

## VITA

**NAME:** **Mark Cloos**

**INSTITUTION:** John A. and Katherine G. Jackson School of Geosciences  
Department of Geological Sciences  
The University of Texas at Austin  
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**DOB:** September 27, 1954; Lake Forest, Illinois, USA Citizen

**EDUCATION:** Ph.D. in Geology, 1981, UCLA  
(Dr. W. G. Ernst, dissertation supervisor)  
B.S. in Geology with Distinction in the Curriculum, 1976,  
University of Illinois at Urbana-Champaign  
(Dr. D. M. Henderson, honors thesis supervisor)

### ACTIVE RESEARCH INTERESTS:

- 1) Field, laboratory and theoretical studies of the structure, metamorphism, geochronology, sedimentation and seismicity at convergent plate margins. Active field projects in the central and northern Coast Ranges of California.
- 2) Tectonics of arc-continent collision zones. Active field projects in the vicinity of the Gunung Bijih (Ertsberg) Mining district in Irian Jaya, Indonesia (west New Guinea).
- 3) Geologic controls on the origin of porphyry copper-type ore deposits.
- 4) High-level nuclear waste disposal

### PRESENT PROFESSIONAL POSITIONS:

Professor, Department of Geological Sciences (1992-present)  
Getty Oil Company Centennial Chair (1995-present)  
Senior Research Scientist, Institute for Geophysics (1993-present)  
Associate Editor, Bulletin Geologi, Indonesian Institute for Technology, Bandung (2006-present)

### PAST PROFESSIONAL POSITIONS:

International Secretary, Geological Society of America (2007-2011)  
Member, Geological Society of America, Annual Program Committee (2006-2011)  
Member, Steering Committee, Geological Society of America, Tectonic Crossroads Meeting, Ankara, Turkey (2008-2010)  
Member, Geological Society of America, Donath Medal and Young Scientist Award Committee (Chair, 2007-2010)  
Member, Mineralogical Society of America, MSA Award Committee (2007-2009)  
Member, Geological Society of America, Honorary Fellows Committee (2007-2009)

Member, Geological Society of America, Ad Hoc Committee on Divisions (2005-2007)  
Member, Technical Program and Scientific Advisory Committee, Backbone of the Americas:  
Patagonia to Alaska Meeting, Geological Society of America and Asociacion Geologica  
Argentina, Mendoza, Argentina, April 3-7, 2006  
Member, U. S. National Committee, International Union of Geological Sciences (2001-2005)  
Donath Medal Committee, Geological Society of America (2001-2004; Chair 2002-03)  
Board, International Division, Geological Society of America (2001-2005, President 2003-04)  
Appointed by National Academy of Sciences as United States Delegate, International Geological  
Congress, Florence, Italy, August, 2004  
Chair, Department of Geological Sciences (1996-2000)  
Associate Director, Geology Foundation (1996-2000)  
Member, Board on Earth Sciences and Resources, National Academy of Sciences/National  
Research Council (1992-1997)  
Chair, South-Central Section, Geological Society of America (1996-1997)  
Member, U.S. Geodynamics Committee (1993-1997)  
Chair, 1996 South-Central Section Meeting, Geological Society of America  
Associate Editor, *Geology*, Geological Society of America (1987-1995)  
Councilor, Geological Society of America (1993-1995)  
William T. Stokes Centennial Teaching Fellow, Department of Geological Sciences, University  
of Texas at Austin (1984-1995)  
Research Scientist, Institute for Geophysics, University of Texas at Austin (1989-1993)  
Management Board, Structural Geology and Tectonics Division, Geological Society of America  
(1988-1992, Chair 1990-91)  
Associate Professor, Department of Geological Sciences, University of Texas at Austin (1987-  
1992)  
Associate Chairman, Department of Geological Sciences, University of Texas at Austin (1986-  
1989)  
Associate Director, Geology Foundation, University of Texas at Austin (1986-1989)  
Research Associate, Institute for Geophysics, University of Texas at Austin (1985-1989)  
Assistant Professor, Department of Geological Sciences, University of Texas at Austin (1981-  
1987)  
Research Assistant and Teaching Assistant, Department of Earth and Space Sciences, UCLA  
(1976-1981)  
Research Assistant, Industrial Minerals Section, Illinois State Geological Survey, Urbana,  
Illinois (1974-1976)

