

F*** Yeah Fluid Dynamics:

Getting started in science communication

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APS Division of Fluid Dynamics

Denver, CO

20 November 2017



On science communication

<http://nicolesharp.com/talks>

NICOLE SHARP

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APS Division of Fluid Dynamics Presentations

- 2017: "F*** Yeah Fluid Dynamics: Getting into science communication," Slideshow
- 2016: " 'In a sea of sticky molasses': The physics of the Boston Molasses Flood," Slideshow (.pptx, 43.4 MB)
- 2016: "F*** Yeah Fluid Dynamics: Inside the science communication process," Slideshow (.pptx, 22 MB)
- 2015: "F*** Yeah Fluid Dynamics: On science outreach and appealing to broad audiences," Slideshow (.pptx, ~9.5 MB)
- 2013: "Discrete surface roughness effects on a blunt hypersonic cone in a quiet tunnel," Slideshow (.pdf)
- 2013: "F*** Yeah Fluid Dynamics: Lessons from online outreach," Slideshow (.pdf)
- 2012: "Surface roughness effects on a blunt hypersonic cone," Slideshow (.pdf)
- 2008: "Complex dynamics of a boundary layer with free stream turbulence," Slideshow (.pdf)
- 2007: "Measurements in a boundary layer with intense free stream turbulence," Slideshow (.pdf)

← This talk

← Last year's talk

Or email: fyfluids@gmail.com

FYFD in brief...

Established: July 2010

Platform: Tumblr

Format: new posts M-F

Posts: 1850+

Readers: 259,500+

Featured by:

The New York Times
the guardian

SPIEGEL

WIRED

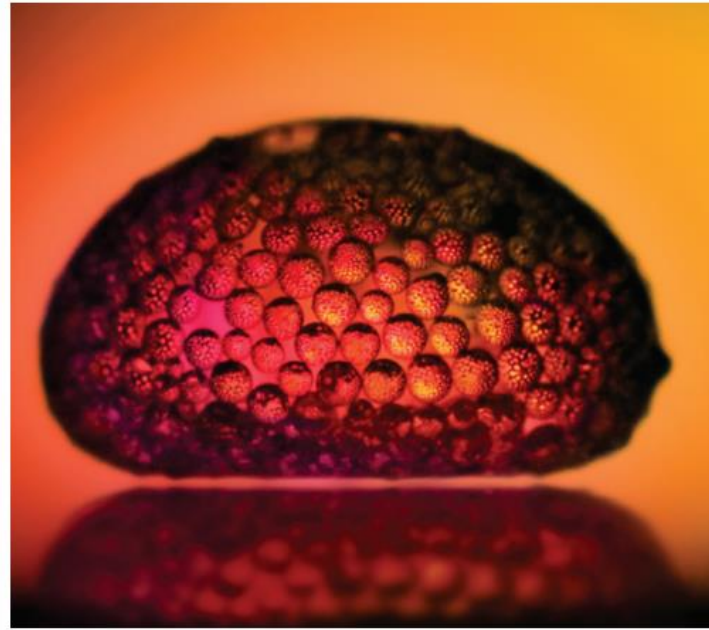
physicsworld

npr

GIZMODO

io9

The Atlantic
tumblr.



A [Leidenfrost](#) droplet impregnated with [hydrophilic](#) beads hovers on a thin film of its own vapor. The Leidenfrost effect occurs when a liquid touches a solid surface much, much hotter than its boiling point. Instead of boiling entirely away, part of the liquid vaporizes and the remaining liquid survives for extended periods while the vapor layer insulates it from the hot surface. Hydrophilic beads inserted into Leidenfrost water droplets initially sink and are completely enveloped by the liquid. But, as the drop [evaporates](#), the beads self-organize, forming a monolayer that coats the surface of the drop. The outer surface of the beads dries out, trapping the beads and causing the evaporation rate to slow because less liquid is exposed. (Photo credit: [L. Maquet et al.; research paper](#) - pdf)

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<http://fyfluidynamics.com>

tumblr

259,500+ followers

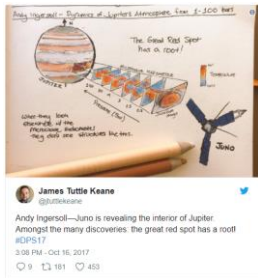


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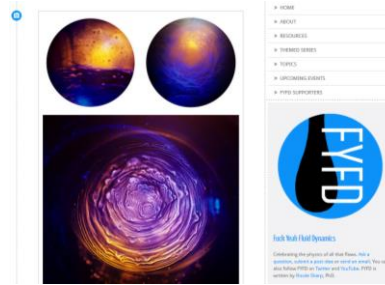
You Tube

