



Research Methods in Science in Engineering  
Dissemination of Research

Slide 1

1

## Lecture Outline

- Introduction
- Papers
- Posters
- Presentations
- Other dissemination channels

Slide 2

2



# Introduction

3



## What is Dissemination?

Dissemination is a broad term for sharing your research findings with the world.

Dissemination is equally important as the research itself.

4

## Why is Dissemination Important?

- Your funders want to see your results.
- Needed for others to benefit from your research.
- Exposing people to research helps to motivate interest.
- Your research is not beneficial to society if nobody is aware of it.

## Ways to Disseminate Research

- Publications
- Magazine and newspaper articles
- Project reports
- Posters
- Conferences and presentations
- Outreach activities
- Incorporating teaching into classroom.
- Websites, blogs, discussion boards, etc.



### 3 Ps of Dissemination


- Papers
- Posters
- Presentations

# Papers

7

## Peer-Reviewed Vs. Non-Peer Reviewed

<p style="text-align: center;"><b>Peer Reviewed</b></p>  <p style="text-align: center;">Papers are reviewed and verified by experts prior to publication.</p>	<p style="text-align: center;"><b>Non-Peer Reviewed</b></p>  <p style="text-align: center;">Information disclosed without any kind of review. Less reliable.</p>
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 Slide 8

8

## The Peer-Review Process

1. Manuscript is written.
2. Manuscript is submitted to a journal.
3. Manuscript gets assigned to an editor.
4. Editor identifies a handful of experts to review the manuscript.
5. Editor coordinates the reviews with the experts.
6. Editor contacts authors with feedback from the review.
  - a) Manuscript may get declined.
  - b) Manuscript may get accepted without changes.
  - c) Manuscript conditionally accepted with required revisions.
7. Authors revise manuscript.
8. Authors resubmit revised manuscript.
9. Go back to Step 5, but you may only get one or two chances.

Is the research novel?  
 Are the results significant?  
 Are the results useful?  
 Are the results correct?  
 Will the paper be of interest to the readers?

## Advice for Publishing

- Be a salesman when writing the abstract.
- Submit quality manuscripts with excellent writing and graphics.
- Good graphics may get you on the cover!
- Follow formatting requirements EXACTLY.
- After submitting a manuscript, forget about it. It may be many months before you hear back.
- Always respond humbly and politely to reviewers.
- If you get declined, revise if possible and submit elsewhere.

## Surviving the Peer-Review Process

- Expect a mean and hostile review.
- Expect reviewers to only have skimmed your paper and missed information and key points.
- When responding to the review, be very polite and respectful.
- Do not argue with reviewers.
- Despite your feelings, the reviewers likely have good points.



Pond Scum

## Typical Comments and Appropriate Responses

Authors do not seem to be aware of the state-of-the-art and are missing key previous work in their citations.

*We thank the reviewers for helping us to improve our discussion of the state-of-the-art. We have added the following citations to our manuscript, but are not aware of any other key papers on the subject. It would help us tremendously if the reviewer could identify any key works we are missing so that we can cite that work.*

This research does not appear to be new and novel.

*We thank the reviewers for helping us make this a stronger manuscript by highlighting that we have done a poor job at explaining the novelty and significance of our research. We have added the following paragraph to our introduction to clearly identify what is novel about our research and why it is important. We have also revised our abstract and conclusion to reiterate these points and to be consistent.*



# Posters

13



## Advice for Posters

- Make your poster eye candy.
- Make your poster unique and memorable.
- Minimize the area that text dominates, but not to same extreme as a presentation. A poster must be understandable on its own.
- Make text large enough to see clearly.
- Stand at your poster with a smile. Be approachable.
- Bring gadgets to show off while talking.
- Bring business cards and/or pamphlets. You can leave these with the poster when you are not there.
- Dress professionally.
- Poster presentations are less formal than a presentation and great networking opportunities!

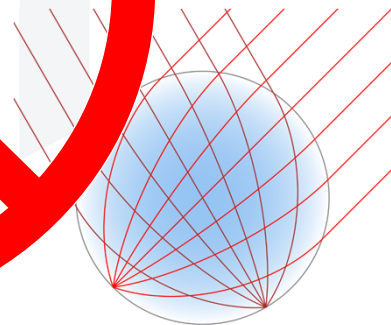
14

# Presentations

15

## The Luneburg Lens

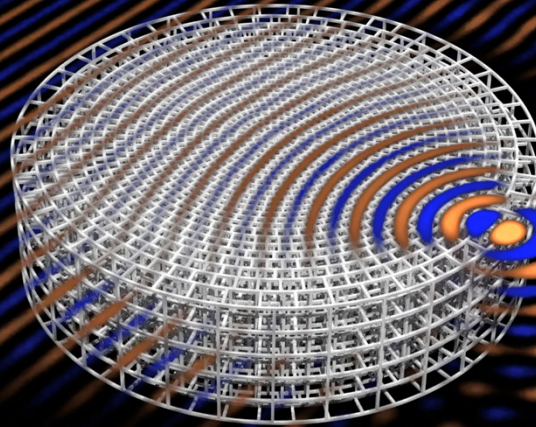
- The Luneburg lens is a spherically symmetric gradient-index lens where the refractive index decreases radially from the center to the outer surface.
- Relative permittivity profile:  $\epsilon_r(r) = 2 - (r/R)^2$
- Luneburg lenses have been made for radio frequencies up to optical frequencies.
- Applications include radar reflectors, microwave antennas, energy collection, and more.



16

## The Luneburg Lens

$$\epsilon_r(r) = 2 - \left(\frac{r}{R}\right)^2$$



## Advice for Presentations

- Get to know the room you will be presenting beforehand.
- Test and verify your laptop, connection to projector, laser, etc.
- Make yourself the focus of the presentation, not the slides.
- Make your slides eye candy to attract attention and be memorable.
- Dress professionally.
- Hang around after your presentation to meet people. It is an excellent networking opportunity.
- Bring gadgets for people to see after your talk.
- Bring business cards and/or pamphlets.
- Always be prepared to give a radically abbreviated version of your presentation.

# Other Dissemination Channels

19

## Reach Out to Different Audiences



Laura Turón → <https://lt-artdesign.com/>

20