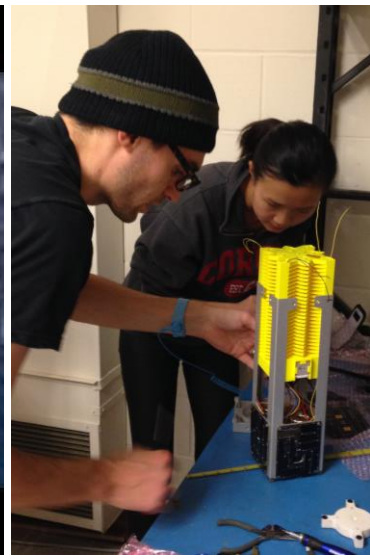
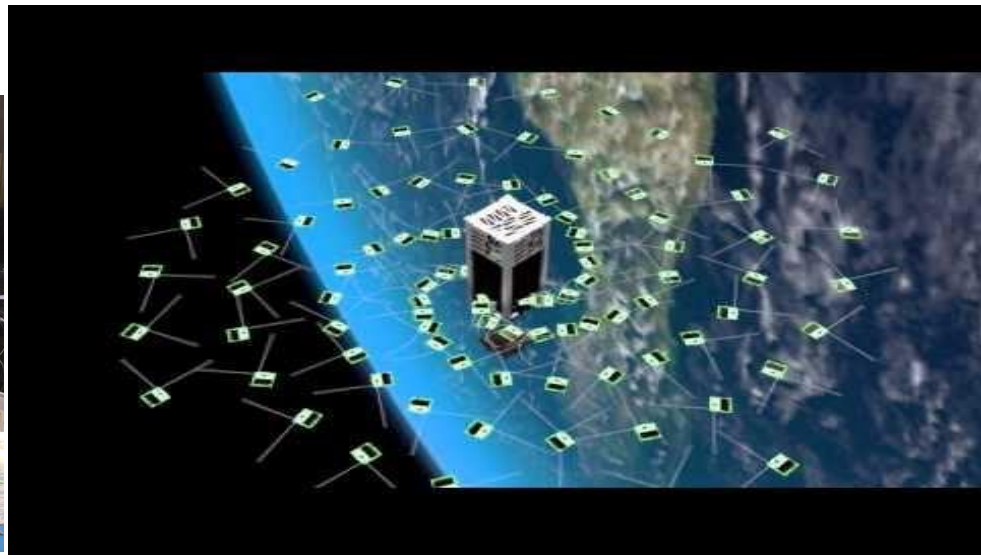
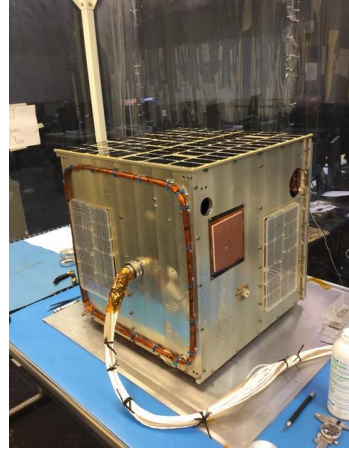


