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LIKE
Open Science Course
Seminar 4:
Communications
Strategies

10 November 2020

Today's discussion

- 1 Recap: Open Science
- 2 Introduction
- Telling people about your work
- 4 Closing thoughts

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The story so far

A recap

- What's open science?
- How do we make our science open?
- Can I just make it open?

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Self-study 3: Implementing Open Science

Working with your group, implement at least two of the ideas for improving the openness of your work that you identified in self-study 2

• What was your experience of making your work open?

Workshop: Your experiences of implementing open science

Share your experience of implementing open science...

 Each student will have 10 minutes to present their case study and obtain feedback from their colleagues.

Course outline

Seminar	Self-study	Assignment
1. Introducing open science		
	1. Background reading	
2. Guiding principles		A I D 2
2 Onen esianes and intellect	2. <u>Is your group's work F</u>	AIR!
3. Open science and intellect	<u>uai</u>	
property	3. Implementing open sci	ience
4. Communicating your scie		<u>leffee</u>
<u>communicating your sere</u>	4. Communications strate	egies
		1. Implementation case study
5. What are data managem	<u>ent</u>	
plans and why do they matter	_	
	5. Draft a data managem	ient plan
Workshop: Your experiences	<u>of</u>	
implementing open science	6 Decise data assessment	ant also
	6. Revise data manageme	
		Data management plan

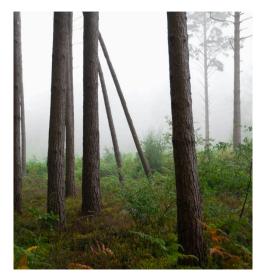


Our goals for today

If no-one knows you did it, you didn't do it.

Learn how to promote your work by crafting and executing a communications strategy

- Why do we communicate?
- How do we communicate?
- What do we communicate?

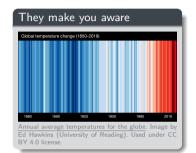


If a tree falls in a forest and no one is around to hear it, does it make a sound? Photo by Harry Shelton on Unsplash



Why do we communicate?

Effective communications make a difference







Channel - Audience - Message



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Audience: Almost anyone **Message:** Call to action.

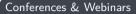




Photo by Chris Montgomery on Unsplash

Audience: Already interested Message: Insight & understanding.



Photo by Annie Spratt on Unsplash

Audience: Really interested Message: Actionable information.

Are there better ways to reach your audience?



Photo by Sam McGhee on Unsplash

And now, you tell your story



Photo by Cederic Vandenberghe on Unsplash



Journal Article Posing Three Challenges to Wind Energy Potential Oct. 10, 2019

Wind energy researchers from the U.S. Department of Energy's National Renewals Energy Laboratory (NRFL) are among a team of authors inviting the scientific community to address three challenges that will drive the innovation needed for wi to become one of the world's primary sources of low-cost electricity generation.

Their call to action appeared in a new journal article published in Science.

"People think that because wind turbines have worked for decades, there's no room for improvement. And yet, there's so much more to be done," said NRFI, Research Fellow a article co-author Paul Veers, "Wind energy has the potential to be a primary source of cost energy for the world, but we won't get there on a business as usual trajectory. We need eclantists and researchers worldwide to join us in addressing wind's research

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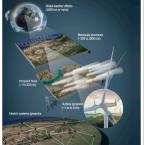
REVIEW SUMMARY

DENEWARI E ENERGY Grand challenges in the science of wind energy

Paul Veers? Katharina Dukas? Frir Lanty? Stanban Barth, Carlo I. Rottasso, Ola Carlson. Andrew Clifton, Johney Green, Peter Green, Hannele Helttinen, Daniel Laird, Ville Lehternäki, Julie K. Lundquist, James Marwell, Melinda Marquis, Charles Meneyeau, Patrick Moriarty. Yahier Munduate, Michael Muskulus, Janathan Naushton, Lucy Pag, Joshua Paruette Josephins Polistics Army Reductions, Justice Sour Rodrigo, Arma Maria Semenautus, I Charles Smith Aldan Tucky, Ryan Wiser

and an increasing demand for energy services

BACKGROUND: A growing global population | Additional research and exploration of design cetions are needed to drive innovation to meet are expected to result in substantially greater | future demand and functionality. The growing deployment of clean energy sources. Wind energy is already playing a role as a mainstream push the technology into areas of both sciensource of electricity, driven by decades of sci- tific and engineering uncertainty. This Review entific discovery and technology development. embores grand challenges in wind energy re-



The cascade of scales underlying wind energy scientific grand challenges. Length scales from weather systems at a global level down the boundary layer of a wind turbine airfoli and time scales from seasonal fluctuations in weather to subsecond dynamic control and habridge of electrical generation and demand must be understood and managed.

