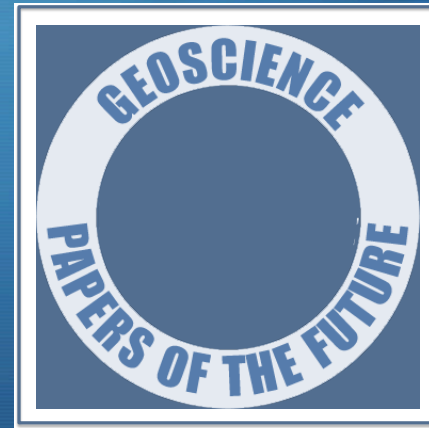
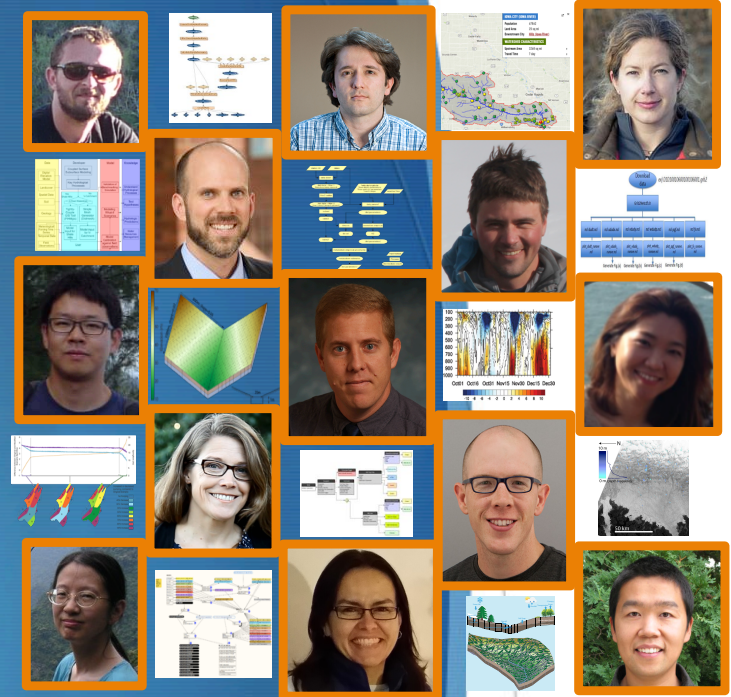


# The Geoscience Paper of the Future

Erin Robinson,  
Foundation for Earth Science  
Yolanda Gil, USC/USI  
Chris Duffy, PSU  
Chris Mattmann, JPL  
Scott Peckham, CU



<http://www.ontosoft.org/gpf>



EarthCube



Field photos

Code

Data

Lab notebook





# Geoscience Paper of the Future

## Modern Paper

### Text:

Narrative of the method, some data is in tables, figures/plots, and the software used is mentioned

### Data:

Include data as supplementary materials and pointers to data repositories

## Open Science

### Sharing:

Deposit data and software (and provenance/workflow) in publicly shared repositories

### Open licenses:

Open source licenses for data and software (and provenance/workflow)

### Metadata:

Structured descriptions of the characteristics of data and software (and provenance/workflow)

## Reproducible Publication

### Software:

For data preparation, data analysis, and visualization

### Provenance and methods:

Workflow/scripts specifying dataflow, codes, configuration files, parameter settings, and runtime dependencies

## Digital Scholarship

### Persistent identifiers:

For data, software, and authors (and provenance/workflow)

### Citations:

Citations for data and software (and provenance/workflow)



# Software Stewardship for the Geosciences

<http://www.ontosoft.org/>

Yolanda Gil  
(USC/ISI  
& USC/CS)



Chris  
Duffy  
(PSU)



Scott  
Peckham  
(CU Boulder)



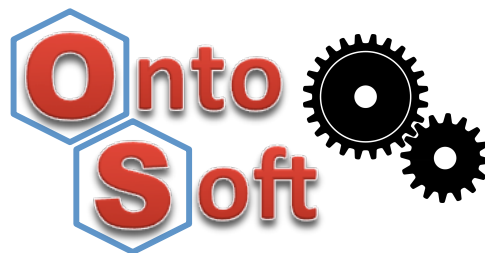
Chris  
Mattmann  
(NASA/JPL  
and USC/CS)



Erin  
Robinson  
(FES/ESIP)

## Community

- Recommender system
- Interoperability



## Publication

- Structured metadata
- Interactive advice

## Learning

- Best practices
- Multimedia lessons



# The Geoscience Papers of the Future Initiative

1. A Special Issue of a journal in all geoscience areas that includes only geoscience papers of the future



2. Training sessions for geoscientists to learn best practices in software and data sharing, provenance documentation, and scholarly publication





# GPF Pioneer Authors



**Cedric David**, NASA/JPL  
Hydrology modeling



**Ibrahim Demir**, U. of Iowa  
Hydrology sensor networks



**R. W. Fulweiler**, Boston U.  
Biogeochemistry in marine ecology



**J. Goodall/B. Essawy**, U.  
Virginia, Hydrology/visualization



**Leif Karlstrom**, U. Oregon  
Volcanic vent clustering



**Kyo Lee**, NASA/JPL  
Regional climate modeling



**Heith Mills**, U. Houston  
Geochemistry, marine biology



**Ji-Hyun Oh**, USC  
Tropical meteorology



**Suzanne Pierce**, UT Austin  
Hydrogeology for decision support



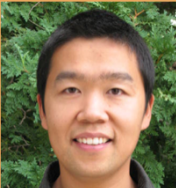
**Allen Pope**, U. Colorado  
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**Mimi Tzeng**, Dauphin Island  
Sea Lab, Ocean fisheries



**Sandra Villamizar**, UC Merced  
River ecohydrology



**Xuan Yu**, U. Delaware  
Hydrologic modeling

# Call for Papers: Special Issue of AGU's Earth and Space Science Journal



American Geophysical Union



## Earth and Space Science

AN OPEN ACCESS AGU JOURNAL

Special Section: Geoscience Papers of the Future

Details at: <http://tinyurl.com/ess-gpf>

- ★ Submissions open: July 1, 2015
- ★ Submissions closed: January 1, 2016
- ★ Submission categories:
  - ★ Research articles
  - ★ Technical reports

### Editors



Chris Duffy  
PSU



Yolanda Gil  
USC



Karan Venayagamoorthy  
CSU

Cedric David  
NASA/JPL



Scott Peckham  
U. Colorado





# OntoSoft GPF 2015 Training Sessions

## ★ Webinars:

- ★ **August 4**, 2015: 10am PDT
- ★ **September 16**, 2015: 10am PDT
- ★ **November 9**, 2015: 10am PDT

RSVP: [ontosoft@gmail.com](mailto:ontosoft@gmail.com)

Updates will be posted at  
<http://www.ontosoft.org/gpf>

## ★ Face-to-face training sessions:

- ★ **July 16**, 2015: **ESIP** Summer Meeting, Asilomar, CA
- ★ **August 17**, 2015: **WHOI**, Woods Hole, MA
- ★ **September 28**, 2015: **NCAR**, Boulder, CO
- ★ **September 28**, 2015: **USGS**, Denver, CO
- ★ **October 9**, 2015: **LDEO**, New York, NY
- ★ **October 28**, 2015: **NASA/JPL**, Pasadena, CA
- ★ **October 30**, 2015: **UT Austin**, Austin TX
- ★ **November 2**, 2015: **GSA**, Baltimore, MD
- ★ **December 2015**: **AGU Fall Meeting**, San Francisco, CA