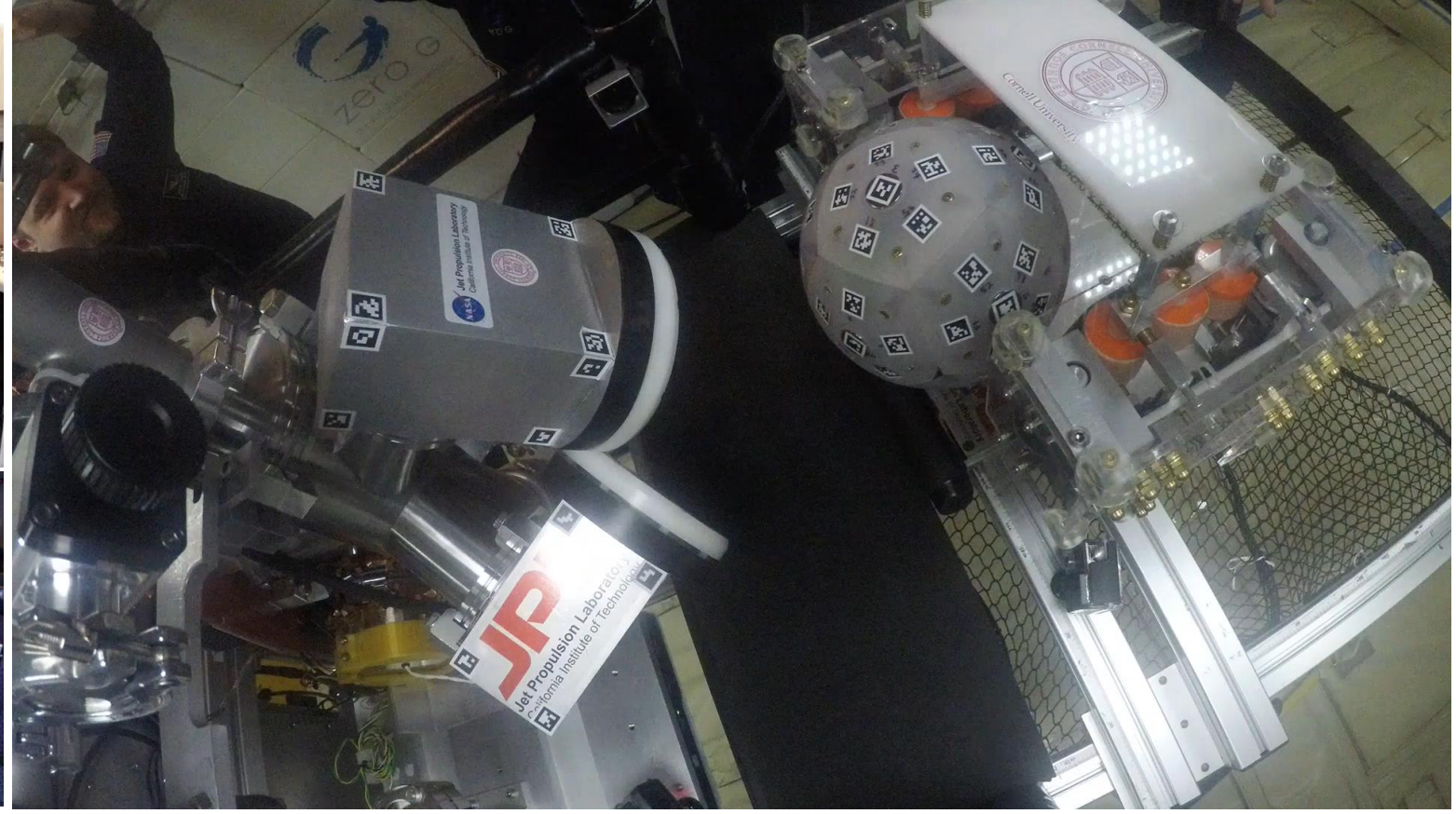
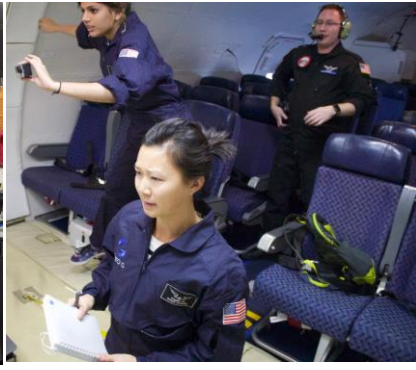
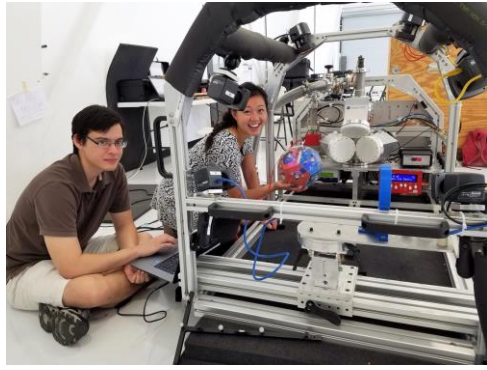
Past Research at Cornell