search that must be addressed to enable wind energy to supply one-third to one-half, or even

plants comprising hundreds of individual generators working synergistically within the larger electric grid system. These grand challenges are interrelated, so progress in each domean must build on concurrent advances in the

OUTLOOK: Meeting the grand research challearners in wind engray science will enable the wind power plant of the future to supply many of the anticipated electricity system needs at a low cost. The interdependence of the grand challengue requires expansion of interreted and

The first of continue of Wardings to provide to the first continue Corresponding author, Frealt and veersibaret poy (P.V.): kadyfidtu.dk (K.D.); eric.lantzifirnel.gov (E.L.) Oto this article as P. Veers et al., Science 366, eass/2027



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more of the world's electricity needs ADVANCES: Drawing from a recent international

wardshop we identify three grand challenges in wind energy research that require further progmer from the extentific community: (i) improved understanding of the physics of atmospheric flow in

the critical wone of wind nouse plant operation (ii) materials and system dynamics of individual wind turbines and (iii) optimization and control of fleets of wind

other two. Characterizing the wind nower plant. operating zone in the atmosphere will be essential to designing the next generation of evenlarger wind turbines and achieving dynamic control of the machines. Enhanced forecasting of the nature of the atmospheric inflow will subsequently enable control of the plant in the manner necessary for grid support. These wind energy science challenges bridge previously senorable excepatial and temporal scales that extend from the physics of the atmosphere to flexible aeroelastic and mechanical systems more than 200 m in diameter and, ultimately, to the electrical integration with and support for a continent-sized grid system

cross-disciplinary research efforts. Methods for handling and streamlining exchange of vast quartities of information across many disciplines the Commission and commission of the be crucial to enabling successful integrated research. Moreover, research in fields related to computational and data science will runnort the research community in eaching to further integrate models and data across scales



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EL publishes journal article on three challenges vind power innovation

D Staff | October 11, 2019

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s inviting the scientific community to address three challenges that will drive the innovation needed for wind to become

ink that because wind turbines have worked for decades, there's no room for improvement. And yet, there's so much

17. NREL convened more than 70 wind experts representing 15 countries to discuss a future electricity system where Eric Lantz, and Katherine Dykes of the Technical University of Denmark identified three "grand challenges" in wind energy

rst grand challenge; improved understanding of the wind resource and flow in the region of the atmosphere where





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Designing a communications strategy

Figure out why you are communicating:

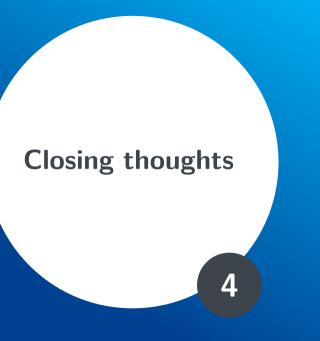
- Who's the audience?
- What do you want them to do?
- How does your communication help?

Work out how to achieve that goal:

- To make people aware: inform
- To make people care: persuade
- To make people act: push or provoke

Choose your media

Tell your story



Seminar summary

Once you've made your science open, you need to let people know about it. That's where communications are needed.

You've learned:

- Why we communicate
- Some ways to communicate
- How to make communications effective
- The elements of a communications strategy



Photo by $\underline{\mathsf{Mathew}\ \mathsf{Schwartz}}$ on $\underline{\mathsf{Unsplash}}$

What to do now

Further reading

- The Birth of Linux: How Linux Got Started. (Linux.com, 2020)
- The open Bike Initiative

Self-study 4: Communicate!

Create and implement a communications strategy for two of your stakeholder groups

• See the guidance on GitHub.

Assignment 1: Implementation Case Study

Prepare a case study about making your work FAIR and communicating it to your stakeholders.

• See the guidance on GitHub.

Seminar 5: data management plans

What are data management plans, and why do they matter?

• See the Seminar materials on GitHub

A what now?

Assignment 1:

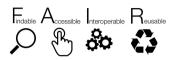
Prepare a case study based on your self-study work to describe what was done to make your work FAIR and implement the R5 concepts, and how you communicated your work to your stakeholders. For example...

- Publishing your Master's thesis through your university's data portal and promoting it to stakeholders.
- Promoting results or a first paper from your LIKE PhD through websites like LinkedIn, Xing, or other social media
- Sharing code or other results through GitHub, Zenodo, or some other repository and sharing results with colleagues

Deliverable: Prepare a 5-minute presentation for the workshop.

N.B: These details may be out of date! Always check the assignment details on GitHub

Let's make this presentation open



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The source code is available through GitHub

Interoperable

This material is produced using the LATEX 'Beamer' package.

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