Lunar Surface Innovation
CONSORTIUM

Extreme Environments Focus Group October Meeting

October 11, 2022

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Today's Agenda

- LSIC Updates
- LSIC Fall Meeting
- Agenda through December 2022
- Karen's Corner
- Featured Presentations
  - Subgroup Leads Review
- Q&A

LSIC Updates

Funding Opportunities

- Announcement for Partnership Proposals (AFPP) to Advance Tipping Point Technologies
  - Final Proposals Due 11/22/2022
  - https://nspires.nasaprs.com/external/solicitations/summary.do?solId={9987D88F-0A12-5203-FC25-423773FAF134}&path=&method=init

- NASA Innovation Corps Pilot
  - Proposals may be submitted at any time through March 29, 2023, but applications will be reviewed in intervals on the following dates: July 22, 2022; Sept. 16, 2022; Nov. 17, 2022; and Jan 20, 2023
  - https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7b1B42E782-61BB-9834-F20F-44CBEF13C0A6%7d&path=&method=init

- Please visit LSIC website for full list
  - http://lsic.jhuapl.edu/Resources/Funding-Opportunities.php

LSIC Updates

Lunar Community Meetings

- LSIC Fall Meeting November 2-3 (University of Texas, El Paso/Hybrid)
  - Theme: Excavation and Construction
  - Abstracts Due: September 16
  - https://lsic.jhuapl.edu/Events/Agenda/index.php?id=350

- AIAA ASCEND 2022
  - Call for Content Deadline: March 31, 2022
  - Event Date: October 24-26, 2022 (hybrid)
  - https://www.ascend.events/2022

- CLPS 2022: Survive the Night Technology Workshop
  - Venue: Cleveland, OH and Hybrid
  - Event Date: December 6-8, 2022
  - https://www.hou.usra.edu/meetings/clps2022/

LSIC Fall Meeting

- Date: November 2-3
- Location: Hosted by the University of Texas at El Paso (UTEP)/Hybrid Format
- Technical focus: *Excavation and Construction*
  - Lunar and terrestrial construction
  - Lunar proving grounds and testing facilities
  - Early lunar infrastructure
  - Posters and lightening talks
  - Interactive breakout sessions
  - Tours

- Registration deadline is October 18.
- Event page: https://lsic.jhuapl.edu/Events/Agenda/index.php?id=350