undergrad high
agility sat CMGs

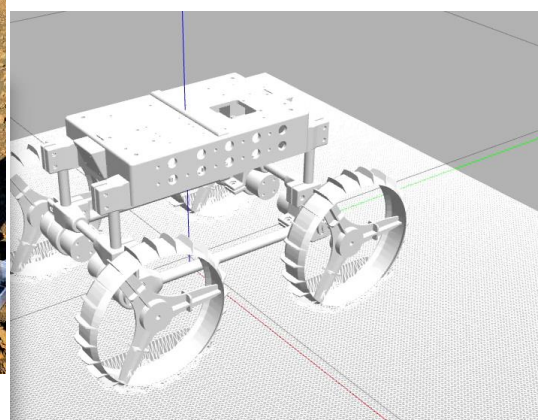


Master's chipsats

PhD: novel dynamics docking

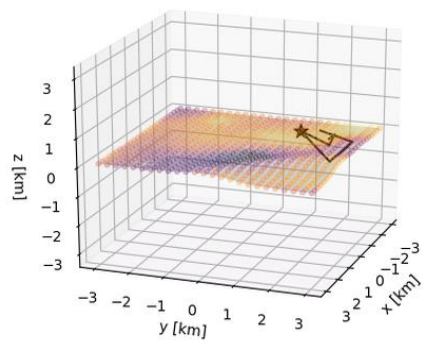


Current Research at Hawaii

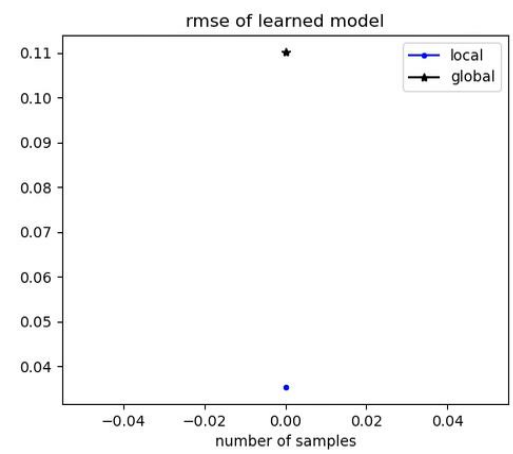
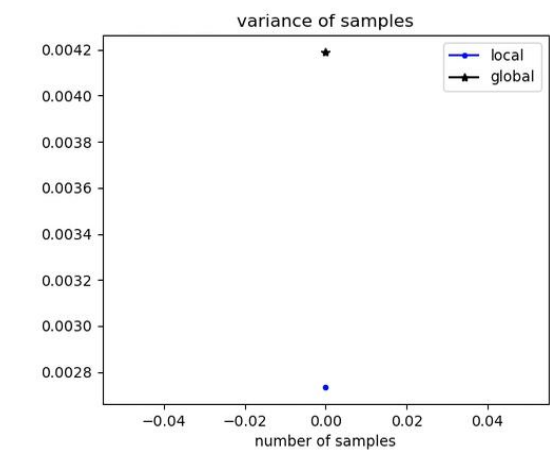
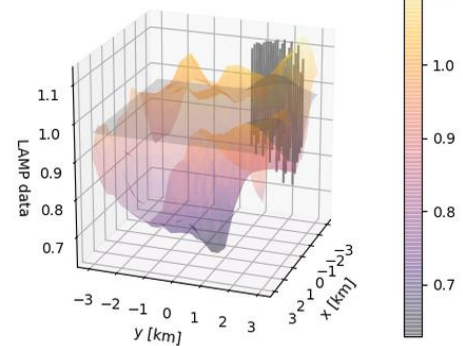


