are important sites for the generation of new continental crust and for the recycling of elements that make our planet habitable (e.g. water and carbon dioxide). This lecture will examine the importance of these recycling processes driven by plate tectonics for the evolution of the surface of the Earth.

Monday, August 16 – *Volcanic Hazards*

James Quick, Associate Vice President for Research, Dean of Graduate Studies, Professor of Earth Sciences, SMU

Did you know that there are multiple types of volcanic eruptions that can occur - each identified by different visual activities, producing various hazards, and resulting in diverse geological consequences? Threats from active volcanoes range from the dramatic destruction of property and life on the ground to eruption of volcanic-ash clouds that constitute severe risks to jet aircraft in flight. In this last lecture of the Ring of Fire Series, Jim Quick share with us insights on the nature of volcanoes and what we should know about the multiple hazards of volcanoes.



CALENDAR

4 Mondays, July 26 & August 2, 9, 16
11:00 am Lecture/12:00 pm Lunch

Maggiano’s at North Park Center

Series Cost: \$180 members
\$260 non-members

Individual Lecture Cost:
\$45 members/\$65 non-members

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