5500+ subscribers

Science communication comes in all forms



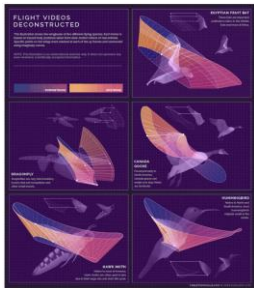
Social Media



Blog



Comic (xkcd)



Poster (E. Lutz)



Video



Song (Acapella Science)

The Extremes of Fluid Dynamics

Nicole Sharp, Ph.D.
APS New England Section Meeting
Wheaton College
Wheaton, MA
3 April 2016



Presentation



Webpage



Dance (Dance Your PhD)

Spotlight: James Tuttle Keane

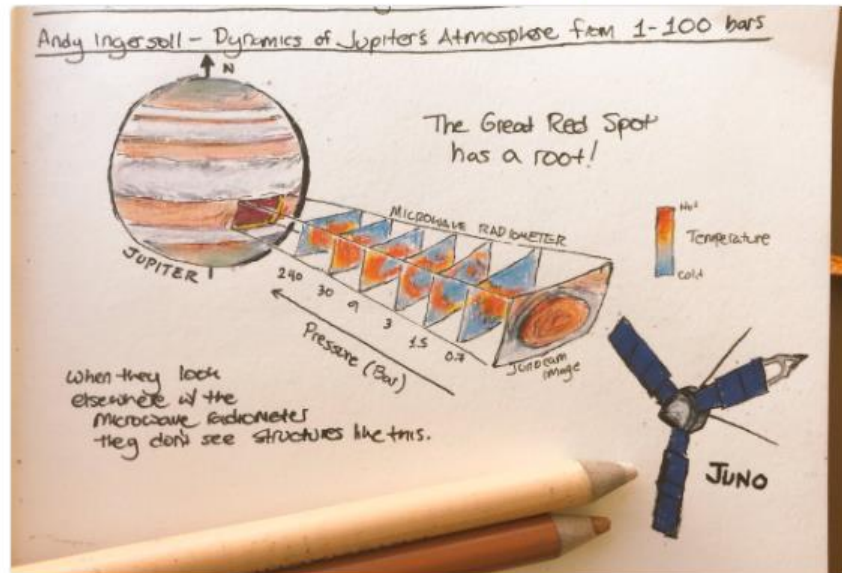


James Tuttle Keane

@jtuttlekeane

Follow

Andy Ingersoll—Juno is revealing the interior of Jupiter. Amongst the many discoveries: the great red spot has a root! #DPS17



5:08 PM - 16 Oct 2017

Creative conference notes as public outreach.

