

Environmental Disasters (Synthesis Track 3)

All Speakers, and
Sessions Contributors

Ravi Sharma and Gary
Berg Cross - Co
Champions



Synthesis – (Environmental Disasters)

Speakers

1. Dave Jones and Karen Moe ESIP Cross-Domain Collaboratory: Challenges and Opportunities
2. Krzysztof Janowicz Knowledge Graphs and Disaster Mitigation
3. Andrew Dougherty - Personal Emergency Management using the Free Life Planner
4. Moving from data to interoperable information and knowledge in climate research
 1. Barbara Magagna / Sirko Schindler: How to make climate research interoperable with I-ADOPT from field observation to data publication
 2. J. Barrott / S. Bharwani: How to make knowledge interoperable: examples from weADAPT and the Connectivity Hub
5. Next Week: Yolanda Gil - Ontologies for Exploring Interventions for Disaster Preparation and Response
6. Today Dr Ravi Sharma - Earth Observations to monitor disasters - sensors, platforms, image-data and metadata

Synthesis – (Environmental Disasters)

1. ESIP Clusters -Karen Moe and Dave Jones
 - Operational Readiness Levels (ORLs)
 - Disaster Lifecycle Cluster Engaging Users
 - Accelerating Research to Operations
 - GeoCollaborate Demonstration
 - Real-Time Data Access and Sharing Across platforms and devices
 - Make Data Matter | Enable Decision Making

Can the Ontology Summit participants point us to ‘best practices’ for deciphering the FEMA terms.

- Note they have collected an impressive list with
- multiple definitions/examples of terms as I just
- looked at Acceptable Risk and Accident.
- How can we move forward to link terms and
- integrate them into a test case for connecting with
- communities?

Synthesis – (Environmental Disasters)

- Krzysztof Janowicz, UCSB & UniVie (PI) et. al.
- Knowledge Graphs and Disaster Mitigation. We provide area briefings within seconds for any region
- KnowWhereGraph aims at providing area briefings within seconds for any region on Earth to answer questions such as
- By doing so, we assist decision-makers and data scientists in rapidly enriching their data with millions of connected, up-to-date facts at the human-environment interface to gain the situational awareness required for good decision-making.
- Our ultimate goal is to flip the 80/20 bottleneck on its head.
- “What is here?”
- “What happened here before?”
- “Who knows more?”
- “How does it compare to other regions or previous events?”

Synthesis – (Environmental Disasters)

With KnowWhereGraph GeoEnrichment

- We don't serve links to datasets; we serve every single data record in these datasets in a searchable and AI-ready way.
- We don't provide yet another region (e.g., county) specific portal; we serve data across many different types of region identifiers.
- We don't make you download, overlay, and analyze different datasets on various topics relevant to your information needs; we answer your questions directly and based on pre integrated data.
- We don't go offline with the next technology change, e.g., Flash, Silverlight; we rely on a distributed, internationally standardized open-source technology paradigm.

Spatiotemporally explicit KG embeddings that are invariant under syntactic changes

Key Research Qs How to detect and mitigate bias in Geographic knowledge graphs

Synthesis – (Environmental Disasters)

3. Andrew Dougherty

I will then backport as much as feasible from my private version, which I've written these last 5 years.

This means that a working version of **FRDCSA** is now installable and LIVE (i.e. no longer a terminal branch of the project).

Synthesis – (Environmental Disasters)

3. Andrew Dougherty

Various kinds of computational problems:

- Decision Problem
- Search Problem
- Counting Problem
- Optimization Problem
- Function Problem

Synthesis – (Environmental Disasters)

3. Andrew Dougherty

- Refereced Tsunami, Fires,
- FRDSCA based on logic axioms and collection and analysis of multiple software codes and apps
- Axioms, Proofs relating to Cyc were also mentioned.
- Automated software and AI
- Etc.

Synthesis – (Environmental Disasters)

- How to make climate research interoperable with I-ADOPT from field observation to data
- The I-ADOPT Ontology
- <https://w3id.org/iadopt>
- Interoperability framework
- Catalog of Terminologies
- GitHub design patterns, etc.
- Guide for minting new variables.

4. Climate Panel

EDT Discussion and Question/Answer

- To what degree, do you feel your challenges might be addressed by the approaches presented?
- After hearing about I-ADOPT, weADAPT and the Connectivity Hub, what aspects would you be interested in collaborating on?
- Sirko Schindler: @Robert we're building a catalog of terminologies here: <https://i-adopt.github.io/terminologies/list/all>
- Great adaptive integration and graphic presentation.

Synthesis – (Environmental Disasters)

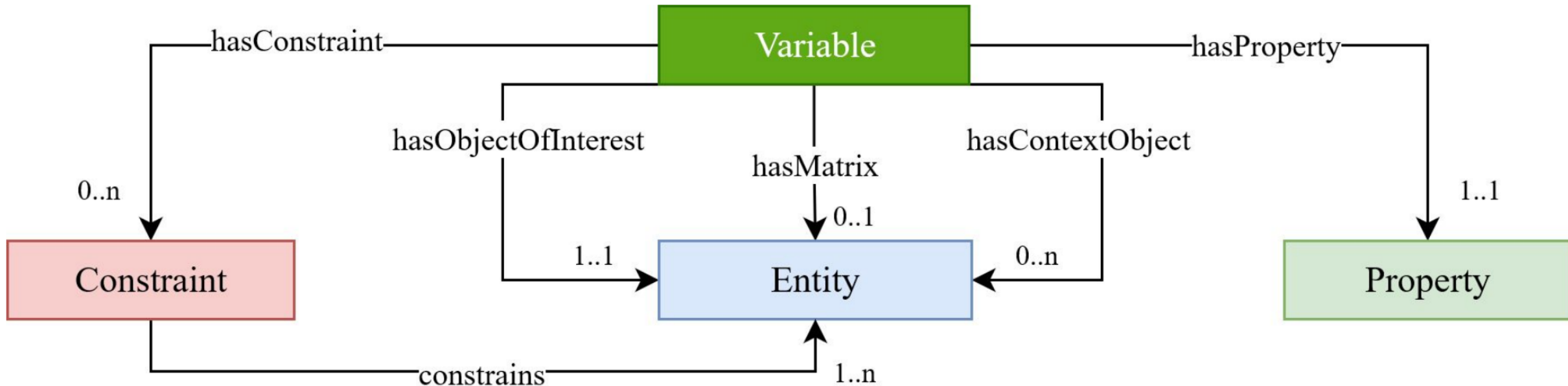
I-ADOPT Interoperability Framew...

11 / 23

—

92%

+



4. Climate Panel