

MARJORIE A. CHAN

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ACADEMIC POSITION:

July 1995 to present- Professor, Dept. of Geology and Geophysics, University of Utah
July 2002 to June 2010 Dept. Chair, Dept. of Geology and Geophysics, University of Utah
July 1988 to June 1995 Assoc. Professor, Dept. of Geology and Geophysics, University of Utah
Administrative Leadership: Dept. Chair 2002-2009 (incl. Dept. programming for new building)

EDUCATION:

Ph.D. Geology, December 1982, University of Wisconsin-Madison Advisor: Dr. R. H. Dott, Jr.
B.S. Geology, June 1977, University of California-Davis

SELECT PUBLICATIONS (from career total of 117 peer review publications)

1. **Chan, M. A.**, Beitler, B., Parry, W. T., Ormö, J. and Komatsu, G., 2004, A possible terrestrial analogue for hematite concretions on Mars: *Nature* v. 429, p. 731-734.
2. **Chan, M. A.**, Beitler Bowen, B., Parry, W. T., Ormö, J. and Komatsu, G., 2005, Red Rock and Red Planet Diagenesis: Comparisons of Earth and Mars Concretions: *GSA Today* v. 15 n. 8, p. 4-10 (cover photo and feature article).
3. **Chan, M. A.**, Johnson, C. M., Beard, B.L., Bowman, J.R., and Parry, W.T., 2006, Iron isotopes constrain the pathways and formation mechanisms of terrestrial oxide concretions: A tool for tracing iron cycling on Mars?: *Geosphere*, v. 2, p. 324-332.
4. **Chan, M.A.**, Ormö, J., Park, A.J., Stich, M., Souza-Egipsy, V., and Komatsu, G., 2007, Models of iron oxide concretion formation: Field, laboratory, and numerical comparisons: *Geofluids*, v. 7, p. 1-13.
5. Okubo, C.H., Schultz, R.A., **Chan, M.A.**, Komatsu, G., and HiRISE team, 2009, Deformation band clusters on Mars and Implications for Subsurface Fluid Flow: *Geological Society of America Bulletin* v. 121 no. 3-4 p. 474-482.
6. Potter, S. L., **Chan, M.A.**, Petersen, E.U., Dyar, M. D. and Sklute, E., 2011, Characterization of Navajo Sandstone Concretions: Mars comparison and criteria for distinguishing diagenetic origins: *Earth and Planetary Science Letters* 301 p. 444-456.
7. **Chan, M.A.**, Nicoll, K., Ormö, J., Okubo, C., and Komatsu, G., 2011, Utah's geologic and geomorphic analogs to Mars—An overview for planetary exploration, *in* Garry, W.B., and Bleacher, J.E., eds., *Analogues for Planetary Exploration: Geological Society of America Special Paper 483*, p. 349–375.
8. **Chan, M.A.**, Potter, S.L., Bowen, B.B., Petersen, E.U., Parry, W. T., Bowman, J.R., Barge, L., and Seiler, W., 2012, Characteristics of terrestrial ferric oxide concretions and implications for Mars, *in* Grotzinger, J. and Milliken, R., *Sedimentary geology of Mars: SEPM Special Publication 102*, p. 253-270.
9. Potter-McIntyre, S.L. **Chan, M.A.** and McPherson, B.J., 2014, Textural and mineralogical characteristics of microbial fossils associated with modern and ancient iron (oxyhydr)oxides: Terrestrial analogue for sediments in Gale Crater: *Astrobiology* v. 14, p. 1–14. DOI: 10.1089/ast.2013.0974.
10. **Chan, M.A.**, 2015, The martian lake chronicles: Curiosity reveals evidence for ancient lakes on Mars: *Science* v. 350, p. 167.

SYNERGISTIC ACTIVITIES

1. 2015-16 NSF EarthCube Leadership Council (elected representative of Engagement Team)
 2. 2013-14 GSA (Geo. Soc. America) Sedimentary Geology Division Chair (2013-2014)
 3. 2014 NSF workshop: Research Infrastructure in Support of NSF-SEP Grand Challenges (invited workshop ~ 25 geoscience representatives)
 4. 2013 NSF EarthCube Workshop Convener for Sedimentary Geology Community
 5. 2012-16 Workshops, Webinars “Mars for Earthlings” Higher ed teaching modules
 6. 2010, 11, 13 NASA HiRISE Team guest field trip leader (annual team meeting)
 7. 2013 NSF EarthCube Workshop Convener for Sedimentary Geology Community
 8. 2005-11 GSA & AWG (Assoc. Women Geoscientists) leaderships meeting for Women Dept Chairs, Heads, at national GSA meetings
 9. 2012- 13 GSA Diversity in the Geosciences Committee Chair
 10. 2011 Attended NASA Mars Science Laboratory launch, Cape Canaveral FL
 11. 2005- 11 Science Advisor for PBS NOVA science
 12. 2010-11 GSA committee developing position statement on geoconservation
 13. 2010 First International Mars Sedimentology Conference, El Paso TX
 14. 2008 NASA Astrobiology Institute (review panel) St. Louis MO
 15. 2004 2nd Early Mars Conference: implications for life. Jackson Hole WY
- Dozens of media interviews, documentaries, research related news & internet/web articles

SELECT HONORS AND AWARDS

- 2014 GSA Distinguished International Lecturer (54 lectures in India, New Zealand, Australia, Japan, China, Korea)
- 2014 Plenary speaker- International Sedimentology Congress (International Association of Sedimentologists), Geneva, Switzerland
- 2011 GSA Bulletin Exceptional Reviewer (chosen by GSA Bulletin science editors)
- 2010 University of Wisconsin- Department of Geosciences Distinguished Alumnus
- 2009 YWCA Outstanding Leadership Award, Utah
- 1995 Elected Fellow in the Geological Society of America
- 1981, 91 SEPM Excellence of Presentation Awards (Annual Meeting)
- University Utah teaching & research awards (2006, 1996, 1994, 1993) Geology & Geophysics

PROFESSIONAL/HONORARY SOCIETIES

Geological Society of America (Elected Fellow) Association of Women Geoscientists
Society for Sedimentary Geology Utah Geological Association
International Association of Sedimentologists National Association of Geology Teachers
American Association of Petroleum Geologists Canadian Soc. Petroleum Geologists

GRANTS

- 2015-2018 NSF- Stratigraphy: Collaborative Research: Unlocking secrets of the world's largest sand sea: Links of water, climate, and life recorded by the Lower Jurassic Navajo Sandstone, Colorado Plateau, USA, with Co.Is.- Steve Hasiotis, Marjorie Chan, Judy Parrish. (Chan portion \$99,000).
- 2011-16 NASA-EPOESS “Mars For Earthlings: A terrestrial approach to Earth and Planetary Science teaching” (\$356,261) P.I. Marjorie Chan