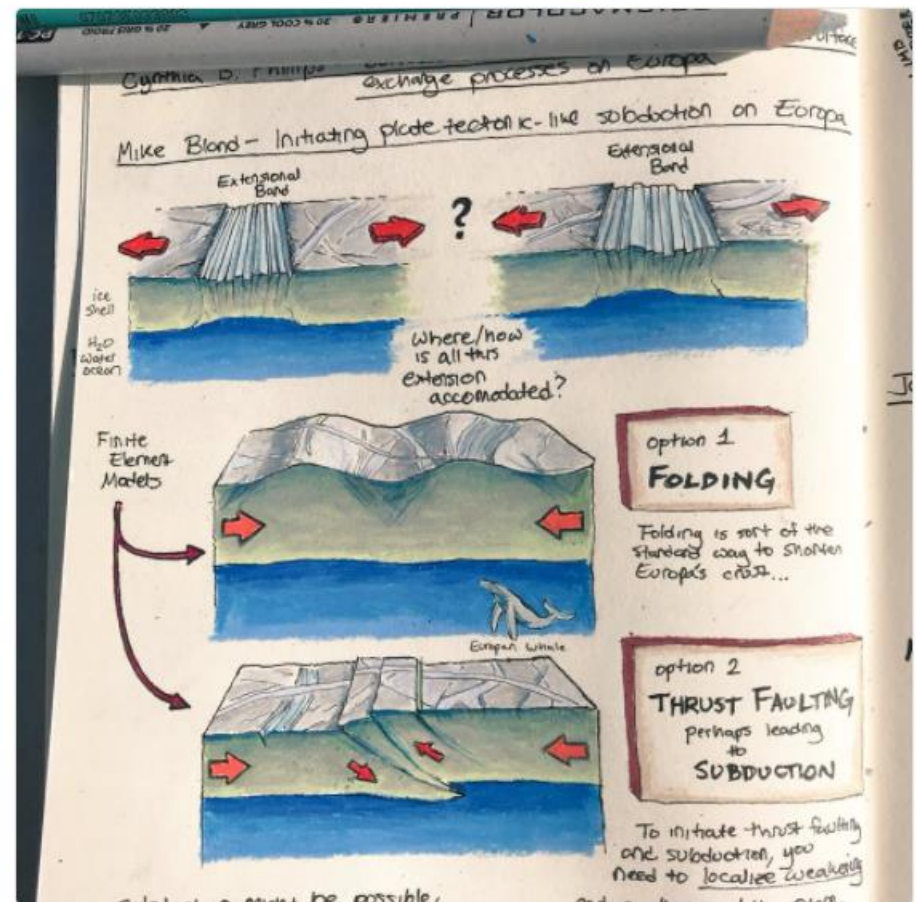


James Tuttle Keane

@jtuttlekeane

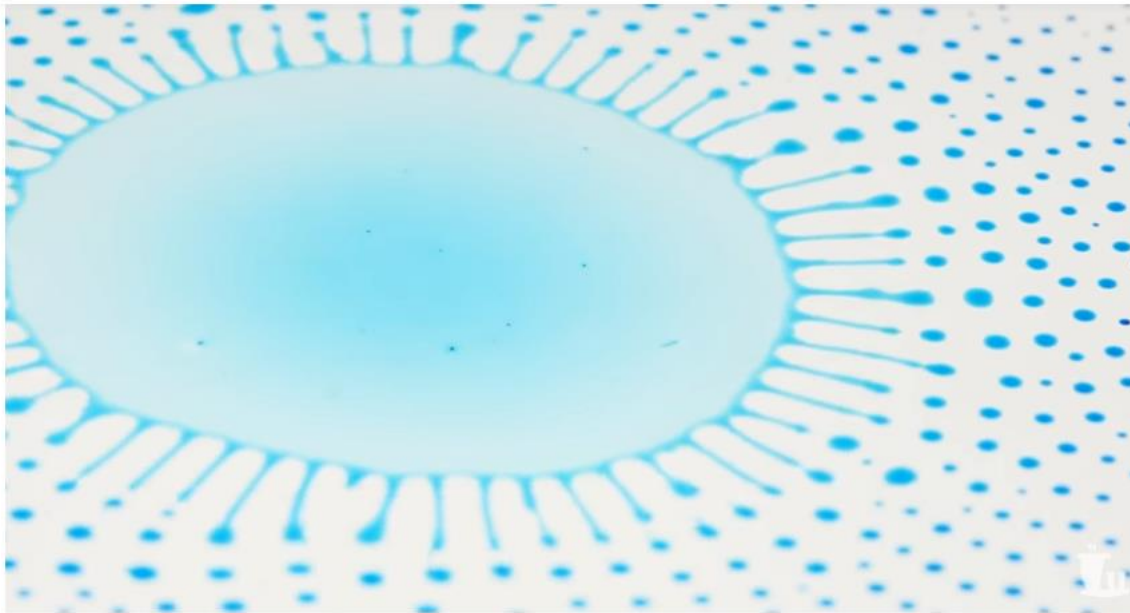
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Mike Bland—Subduction of Europa's icy crust might happen if the conditions are just right (otherwise the crust folds) #DPS17



4:50 PM - 17 Oct 2017

Spotlight in Fluids: The Lutetium Project



Bursting droplets

14,142 views



94



0



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The Lutetium Project

Published on Mar 7, 2017

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Music for a mesmerizing research experiment, which just made the cover of the journal Physical Review Letters, and which you can even do at home!

