

Visiting Researcher Profile



Dr. Jessica Robin

Program Manager
National Science Foundation

Research Specialty: Soil Science and Remote Sensing

Bio

Dr. Jessica Robin is a geographer and soil scientist and works as a program manager at the National Science Foundation (NSF) in the Office of International Science and Engineering in Ballston, Virginia. She received her Doctorate of Philosophy in Physical Geography from the University of Maryland-College Park in 2006. Additionally, she has a Masters of Science in Soil Science and a Masters of Professional Studies in International Agriculture, both from Cornell University. She also received her undergraduate degree from Cornell University in Industrial and Labor Relations. Prior to working at NSF, she worked at NASA Goddard Space Flight Center (GSFC) as an on-site contractor collaborating with schools around the world in her research. Her research integrates field and satellite data with computer models and focuses on how natural and human-made changes affect different environments. The goal of this research is to help us understand how climate change affects growing seasons in different parts of the world. Jessica's educational experiences range from giving presentations to, and developing research projects with, K-12 students around the world, conducting teacher training workshops, and teaching college courses at the University of Maryland-Baltimore County. Additionally, she developed soil science curricula for the GLOBE program and Cornell University and co-authored the Basic GAPS software and manual. Basic GAPS is a computer simulation model of the Earth system for students. She is also fluent in Spanish. Jessica has participated in *Journey* programs in Hilo, Hawaii and Washington, DC.

Examples of Classroom Presentations

***Earth from Space* [Grades: 6-12]**

What does a volcano, a glacier, and a city look like from space? How do we tell what things are on Earth from a satellite image? In this interactive presentation you will take a visual tour of Earth as seen from satellites. You will learn about the different satellites and how scientists use this information to study and monitor change on Earth. Then you will take a visual quiz and see how well you can determine what things are on Earth from space.

***Just Passing Through* [Grades: K-5]**

How and why do soils differ? This interactive presentation shows you how water flows through soils, how water changes as it goes through soil, and how different types of soils affect water movement. Students time the flow of water through different soils, examine the amount of water held in these soils, and observe the filtering ability of soils.

Examples of Family/Public Program Presentations

Visible Earth

Have you ever wondered what our planet Earth looks like from space? Or how scientists use satellite images to differentiate a tree from a building and how they monitor change with this information? In this interactive presentation you will have an opportunity to answer these questions as you view images from all over the world taken from Earth observing satellite missions. You will learn which satellites provide us information about land surfaces, oceans, snow cover, and other parts of the Earth system. You'll also learn how long it takes to develop instrumentation for a specific satellite mission and how the data is calibrated and validated.