



HUMANITY
CENTERED
ROBOTICS
INITIATIVE



Janet Vertesi
Princeton University

“Seeing Like a Rover: Visualization and Embodiment
on the Mars Exploration Rover Mission”



Wednesday, October 2, 2013
12:00 – 1:30pm
Barus and Holley Room 190

Co-sponsored by Science and Technology Studies

How do you work with a robot millions of miles away to make scientific discoveries on a planet you have never set foot on? While the team of NASA scientists and engineers rely on Spirit and Opportunity to do science on Mars, working with the [Mars Exploration Rovers](#) also requires that team members learn to "see like a Rover". On the one hand, I show how this enrolls a particular visual fluency with the hundreds of thousands of images that return from the Martian surface, producing new representations with image processing software to inform Rover operations. On the other hand, I argue, this visual connection to the Rovers' "eyes" on another planet produces a deeper connection to the robots too: one that ascribes human characteristics to machines, teaches humans to see, move and feel like their robots do, and develops an intimate and embodied understanding of the vehicles' experiences on Mars.

Janet Vertesi is a sociologist of science and technology whose research focuses on the organizational dynamics in NASA's robotic spacecraft missions. An active member of the Science and Technology Studies and Human-Computer Interaction communities, Vertesi publishes at CHI, CSCW and Ubiquitous Computing alongside Social Studies of Science, participates in critical and reflective design, and sociotechnical studies. Her forthcoming book, *Seeing like a Rover: Images in Interaction on the Mars Exploration Rover Mission* will be published by the University of Chicago Press in 2014; and she is co-editor along with Catelijne Coopmans, Michael Lynch, and Steve Woolgar of [Representation in Scientific Practice Revisited](#) (MIT Press, 2014). She holds a PhD from Cornell University in Science and Technology Studies, and is currently Assistant Professor of Sociology at Princeton University.

This presentation is part of the HCRI's Multidisciplinary Speaker Series that showcases diverse and groundbreaking research undertaken by leaders in science, technology, design, and impact of robotics on society.

*For more information on this talk and the HCRI Speaker Series,
contact Suzanne_Alden@brown.edu or visit hcri.brown.edu.*