

Tips for Poster Design and Video Presentations in the Mathematical Sciences

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What story do you want to tell?

- 1 Concisely formulate the problem
 - Motivation from outside your field
 - Simple examples
 - Understandable to a novice in *this* audience

Hook your audience right at the start!

- 2 Concisely formulate your results
 - Formulae
 - Methods
 - Theorems [simplified versions]
 - **Graphical Results**

Construct a cohesive narrative

- Identify what the audience absolutely needs to know to
 - ① Understand your results
 - ② Appreciate why they are important
- Only display what you want to talk about
- Only talk about what you display

Crafting the message should ↑ your understanding!

Tips for Poster Design: Layout

① The Look

- Search for exemplary examples/templates
- But: Don't be overly flashy
- Layout features should support the narrative

② The Block

- (Maybe) use bullet points: **No paragraphs!**
- Maximum of two lines per bullet point
 - Sub-bullets allow for further nuance
- Sentences should be grammatically correct yet succinct.

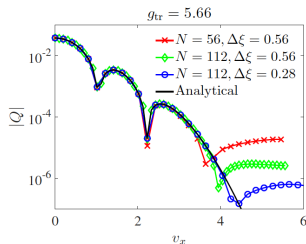
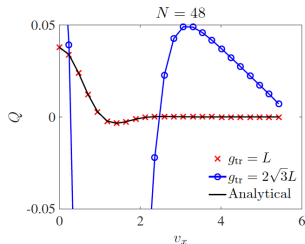
Simplify mathematical notation to the essentials.

But don't miss an opportunity to convey mathematical ideas!

Tips for Poster Design: Punchlines

Punchlines:

- One/two lines at bottom of figure or block
- Gets the point across to the audience
- Sets them up for the rest of the story
- Larger, bold, colored

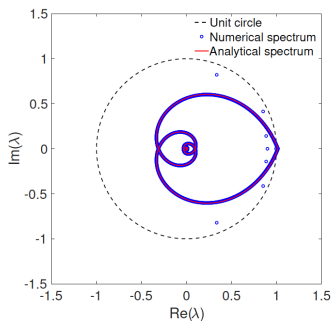


Smaller $\Delta\xi$ better captures the oscillations of \widehat{G}^{tr}

Tips for Poster Design: Figures

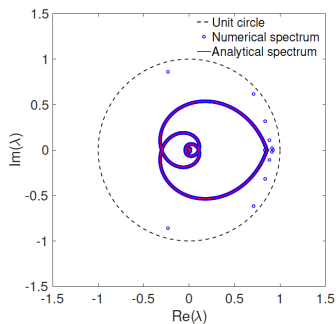
- Titles, legends, and axes labels with large fonts
- Uncluttered
- Punchlines for take home message

$\ell_0 = 0.1, P_{\text{sat}} = 2000 \text{ W}$



Unstable

$\ell_0 = 0.2, P_{\text{sat}} = 50 \text{ W}$



Stable

Tips for Video Blitz Presentations

Video Blitz: A sequence of short videos advertizing posters

A Six Sentence Story in 30 Seconds¹

- 1 Your name
- 2 Poster title
- 3 Explain topic your poster deals with
- 4 What you did
- 5 How you did it
- 6 Summarize the novelty of your results

**Crafted using your poster.
Keep it friendly and crisp!**

¹For 2 min videos add more detail in items 3,4,6.

Example Video Blitz Text

- 1 Hello. I'm John Zweck.
- 2 Our poster is on the Spectral Computation of low probability tails for the Boltzmann Equation.
- 3 The Boltzmann Equation models the pdfs of the velocities of colliding particles in low-temperature, non-equilibrium plasmas.
- 4 We adapt a spectral method of Gamba for the numerical computation of the collision operator and show that it can be used to accurately compute the low probability tails.
- 5 To do so, we derive an error estimate for Gamba's truncated collision operator.
- 6 We explain the important role that the truncation operator plays in the accuracy of this Fourier-transform based method.

Links to [Blitz Recording \[YouTube\]](#) and [Poster \[pdf\]](#)

Additional Resources/References

- 1 [Tips for effective poster design \[Birmingham\]](#)
- 2 [Resources for Giving Talks and Poster Presentations \[Illinois\]](#)
- 3 [How to make a poster? \[Maths, Oxford\]](#)
- 4 [Giving a Talk \[Bryna Kra, Math, Northwestern\]](#)
- 5 [Talks are not the same as papers \[Terry Tao, UCLA\]](#)
- 6 [How to give a good 20 minute math talk \[Ross, U. Richmond\]](#)