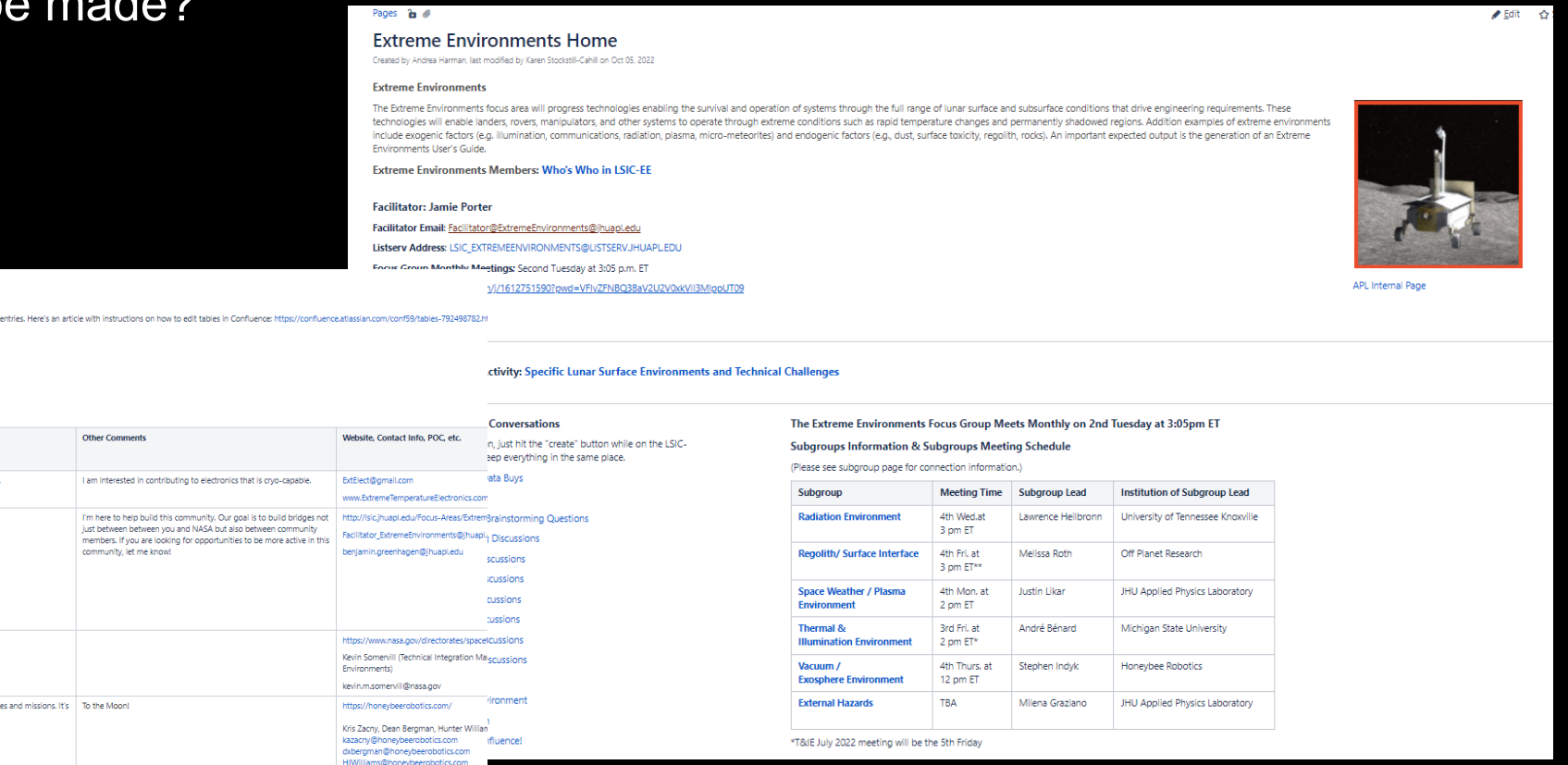
Agenda through December 2022

- October 11, 2022
  - Subgroup Leads Review
  - Speaker: Subgroup Leads
- November 2022
  - Cancel due to LSIC Fall Meeting
- December 13, 2022
  - Kick off for 2023 path forward!!!

Lunar Surface Innovation CONSORTIUM

Karen's Corner

- What would everyone like to see on confluence?
- What changes should be made?
- What are we missing?



Pages

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Extreme Environments Home

Created by Andrea Harman, last modified by Karen Stockstill-Cahill on Oct 05, 2022

Extreme Environments

The Extreme Environments focus area will progress technologies enabling the survival and operation of systems through the full range of lunar surface and subsurface conditions that drive engineering requirements. These technologies will enable landers, rovers, manipulators, and other systems to operate through extreme conditions such as rapid temperature changes and permanently shadowed regions. Addition examples of extreme environments include exogenic factors (e.g. illumination, communications, radiation, plasma, micro-meteorites) and endogenic factors (e.g., dust, surface toxicity, regolith, rocks). An important expected output is the generation of an Extreme Environments User's Guide.

Extreme Environments Members: Who's Who in LSIC-EE

Facilitator: Jamie Porter

Facilitator Email: Facilitator@ExtremeEnvironments@jhuapl.edu

Listserv Address: LSIC_EXTREMEENVIRONMENTS@LISTSERV.JHUAPL.EDU

Focus Group Monthly Meetings: Second Tuesday at 3:05 p.m. ET

APL Internal Page

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Conversations

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The Extreme Environments Focus Group Meets Monthly on 2nd Tuesday at 3:05pm ET

Subgroups Information & Subgroups Meeting Schedule

(Please see subgroup page for connection information.)