Planetary surface analogues: spectrometer and bevameter

LAMP data on DEM,eXPLORation; position[-2.e+00 1.e+00 5.e-04]

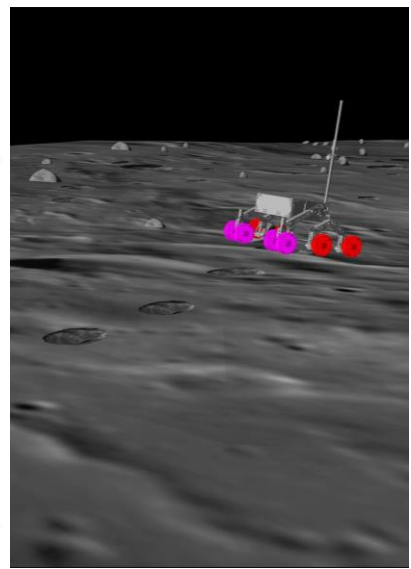


LAMP measured vs predictions

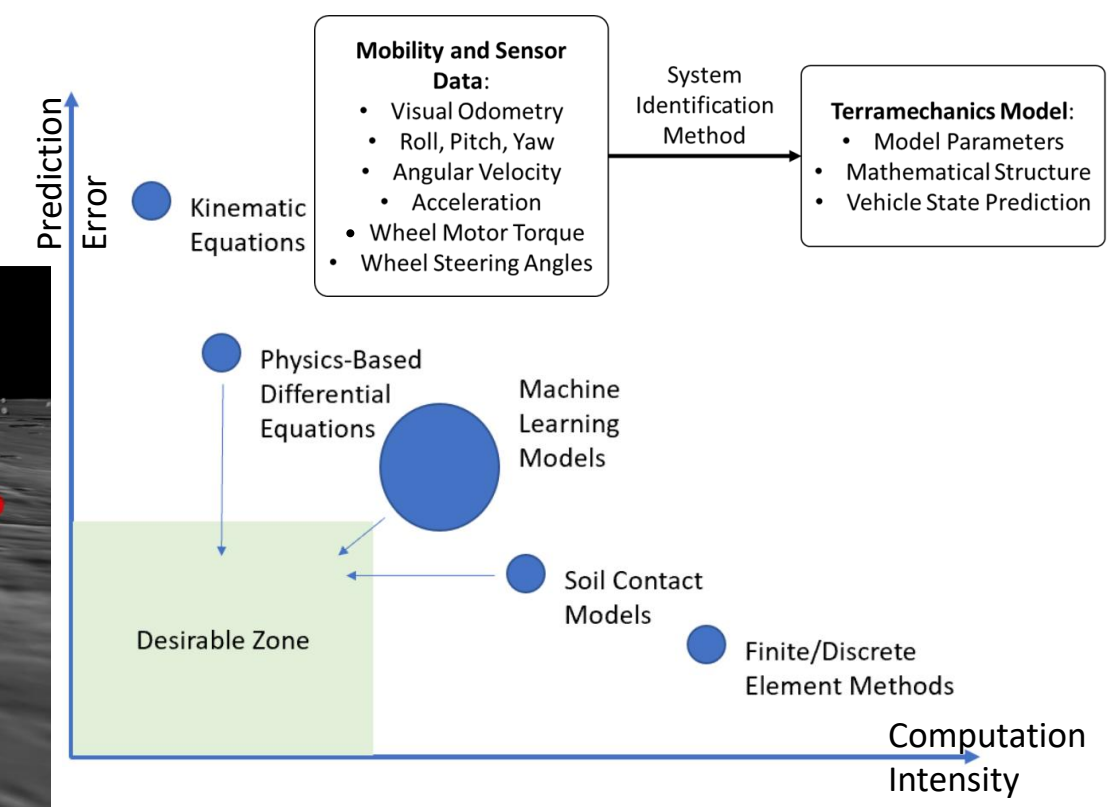


Active learning on planets

Digital twins



Terramechanics & System Identification



Future Research at UW

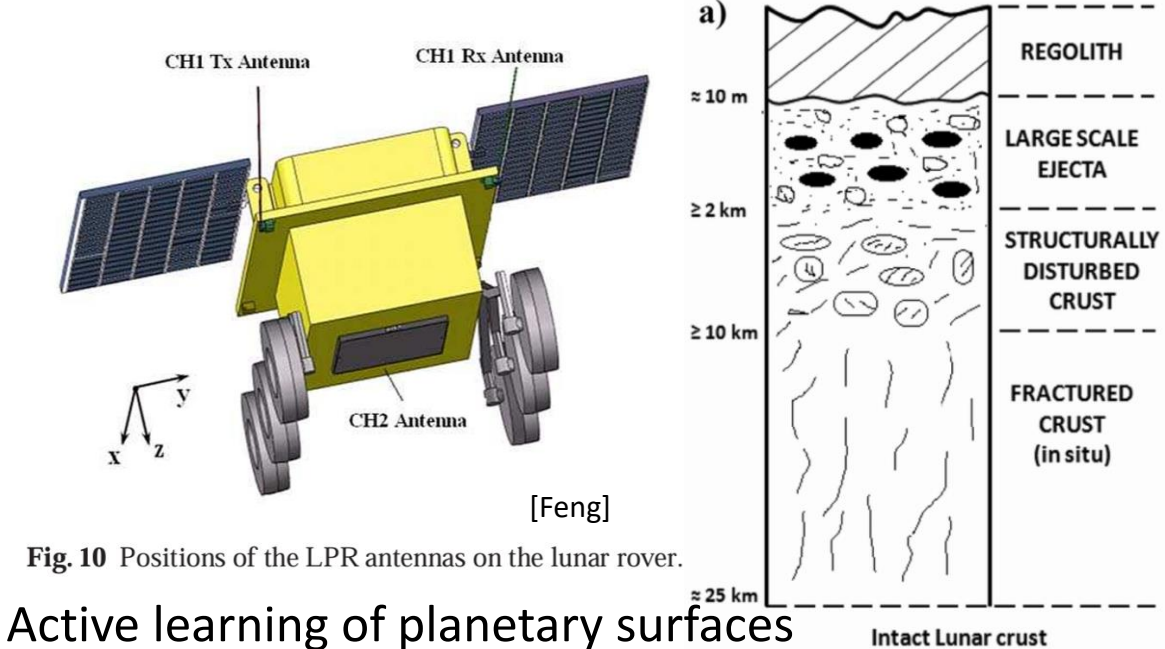
