

JOSHUA TARON

Nationality: USA
Birth Details: February 29, 1980, Oklahoma City, Oklahoma, USA.
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PROFESSIONAL PREPARATION

2009 Ph.D. Engineering The Pennsylvania State University, University Park, PA, USA
2005 B.S. Engineering The Pennsylvania State University, University Park, PA, USA
2005 Commonwealth of Pennsylvania Engineer in Training (EIT) license ET007924.

SELECT AWARDS

Recipient of the 2010 *Dr. N.G.W. Cook Dissertation Award* from the American Rock Mechanics Association.
2008 – 2009: Frank and Lucy Rusinko Graduate Fellowship in Energy and Mineral Engineering, 1st place.
2008 – 2009: Graduate Teaching Assistant of the Year.

PROFESSIONAL DETAILS

2009 - Pres. Staff Scientist, Helmholtz Center for Environmental Research, Leipzig, Germany.
2005 - 2005 Engineer, Environmental Resources Management (ERM), Exton, PA.
2003 - 2004 Internship, DuPont Engineering Technology, Wastewater Laboratory, Wilmington, DE.

RESEARCH INTERESTS

Computational geomechanics, fluid transport in fractured and porous media, rock mechanics, and chemical and mechanical process couplings in earth materials. A research expose was highlighted at the Center for Geomechanics, Geofluids, and Geohazards in 2009, and can be found at <http://g3.ems.psu.edu>.

APPROVED RESEARCH GRANTS

Elsworth, D., J. Taron, and E. Sonnenthal (2010). THMC modeling of EGS reservoirs – Continuum through discontinuum representations: Capturing reservoir stimulation, evolution and induced seismicity. U.S. Department of Energy – Geothermal Technologies Program.

PUBLICATIONS

Journal Articles

Six journal articles published from 2007-2010.

Conference Proceedings

Eight articles published in international proceedings from 2006-2010 (2 invited), with five additional contributions in the form of conference abstracts/presentations.

Select Articles

Taron J., D. Elsworth, G. Thompson, and B. Voight (2007). Mechanisms for rainfall-concurrent lava dome collapses at Soufrière Hills Volcano, 2000-2002. *J Volc Geoth Res*, 160: 195-209.
Elsworth D., G. Mattioli, J. Taron, B. Voight, and R. Herd (2008), Implications of magma transfer between multiple reservoirs on eruption cycling. *Science*, 322: 246-248.
Taron J. and D. Elsworth (2009), Constraints on compaction rate and equilibrium in the pressure solution creep of quartz aggregates and fractures: Controls of aqueous concentration. *J Geophys Res*, 115: B07211.
Taron J., D. Elsworth, and K.-B. Min (2009), Numerical simulation of thermal-hydrologic-mechanical-chemical processes in deformable, fractured porous media. *Int J Rock Mech Min Sci*, 46(5): 842-854.