

Synthesis

Track 4: Space Disasters

Ontology Summit 2022

Dr. Ravi Sharma & Robert J. Rovetto

Ontology Summit 2022 Program Committee

Co-Champions Track 4 - Space Disasters

Summary

- Ravi Sharma, Chair Ontology Summit 2022
- Scott Hull, NASA
- Robert Rovetto, Ontology Summit 2022 Committee

Dr. Ravi Sharma

- [Presentation](#) – overlapping with Track 3 - Environmental Disasters
- Detailed & informative overview of active & passive sensors
- Drawing on 50 years of aerospace experience
- *Keywords:* satellites, Sentinel, Landsat, NASA LANCE, Level 0-4 data products, Hierarchical Data Format (HDF), NASA Terra, Aqua & Aura missions, Environmental sensing
- drravisharma@gmail.com
 - Ontolog Forum Member & Ontology Summit 2022 Chair

Dr. Scott Hull with Ivonne Rodriguez

- [Presentation link](#)
- Crewed vs. Robotic Missions - “risks due to remote locations, radiation, space debris, and other unusual conditions”.
- NASA, Orbital Debris Program Office
 - Meteoroids Orbital debris (artificial), other artificial satellites.
 - Tracked debris primarily at 550km alt.
 - “10,000 times more potentially lethal untracked debris than tracked objects”. Meteoroids smaller and more difficult to shield against.
- Risk mitigation
- Preventing debris creation

Thanks to Scott for providing some key take-aways.

Robert J. Rovetto

- Overview of space hazards – prelim classification
 - Echoing orbital debris hazard
 - Hazards from artificial activity & Natural phenomena
 - Spacecraft operations
 - Astrometeorology/Space weather
 - Extra-solar phenomena

Orbital Space Domain Knowledge Modeling

About Services Models

Space Knowledge Representation



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- Overview of Space Ontology project
 - Developing a suite of ontologies & other knowledge organization systems for space/astro & spaceflight, e.g. the orbital debris ontology, astronomical environment ontologies, misc.
 - Project plans, e.g., vocab catalogs, mapping/synchronization, formalisms, concept diagrams, etc.
 - <https://purl.org/space-ontology> | <https://ontospace.wordpress.com/contact>
 - *Actively open to formal collaborations, PhD study options, and other support to R&D.*

Note: also have a personal project on maritime ontology