

Q & A with Kirsten Fristad '05

Major: Geology, Astronomy Core

Current Position: NASA Postdoctoral Fellow at NASA Ames Research Center

Favorite Activities in your Macalester Days: My primary activity in college was running on the Track & Field team. I ran hurdles and sprint relays all four years. I also participated in a variety of other activities including Women in Science and Math (WISM), Geoclub, and played flute in the orchestra. As a geology major, I took a number of geology classes that involved field trips around Minnesota and to Crete and Santorini. I have many fond memories of camping and learning about rocks in beautiful places while it was raining or snowing with my fellow geology-mates and professors Kelly, Karl, Craddock, Ray, and Jeff!

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Research Interests and How They Developed: Having lived in many physical and cultural landscapes as a child, I have always been interested in the interaction between life and environment. This has manifested itself in different ways over the years from planetary geology (what makes a planet habitable? what would it take to enable humans to live on Mars?), to mass extinction mechanisms (what are the environmental implications of massive volcanism? how do environmental systems recover following catastrophic events?), to crustal fluid dynamics (how do water-rock interactions support microbial life? how does reactive fluid flow result in mineral resource deposits?). Generally, my scientific interests have become more focused as I've learned more about state-of-the-art research, and I've also been drawn to more applied topics as I see an increasingly critical need to raise the scientific literacy level of the general public and incorporate science into environmental management and policy decisions.

Summertime Studies: I started applying to off-campus summer research programs early in my studies, which led to several jobs farther down the road. Summer 2002 - Chemical Technician at Henkel Surface Technologies in Michigan. Summer 2003 - NASA's Planetary Geology and Geophysics Undergraduate Research Program (PGGURP) at the John's Hopkins Applied Physics Lab in Maryland. Summer 2004 - NSF REU at the Geophysical Laboratory at the University of Alaska Fairbanks. Summer 2005 - NASA Academy Research Associate at the NASA Goddard Space Flight Center.

Job Path (short version): I took some time off after graduation to live in Australia for a couple months. When my visa ended, I returned to the US and through my internship network obtained a position working in the SAM (on Curiosity) instrument lab at NASA Goddard for 1.5 years. In 2007 I received a Fulbright



Kirsten Fristad '05 in Iceland

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Fellowship to study in Norway. While I was at the University of Oslo, I was offered a Ph.D. position working on the environmental implications of volcanism in sedimentary basins, so I stayed in Norway and completed my doctorate in Geology & Geochemistry in March of 2012. I returned to Minnesota and worked in Jake Bailey's lab at UMN in fall 2012, and then started my Postdoc Fellowship at NASA in January 2013.

Networking à la Kirsten: In retrospect, most of my network grew out of internships and socializing at conferences. Some of my absolute favorite activities in this world are talking to people about science, discussing new ideas, and introducing people who have similar scientific interests. Simply taking an interest in making friends at conferences and on short courses has led to an extensive international and interdisciplinary network. I would highly recommend participating in activities in your field and being friendly!

Advice for Students: You never know what doors may open down the road, so do a good job wherever you are, and be open to the unexpected.

Famous Last Words: It is really fun to meet up with other Mac alums at conferences, so keep in touch!

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