**HONORS AND AWARDS:**

2009 Jackson School of Geosciences Outstanding Educator Award

2008 Texas Exes Teaching Award

2003 Mortar Board Preferred Professor

1999 Best Paper Award for Sapiie, B., Natawidjaya, D. H., and Cloos, M.. Indonesian Association of Geologists, 28th Annual Convention

1989 Donath Medal and Young Scientist Award, Geological Society of America

1987, Houston Oil and Minerals Faculty Excellence Award, Geology Foundation, University of Texas at Austin

1983 College of Natural Sciences Teaching Excellence Award, University of Texas at Austin

1983 Knebel Teaching Excellence Award, Department of Geological Sciences, University of Texas at Austin

1982 Exxon Teaching Excellence Award, Department of Geological Sciences, University of Texas at Austin

**PROFESSIONAL SOCIETY MEMBERSHIP:**

Mineralogical Society of America

Geological Society of America (Fellow)

American Geophysical Union

**SELECTED PUBLICATIONS:***Research Articles in Journals and Books:*

- Cloos, M.**, 2009, The nature of tectonic hazards: Chapter 2 in Volcanic and Tectonic Hazard Assessment for Nuclear Facilities: Connor, C., Chapman, N., and Connor, L., eds, Cambridge University Press, p. 24 - 73.
- Cloos, M.**, and Housh T. B., 2008, Collisional delamination: Implications for porphyry-type Cu-Au ore formation in New Guinea: in Spencer, J. E., and Titley, S. R., eds., Circum-Pacific Tectonics, Geological Evolution, and Ore Deposits: Tucson, Arizona Geological Society Digest 22, p. 235-244.
- Cloos, M.**, Sapiie, B., Quarles van Ufford, A., Weiland, R. J., Warren, P. Q, and McMahon, T. P., 2005, Collisional delamination in New Guinea: The geotectonics of subducting slab breakoff: Geological Society of America Special Paper 400, 51 pp.
- Quarles van Ufford, A., and **Cloos, M.**, 2005, Cenozoic tectonics of New Guinea: American Association of Petroleum Geologists Bulletin, v. 89, p. 119-140.
- Paterson, J. T., and **Cloos, M.**, 2005, Grasberg Porphyry Cu-Au Deposit, Papua, Indonesia: 2. Pervasive Hydrothermal Alteration: *in* Porter, T. M., ed., Super Porphyry Copper and Gold Deposits: A Global Perspective, PGC Publishing, Adelaide, p.303-319.
- Paterson, J. T., and **Cloos, M.**, 2005, Grasberg Porphyry Cu-Au Deposit, Papua, Indonesia: 1. Magmatic History: *in* Porter, T. M., ed., Super Porphyry Copper and Gold Deposits: A Global Perspective, PGC Publishing, Adelaide, p. 321-345.
- Sapiie, B., and **Cloos, M.**, 2004, Strike-slip faulting in the core of the Central Range of west New Guinea: Ertsberg Mining District, Indonesia: Geological Society of America Bulletin, v. 116, p. 277-293.
- Cloos, M.**, 2001, Bubbling magma chambers, cupolas, and porphyry copper deposits: International Geology Review, v. 43, p. 285-311. (reprinted in Frontiers in Geochemistry: Organic, Solution and Ore Deposit Geochemistry: Bellwether Publishing, Ltd. for the Geological Society of America, Konrad Krauskopf Volume 2, p. 191-217)
- Cloos, M.**, and Shreve, R. L., 1996, Shear zone thickness and the seismicity of Chilean- and Mariana-type subduction zones: Geology, v. 24, p. 107-110.
- Weiland, R. J., and **Cloos, M.**, 1996, Pliocene-Pleistocene asymmetric unroofing of the Irian fold belt, Irian Jaya, Indonesia: Apatite fission-track thermochronology: Geological Society of America Bulletin, v. 108, p. 1438-1449.
- Cloos, M.**, 1993, Lithospheric buoyancy and collisional orogenesis: Subduction of oceanic plateaus, continental margins, island arcs, spreading ridges, and seamounts: Geological Society of America Bulletin, v. 105, p. 715-737.
- Cloos, M.**, 1992, Thrust-type subduction zone earthquakes and seamount asperities: A physical model for seismic rupture: Geology, v. 20, p. 601-604.
- Cloos, M.**, and Shreve, R. L., 1988, Subduction-channel model of prism accretion, melange formation, sediment subduction, and subduction erosion at convergent plate margins: 1. Background and description: Pure and Applied Geophysics, v. 128, p. 455-500.
- Cloos, M.**, and Shreve, R. L., 1988, Subduction-channel model of prism accretion, melange formation, sediment subduction, and subduction erosion at convergent plate margins: 2. Implications and discussion: Pure and Applied Geophysics, v. 128, p. 501-545.

