

The Keck Institute for Space Studies
presents an open lecture on:

PUFFER: NASA's Pop-Up Origami Rover

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Wednesday, February 20, 2019

4:30 PM Reception

5:00 PM Lecture

Lees-Kubota Lecture Hall
Guggenheim Building
California Institute of Technology

Come meet PUFFER—NASA's Pop-Up Origami Rover.

Currently, rover missions face serious limitations in extreme terrain. A rover like Curiosity is just too valuable to risk driving into a crater or upending on rough ground. PUFFER was created to work in parallel with larger rovers (or deployed off landers) when the landscape becomes too dangerous.

These mini rovers fold flat—down to about the size of a smartphone—so several can be packed on a rover. When deployed, they are ready to charge up steep slopes, drop into craters, or partially fold to crawl on their bellies into hard-to-reach places. Solar panels on PUFFER's belly allow it to flip over and recharge before returning to the parent rover. With PUFFER, JPL hopes to offer a low-profile, low-cost solution to enable future missions to investigate more varied and extreme terrains.

The design team took inspiration from origami to design PUFFER's body, which is made of folded layers of printed circuit boards. This allows the expendable tiny rovers to carry miniature science instruments such as high-resolution micro-imagers, organic molecule samplers, or spectrometers to study the chemical makeup of other planets.

PUFFER has been tested in some of Earth's most challenging environments, and its designers at JPL hope to see it hitching a ride to new destinations in the solar system sometime soon.

Seating is limited and is available on a first come, first served basis.



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more information,
go to kiss.caltech.edu