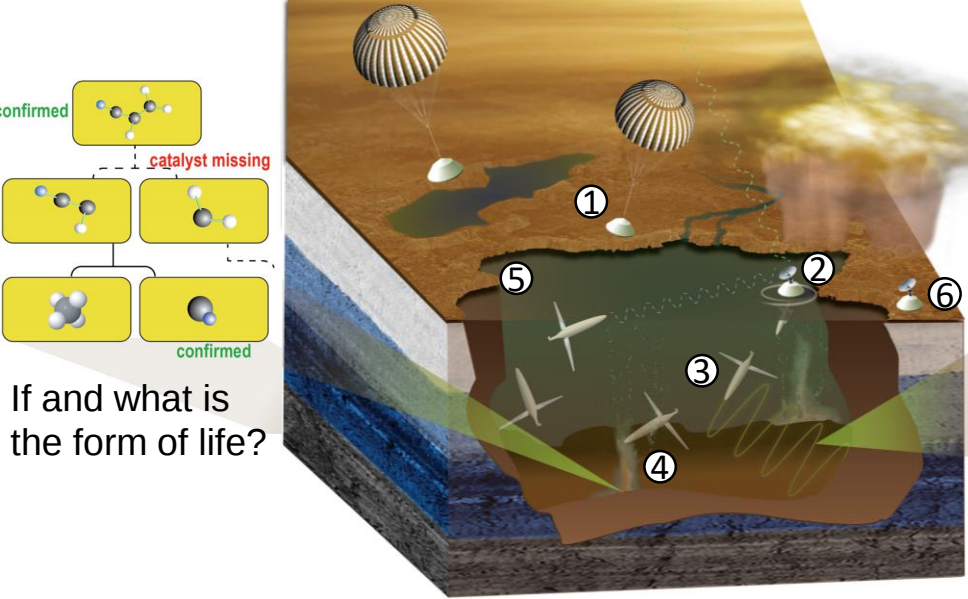
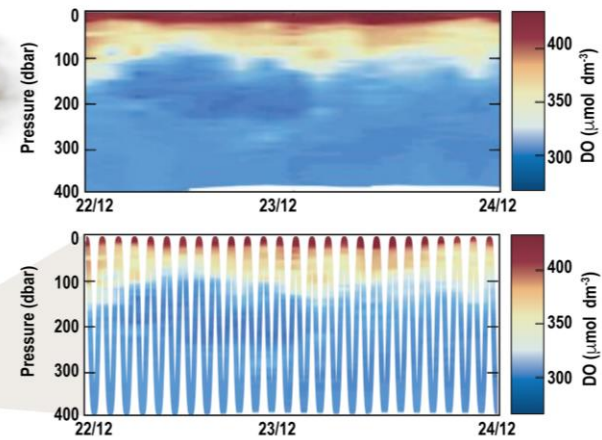
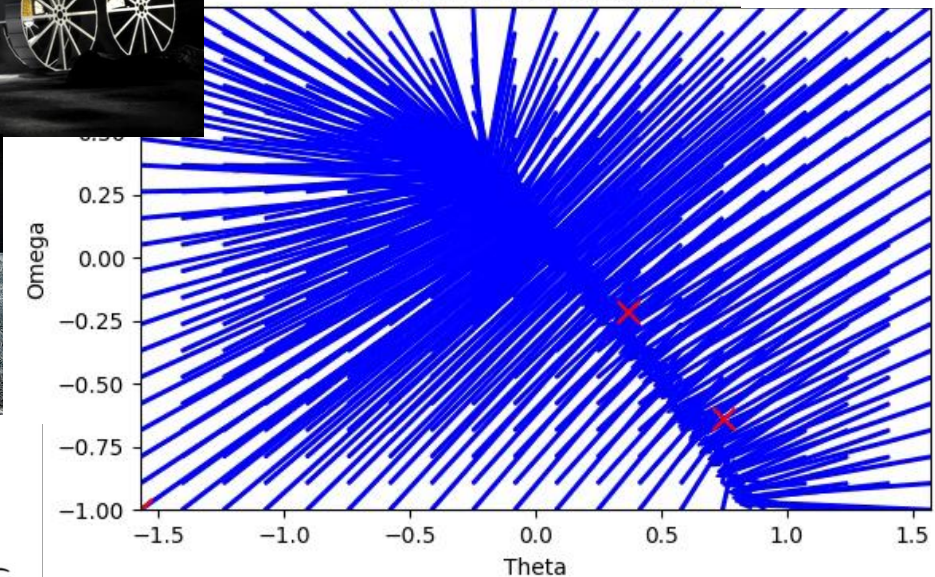
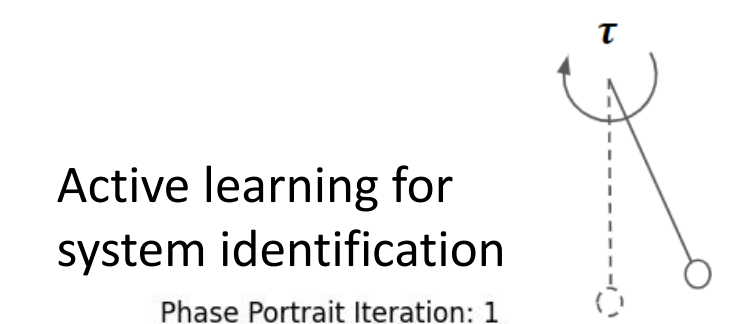
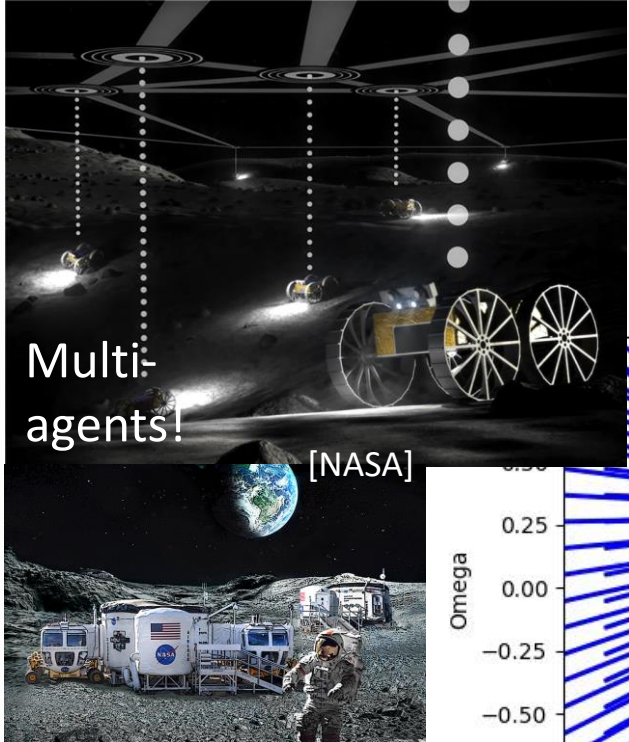