- Shreve, R. L., and **Cloos, M.**, 1986, Dynamics of sediment subduction, melange formation, and prism accretion: *Journal of Geophysical Research*, v. 91, p. 10,229-10,245.
- Cloos, M.**, 1986, Blueschists in the Franciscan subduction complex of California: Petrotectonic constraints on uplift mechanisms: *Geological Society of America Memoir* 164, p. 77-94.
- Cloos, M.**, 1985, Thermal evolution of convergent plate margins: Thermal modeling and re-evaluation of isotopic Ar-ages for blueschists in the Franciscan complex of California: *Tectonics*, v. 4, p. 421-433.
- Becker, D. G., and **Cloos, M.**, 1985, Melange diapirs into the Cambria Slab, a Franciscan trench slope basin near Cambria California: *Journal of Geology*, v. 93, p. 101-111.
- Cloos, M.**, 1984, Landward dipping reflectors in accretionary wedges: Active dewatering conduits?: *Geology*, v. 12, p. 519-522.
- Cloos, M.**, 1984, Flow melanges and the structural evolution of accretionary wedges: *Geological Society of America Special Paper* 198, p. 71-79.
- Cloos, M.**, 1983, Comparative study of melange matrix and metashales from the Franciscan subduction complex with the basal Great Valley sequence, California: *Journal of Geology*, v. 91, p. 291-306.
- Cloos, M.**, 1982, Flow melanges: Numerical modeling and geologic constraints on their origin in the Franciscan subduction complex, California: *Geological Society of America Bulletin*, v. 93, p. 330-345.