↓ More infos and links in the description! ↓

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**Microfluidics Adventures #1:
Physics at the microscale**

The Lutetium Project
635 views



Never-ending bouncing droplets

The Lutetium Project
9.8K views



Droplets with a twist

The Lutetium Project
2.2K views



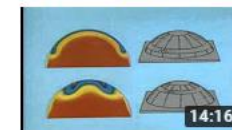
On the surface of liquids

The Lutetium Project
1.1K views



**Tunnel effect of walking droplet
trapped in a square box**

heligone
10K views



**Thermocapillary Convection in
Liquid Droplets**

NASA STI Program
8.1K views



Dual walkers: drops and waves

The Lutetium Project
3.3K views

<https://www.lutetium.paris/>

Spotlight in Fluids: Lib Lab



lib lab



Lib Lab Episode 4: Vortices

3,345 views

55 0 SHARE

**Corvallis-Benton County Public Library**

Published on Jun 21, 2017

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Vortex rings are an amazing phenomenon, and with a bit of added smoke look absolutely brilliant, but how do they work? Lets find out in this exciting and musical 4th episode of Lib Lab featuring the Oregon State University Drum Line! Learn about vortex rings and how to make your own Vortex

[SHOW MORE](#)

Lib Lab Episode 2: Solar Eclipse

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1.3K views

LIB LAB Library Laboratory Pilot Episode: Make your own rocket

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Lib Lab Episode 3: Soft Robots

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649 views

LIB LAB Episode 5: 5 ways to watch the Eclipse Safely!

Corvallis-Benton County Public Libr
934 views

Why incompetent people think they're amazing - David Dunning

TED-Ed
Recommended for you
New

EXPERIMENT - Salt Crystals Growing - Time Lapse (Micro)

Chemical bouillon
Recommended for you

Shadow Bands! Eclipse Follow Up

Corvallis-Benton County Public Libr
79 views

<https://cbcpubliclibrary.net/liblab/>



Figuring out what fits for you



Figuring out what fits for you

COSEE BI Wizard

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WIZARD STEPS

[Project Information](#)[Step 1: Audience](#)[Step 2: Budget](#)[Step 3: Activity](#)[Step 4: Project Description](#)[Step 5: Evaluation](#)[Summary](#)

Step 1c: Audience Venue

Based upon your audience selection, the following is a list of potential venues and/or mechanisms by which you can deliver your message to this audience. Select a venue and proceed on to the next step of the wizard.

Please choose a venue you would like to work in.

- ☒ Community Outreach Events/Projects
- ☐ Multimedia (Websites, Podcasts, Print)
- ☐ Museums, Science Centers, Aquariums, Zoos

Description:

Scientists involve the community in research projects or provide tours and lectures to community groups and organizations.

Benefits of working in this Venue:

Potential to reach a larger audience and impart more information for a deeper understanding. Also, this self selecting for science interested audience and working in this venue provides a great deal of flexibility on the topic.

Challenges working in this venue:

Encounter a variety of ages and backgrounds. Also, depending on project (i.e. citizen science), it could involve a great deal of time and effort investment.



<http://coseenow.net/wizard>

Figuring out what fits for you

IOWA STATE UNIVERSITY

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Iowa State's Broader Impacts Resource



Follow @SP_at_ISU

SP@ISU serves as a single point of contact on campus to gain knowledge in developing quality Broader Impact programs. SP@ISU helps make connections between researchers and resources on campus to develop and implement Broader Impact plans. The target audience is faculty, postdoctoral research associates, and advanced graduate students in science, technology, engineering, and mathematics (STEM).

The goal of SP@ISU is to strengthen the professoriate by enabling professional development in STEM, while promoting and enhancing a diverse community of scholars and learners.

Campus Resources

[Grants Hub](#)

[Vice President for Research](#)

Upcoming Events

[NABI 2017 Summit - website and information](#)