Subgroup	Meeting Time	Subgroup Lead	Institution of Subgroup Lead
Radiation Environment	4th Wed.at 3 pm ET	Lawrence Heilbronn	University of Tennessee Knoxville
Regolith/ Surface Interface	4th Fri. at 3 pm ET**	Melissa Roth	Off Planet Research
Space Weather / Plasma Environment	4th Mon. at 2 pm ET	Justin Likar	JHU Applied Physics Laboratory
Thermal & Illumination Environment	3rd Fri. at 2 pm ET*	André Bénard	Michigan State University
Vacuum / Exosphere Environment	4th Thurs. at 12 pm ET	Stephen Indyk	Honeybee Robotics
External Hazards	TBA	Milena Graziano	JHU Applied Physics Laboratory

*T&IE July 2022 meeting will be the 5th Friday

Who's Who in LSIC-EE

Created by Benjamin Greenhagen, last modified by Peter Brehm on Aug 15, 2022

Make sure that you stay on the radar of *all* of NASA and the rest of the community! Fill out the table below for your institution; don't be shy! Please don't delete other entries. Here's an article with instructions on how to edit tables in Confluence: https://confluence.atlassian.com/conf59/tables-792498782.h

Other Focus Groups:

- Who's Who in DM
- Who's Who in Extreme Access (EA)
- Who's Who in E&C
- Who's Who in ISRU
- Who's Who in SP

Who Are You? (Individual or Institution)	What Do You Do?	What Do You Want Others to Know About You?	Other Comments	Website, Contact Info, POC, etc.
Randall Kirschman, Ph.D.	Consulting and courses on electronic devices and hardware, particularly for extreme temperatures.	I have been involved with R&D for cryogenic electronics for a long time.	I am interested in contributing to electronics that is cryo-capable.	ExtElect@gmail.com www.ExtremeTemperatureElectronics.com
Ben Greenhagen, LSIC-EE FG Facilitator	As the LSIC-EE Facilitator, I help to form a collaborative alliance of NASA, industry, academia, non-profits and government in areas relevant to Extreme Environments. My research interests focus on thermal emission spectroscopy from airless bodies. I love flight missions and am the Deputy PI of the LRO Diviner Lunar Radiometer, a Co-I of Lunar Flashlight, a Co-I of L-CIRiS, and a Co-I of the BepiColombo MERTIS. I also run a laboratory spectroscopy facility, the Simulated Airless Body Emission Laboratory.		I'm here to help build this community. Our goal is to build bridges not just between between you and NASA but also between community members. If you are looking for opportunities to be more active in this community, let me know!	http://lsic.jhuapl.edu/Focus-Areas/Extrem Facilitator_ExtremeEnvironments@jhuapl benjamin.greenhagen@jhuapl.edu
Kevin Somervill NASA POC	As the NASA POC, I help to communicate and coordinate between the LSIC forum and NASA. While my background is in the development of electronics for space applications, I'm keenly interested in how NASA can help to develop commercial capabilities and further academic and industrial research.	I can help to connect you with people and organization in NASA.		https://www.nasa.gov/directorates/space Kevin Somervill (Technical Integration Ma Environments) kevin.m.somervill@nasa.gov
Honeybee Robotics	Honeybee focuses on developing space mining robots for exploration and ISRU. We develop sampling and sample handling systems for all extra-planetary environments. We provide hardware from flight grade actuators to robotic systems for the rigors of difficult space environments.	We work with NASA, Industry and Academia to develop new technologies and missions. It's more fun to explore together!	To the Moon!	https://honeybeerobotics.com/ Kris Zacny, Dean Bergman, Hunter Willian kazacny@honeybeerobotics.com dxbergman@honeybeerobotics.com HJWilliams@honeybeerobotics.com sjindyk@honeybeerobotics.com
Karen Stockstill-Cahill LSIC-EE Subgroup Lead Coordinator	As the LSIC-EE Subgroup Lead Coordinator, I assist the LSIC-EE subgroup leads to generate participation within their groups through the monthly subgroup meetings and Confluence communication portal. I work closely with both the LSIC-EE Facilitator and the subgroup leads to create and update content on their Confluence pages to generate the information needed to return to the Moon for areas relevant to Extreme Environments. My research interests focus on UV-MIR spectroscopy and space	I am here to support the LSIC-EE (& broader LSIC) efforts to build collaborations within the NASA, industry, academia, non-profits, and government entities. I love to work as a part of a team through a range of types of work!	I'm willing to go to the Moon too!	http://lsic.jhuapl.edu/Focus-Areas/Extrem https://civspace.jhuapl.edu/people/karen karen.stockstill-cahill@jhuapl.edu

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