**INVITED TECHNICAL LECTURES (since 2005)**  
**(Non-Univ. of Texas at Austin):**

- International Geological Congress, Brisbane, Symposium on the *Evolution and Geodynamics of the Indo-Australian Plate*, August, 2012 (Keynote Speaker)
- Geological Society of America Penrose Conference, *Deformation, Fluid Flow, and Mass Transfer in the Forearc of Convergent Margins*, Lucca Italy, March, 2012
- Department of Geology, Texas Christian University, February, 2012
- Department of Geosciences, University of Texas at Dallas, February, 2012
- Department of Geology, University of Otago, Dunedin, New Zealand, February, 2012
- International Lithosphere Program, Subduction Channel Workshop -- *Nature of the Plate Interface in Subduction Zones*, Sampeyre, Piemonte, Italy, July, 2011 (Keynote Speaker)
- Department of Earth Sciences, University of Bristol, Bristol, United Kingdom, October, 2010
- Geological Society of America, Tectonic Crossroads Meeting, Ankara, Turkey, Session on *Melanges and melange-forming processes*, October, 2010.
- Geological Association of Canada, Cordilleran Section *2010 Cordilleran Metallogeny: Porphyry Settings*, Vancouver, Canada, April, 2010 (Keynote Speaker)
- Prospectors and Developers Association of Canada 2010 International Convention, Session: *40 Years after Lowell and Guilbert: The model now and some new deposits*: Toronto, Canada, March, 2010 (Keynote Speaker)
- PacRim Congress 2008, *The Pacific Rim: Mineral Endowment, Discoveries, & Exploration Frontiers*, Australasian Institute of Mining and Metallurgy, Gold Coast, Queensland, Australia, November, 2008 (Plenary Address)
- Geological Society of America, Theme Session on *Collisional Tectonism*, Geological Society of America Annual Meeting, Denver, Colorado, October 2007
- Geological Society of America, Theme Session on Melanges, Geological Society of America Annual Meeting, Denver, Colorado, October 2007
- Arizona Geological Society, *Circum-Pacific Tectonics, Geologic Evolution, and Ore Deposits: A Symposium in honor of William R. Dickinson*, Tucson, September, 2007
- Department of Earth Sciences, Iowa State University of Science and Technology, Ames, Iowa, January, 2007
- Department of Geological Sciences, Southern Methodist University, Dallas, TX, November, 2006
- J. G. Liou Symposium, Stanford University, December, 2005
- Geological Society of America Cordilleran Section Eldridge M. Moores Symposium, San Jose, California, May, 2005
- Department of Geological Sciences, Southern Methodist University, Dallas, TX, April, 2005

**UNIVERSITY COURSES TAUGHT (since 2005):****Principal Instructor:**

Summer, 2012	Introductory Field Geology (GEO 320L)
Spring, 2012	Undergraduate Honors (GEO 179X) with W. D. Carlson
	Tectonic Problems (GEO 381K) with D. Stockli and R. Marrett
Fall, 2011	Structural Geology (GEO 428)
	Continental Tectonics (GEO 392M/339T)
Fall, 2010	Structural Geology (GEO 428)
	Continental Tectonics (GEO 392M/339T)
Summer, 2010	Introductory Field Geology (GEO 320L)
	UTeach M.A. Geosciences (GEO 392M)
Spring, 2010	Technical Sessions (GEO 198)
Fall, 2009	Structural Geology (GEO 428)
	Continental Tectonics (GEO 392M)
	Technical Sessions (GEO 198)
Summer, 2009	Introductory Field Geology (GEO 320L)
	UTeach M.A. Geosciences (GEO 392M)
Spring, 2009	Technical Sessions (GEO 198)
Fall, 2008	Structural Geology (GEO 428)
	Tectonics II (GEO 392M)
	Technical Sessions (GEO 198)
Spring, 2008	Technical Sessions (GEO 198)
Fall, 2007	Structural Geology (GEO 428)
	Tectonics II (GEO 392M)
	Technical Sessions (GEO 198)
Summer, 2007	Introductory Field Geology (GEO 320L)
	UTeach Geosciences California Field Geology (GEO 391)
Spring, 2007	Technical Sessions (GEO 198)
Fall, 2006	Structural Geology (GEO 428)
	Tectonics II (GEO 392M)
	Technical Sessions (GEO 198)
Summer, 2006	Field Geology (GEO 320L) with L. E. Long
	UTeach MA Geosciences (GEO 392M)
Spring, 2006	Technical Sessions (GEO 198)
Fall, 2005	Structural Geology (GEO 428)
	Tectonics II (GEO 392M)
Spring, 2005	Tectonics II (GEO 392M)

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**THESIS/DISSERTATION SUPERVISION (as of June, 2012):**

**B.S. Honors Thesis Supervisor - 19**

**B.S. Honors Thesis Committee Member - 14**

**M.S./M.A. Thesis Supervisor - 35**

**M.S./M.A. Thesis Co-Supervisor - 5**

**M.S./M.A. Thesis Committee Member - 42**

**Ph.D. Dissertation Supervisor - 12**

**Ph.D. Dissertation Co-Supervisor - 3**

**Ph.D. Dissertation Committee Member - 29**