

Education:

In Progress Ph.D. Candidate Earth and Planetary Sciences, Washington University in St. Louis
2008 M.A. Earth and Planetary Sciences, Washington University in St. Louis
2006 B.A. Astronomy and Anthropology, University of Colorado at Boulder
(Magna Cum Laude, with Honors)

Research:

2006-Present *Washington University – Graduate Thesis Research*

- Mapping and analysis of pits, spots, uplifts and small chaos regions on Europa
- Stress field from despinning and mapping of linear features on Iapetus
- Landslides and surface material properties on Iapetus
- Using viscously relaxed craters on Ganymede and Enceladus to constrain heat flow

2006 *University of Colorado – Summer Undergraduate Research Assistant*

- Ground truth from the Opportunity Rover for Mars thermal inertia data

2005 *Australian Centre for Astrobiology, Macquarie University – Undergraduate Research Assistant*

- Investigation of cyclic rhythmites as a paleorecord of earth's tidal dissipation
- Reduction of IR images of Venus' cloud structure and observations at the AAT

2002-2003 *University of Colorado/NOAA – Undergraduate Research Assistant*

- Observations of Solar Flares and analysis of SOONSPOT data

Fellowships and Awards:

2010-Present NASA Earth and Space Science Fellowship (NESSF)
2010 Stephen E. Dwornik Award for Best Graduate Poster Presentation at LPSC
2008 GIS Symposium Poster Contest – 1st place
2008 TA Recognition Award – Washington University
2006-2010 Washington University Olin Fellowship
2006 Phi Beta Kappa of Colorado Crisp Fellowship
2006 National Science Foundation Graduate Fellowship Honorable Mention
2005-2006 Barry M. Goldwater Excellence in Education Scholarship
2002-2006 University of Colorado Norlin Scholarship

Publications:

Singer, K.N. and McKinnon, W.B. (2011). Tectonics on Iapetus: Despinning, Respinning, or Something Completely Different? *Icarus*, 216, 1, pp. 198-211.
Hynek, B.M. and **Singer, K.** (2007). Ground truth from the Opportunity Rover for Mars thermal inertia data. *Geophysical Research Letters*, 34, 11201.

Conference Abstracts:

- Singer, K.N.**, Bland, M.T., McKinnon, W.B. , and Schenk, P.M. (2011). Topographic Analysis of Impact Craters on Enceladus and Ganymede: Evidence for Viscous Relaxation. EPSC-DPS2011-1050.
- Bland, M.T., **Singer, K.N.**, McKinnon, W.B. (2011). Enceladus' ancient heat flux: Clues from numerical simulation of crater relaxation. EPSC-DPS2011-1161.
- Singer, K.N.**, Nowicki, L., McKinnon, W.B., and Schenk, P.M.. (2011). Secondary Craters and Ejecta on Icy Satellites: Size-velocity Distributions. *LPSC abstract* #1649.
- Bland, M.T., **Singer, K.N.**, McKinnon, W.B., and Schenk, P.M. (2011). Constraints on Ganymede's Thermal Evolution from Models of Crater Relaxation. *LPSC abstract* #1814.
- Kring, D. A., ... **Singer, K. N.**, et al. (2011). Fold Hinge in Overturned Coconino Sandstone and its Structural Displacement During the Formation of Barringer Meteorite Crater (a.k.a Meteor Crater). *LPSC abstract* #1740.
- Kring, D. A., ... **Singer, K. N.**, et al. (2011). Asymmetrical Distribution of Impact Ejected Lithologies at Barringer Meteorite Crater (a.k.a Meteor Crater). *LPSC abstract* #1746.
- Lynch, K. L., Smith, I. B., **Singer, K. N.**, et al. (2011) The Ganymede Interior Structure, and Magnetosphere Observer (GISMO) Mission Concept. *LPSC abstract* #2364.
- Singer, K.N.** and McKinnon, W.B. (2010). Iapetian Tectonics: Despinning, Respinning, Contraction, Or Something Completely Different? *DPS abstract* #42, #1.01.
- McKinnon, W.B. and **Singer, K.N.** (2010). Small Impact Craters on Triton: Evidence for a Turn-up in the Size-frequency Distribution of Small (sub-km) KBOs, and Arguments Against a Planetocentric Origin. *DPS abstract* #42, #20.09.
- Singer, K.N.**, McKinnon, W.B., and Schenk, P.M. (2010). Pits, Spots, Uplifts, and Small Chaos Regions on Europa: Evidence for Diapiric Upwelling from Morphology and Morphometry. *LPSC abstract* #2195.
- Singer, K.N.**, McKinnon, W.B., Schenk, P.M., and Moore, J.M. (2009). Large Landslides on Iapetus: Implications for Crater and Ridge Modification. *DPS meeting abstract* #41, #38.01.
- Singer, K.N.**, McKinnon, W.B., and Schenk, P.M. (2009). Pits, Spots, Uplifts, and Small Chaos Regions on Europa: A Search for Regional Variations. *LPSC abstract* #2336.
- Singer, K.N.** and McKinnon, W.B. (2008). A Search for Despinning Fractures on Iapetus. *LPSC abstract* #2415.

Teaching and Outreach Experience:

In Progress	WU Teaching Citation
2009-Present	Advising of Undergraduate Research Project
2010-2011	Co-Founder: Washington University Graduate Group on Teaching and Learning
2010	CAE (Center for Astronomy Education) Workshops on Teaching Astronomy
2007	Teaching Assistant – Washington University – Earth Materials Labs
2006-Present	Head Coordinator and Activity Leader for Women in Science Day program for high school girls
2003-2005	Learning Assistant (undergraduate TA) – University of Colorado – Physics 1130, Intro to Electricity and Magnetism; Astronomy 2000, Ancient Astronomy Grader for Astronomy 1030 & 1040, Accelerated Intro to Astronomy 1 & 2

Professional Societies:

2009-Present	American Astronomical Society – Division of Planetary Sciences
2009-Present	Association for Women Geoscientists
2007-Present	Association for Women in Science – St. Louis Chapter President (2008-Present)
2007-Present	American Geophysical Union
2005-Present	Phi Beta Kappa Honors Society

University/Planetary Science Community Service:

2010-Present Astrobiology Primer 2.0 Editor
2010-2011 DPS Women in Astronomy Discussion Hour coordinator
2009-Present DPS Professional Development Committee – Mentoring Lead
2010-2011 Peer Mentors Department President and University Wide Steering Committee
2010 Rapporteur for the Planetary Science Decadal Survey (Satellites Panel)
2009-2010 WU Graduate Student Senate
2008-Present WU EPSc Department Curriculum Committee
2007 Rapporteur for MSL Landing Site Selection Meeting #2