



# Front Range Teen Science Cafe'

## Teen Science Cafe' Network

scientists & teens exploring the world



## Biologically Inspired Miniature Jumping Robots



April's Front Range Teen Science Café will feature Dr. Jianguo Zhao from the Department of Mechanical Engineering at Colorado State University.

Small animals or insects such as grasshoppers, flea, or frogs, although have a small size, can jump to successfully navigate complex natural environments. With biological inspirations from them, it is interesting and challenging to build tiny jumping robots with a size of several centimeters. Such robots could enable a new generation low cost robots that could access confined and hard-to-access spaces. Equipped with various sensors such as CO<sub>2</sub>, ozone, or CO sensor, such robots can be used for spatial and temporal monitoring of pollutant hotspots or actively tracking sources of pollutants. They can also be deployed in conjunction with first responders in accidents or natural disasters to provide real-time situational awareness in dangerous or hard-to-access places. In this presentation, Jianguo will mainly talk about the mechanical and electrical design of such tiny jumping robots.

**APRIL 13**

**WEDNESDAY: 5-7PM**

**EVERYDAY JOE'S COFFEE HOUSE**

**144 S. Mason St, Fort Collins, CO**

**RSVP: <http://www.cmmmap.org/scienceEd/scienceCafe/>**

*Food and drinks are provided. Please RSVP so we can plan accordingly.*



Melissa Burt, CMMAP Education and Diversity Manager  
970.491.8706 mburt@atmos.colostate.edu