Fig. 10 Positions of the LPR antennas on the lunar rover.

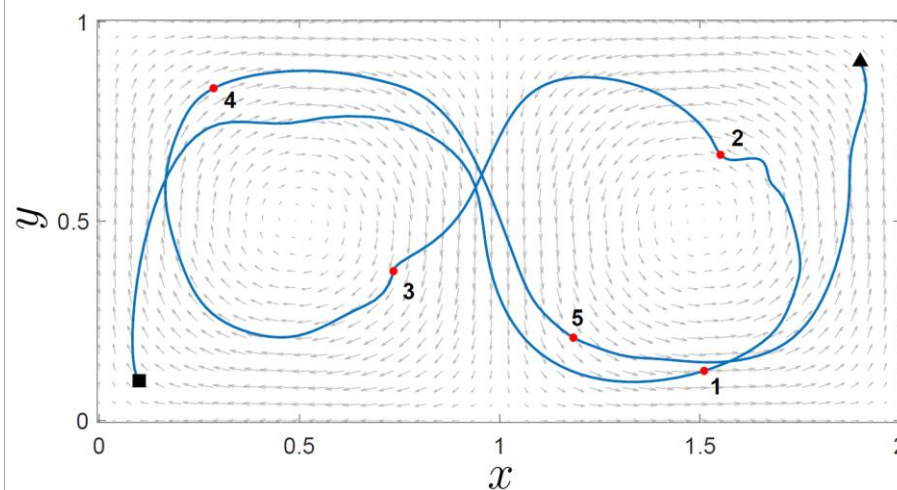
Active learning of planetary surfaces
& of oceans, search for life and reconstructing flow fields



If and what is the form of life?