<http://www.spisu.iastate.edu/>



Workshops

Workshops: ComSciCon

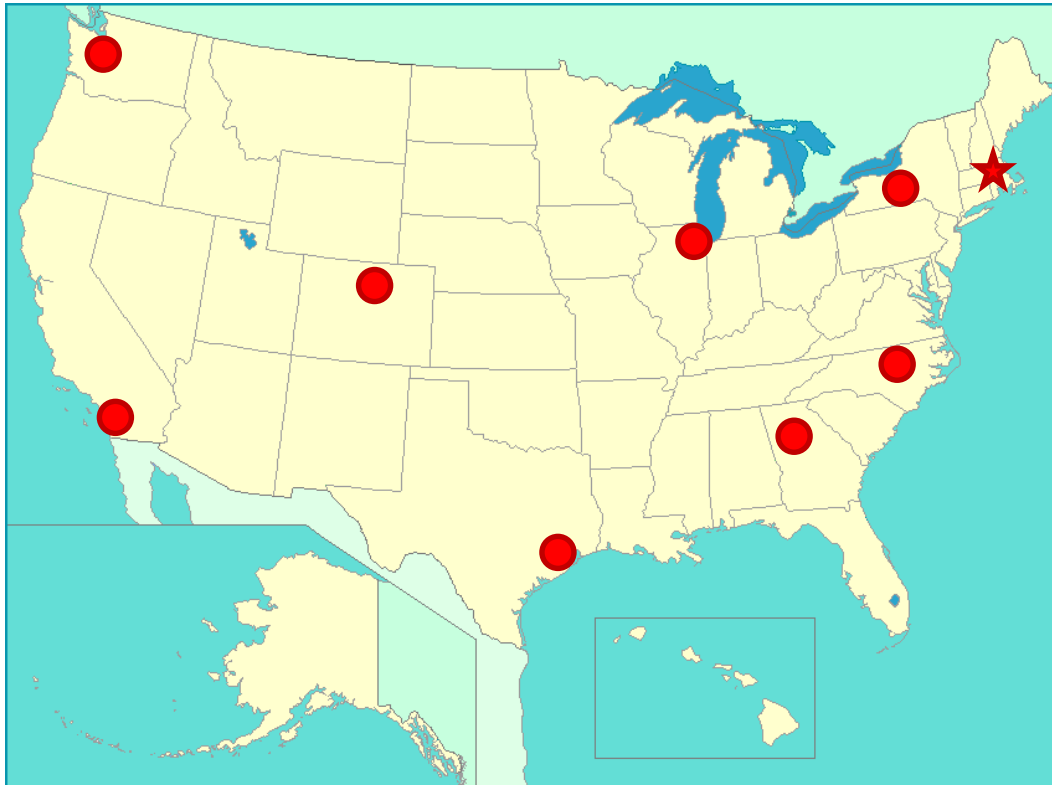


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*The Communicating Science
workshop for graduate students*

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CONTACT



- Organized by grad students **for** grad students
- Meet professionals and other graduate science communicators

<https://comscicon.com/>

Workshops: ComSciCon



ComSciCon

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workshop for graduate students*

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Apply Now for ComSciCon-Atlanta!

The first ComSciCon-Atlanta workshop is now accepting applications for their March 2018 event. [Click here to read more.](#)

Due by Dec. 1



<https://comscicon.com/>

Workshops: Alda Center

ALAN ALDA CENTER FOR
COMMUNICATING SCIENCE

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You've done the research. Share it with the world.

The Alda Center, Scientific American and The Kavli Foundation launch a live-streamed web series for scientists learning to blog about their work.

[LEARN MORE](#)

<https://www.aldacenter.org/>

Honing the craft

[INTERVIEWS](#)[ELEMENTS OF CRAFT ▾](#)[PROFILES ▾](#)[SCIENCE BLOGGING ▾](#)[PITCH DATABASE](#)

- Science writers share the process behind their work
- Advice on blogging and online outreach from both researchers and journalists

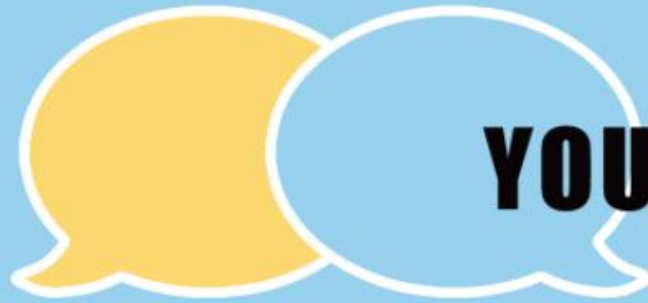
<https://www.theopennotebook.com/>



Keeping up with best practices

Keeping up with best practices

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<https://www.aaas.org/press-public-engagement>



<http://blog.ucsusa.org/category/science-communication>



<https://www.sxswedu.com/>



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FYFD has merch now!



<https://www.redbubble.com/people/fyfluidynamics/shop>



Selected sticker designs
for sale here at DFD

**\$3 each,
Buy 4, get the 5th free**



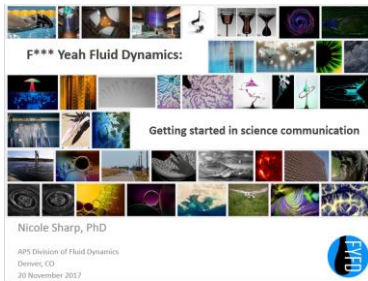
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<http://nicolesharp.com/talks>



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