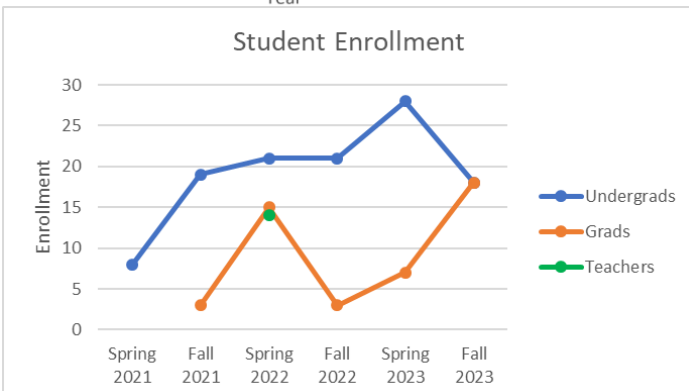


How do fluids move and cycle within a lake system?



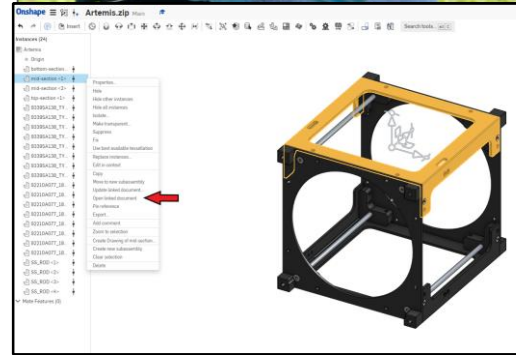
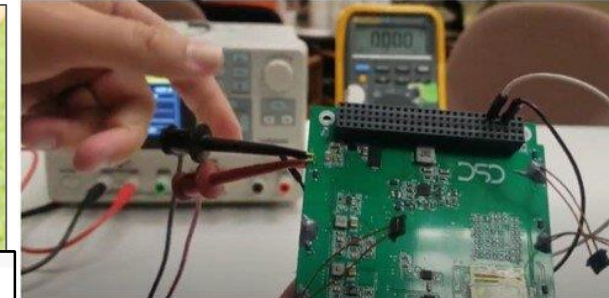
Current Teaching at Hawaii

- EPET/ME 400: Spacecraft Mission Design
 - EPET/ME 301: Space Science and Instrumentation
 - EPET/ME 401: Capstone Project: Producing a Science Satellite
- Outreach college through ME/Electrical Engineering (EE)/Earth Science (ERTH) 699.
- Undergraduate project team advising
- ICS 699/ ME 696: Graduate machine learning seminar in dynamic systems



Future Teaching at UW

- Space Systems Engineering (AA 420, AA 470)
- Machine Learning in Dynamic Systems
- Robot Mechanics: Kinematics, Dynamics, and Control (AE 512)
- Stochastic Estimation and Control (AA 447, AA 549, AA 585, AE 513, AE 514)
- Space Systems Attitude Determination and Control (AA 582)
- Foundations of Machine Learning (CSE 180, CSE 415, CSE 416)
- Foundations of Robotics (AA 591)
- Differential Equations for Engineers
- Linear Algebra for Engineers (AA 547)



Current DEI at Hawaii

- NSF ADVANCE Catalyst – gender equity, institutional data
- NSF AI Institute in Dynamic Systems – data accessibility
- DEI co-chair for NSF AI Institute and International Space Robotics Conference
- Huliamaahi – all-gender restrooms, climate survey, unlearning racism curriculum, speed mentoring
- Women in STEM – SWE, GWiSH, WiDS
- Director of Diversity Initiatives
- Sloan Indigenous Fellows Program

Future DEI at UW

- NSF ADVANCE – speaking to WSGC in January!
 - Institutional data? Climate survey?
- Socioeconomic status – the common link?
 - URM measurable but SEC not?
- Core: advocate mobility and opportunities
 - Data accessibility
 - Mentorship
- Gather qualitative and quantitative data

Data Access is a Diversity Issue

✓ *Wealth $\propto$ Prestige*

Overall Ranking vs Endowment

