

# Ethics of Intelligent Vehicles

## Presentation and poster preparation

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- Scientific presentation
- Scientific poster
- LaTeX
- Other tools

# Scientific presentation: a standard structure

Title

Presenter Name(s)

Collaborator Name(s)

Event

Venue

Date

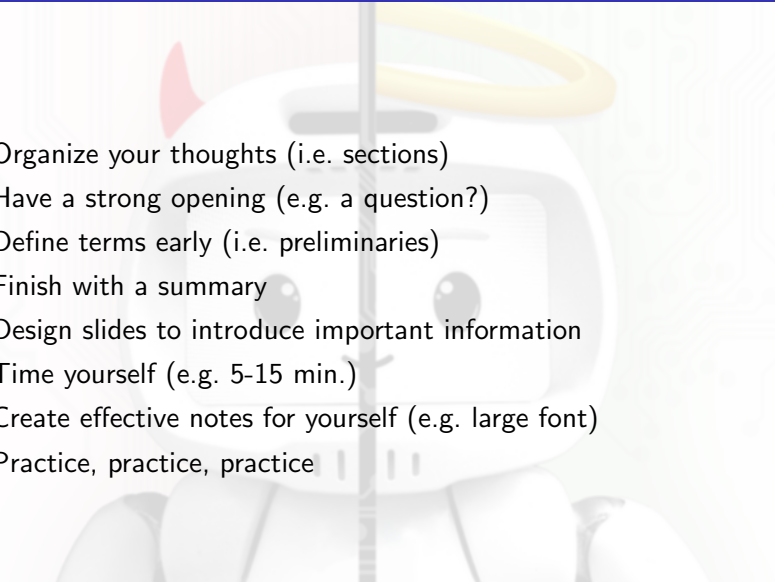
- ▶ Title
- ▶ Presenter name(s)
- ▶ Collaborator name(s)
- ▶ Event
- ▶ Venue
- ▶ Date

Outline

- Motivation
- Applications
- Preliminaries
- Result 1
- ...
- Result N
- Conclusions

- ▶ Motivation
- ▶ Applications
- ▶ Preliminaries
- ▶ Results
- ▶ Conclusions

# Scientific presentation: tips

- 
- 1 Organize your thoughts (i.e. sections)
  - 2 Have a strong opening (e.g. a question?)
  - 3 Define terms early (i.e. preliminaries)
  - 4 Finish with a summary
  - 5 Design slides to introduce important information
  - 6 Time yourself (e.g. 5-15 min.)
  - 7 Create effective notes for yourself (e.g. large font)
  - 8 Practice, practice, practice

① a large font:  $\geq 24$  *point*

▶ **avoid** font OR **font**

② a clean typeface: *Sans serif typefaces, e.g. Arial*

③ bullet points, **not** complete sentences

④ a common rule: *6 bullets per slide, 7 words per item up to a line*

⑤ contrasting colors: *dark-to-light/light-to-dark*

⑥ **avoid** red/green combinations

⑦ **avoid** special effects

# Scientific poster: a general structure

- ▶ Title
- ▶ Presenter name(s)
- ▶ 2-3 sentence Summary
- ▶ Model and applications
- ▶ Results
- ▶ Conclusions
- ▶ Bottom line

**A TEMPLATE OF A POSTER**  
Name, X-Research Student, WiSe 21/22, FU Berlin

**Summary**  
-Task 1  
.....

**Model**  
-Task 1  
.....

**Applications**  
-Task 1  
.....

**Result 1**  
-Task 1  
.....

**Result 2**  
-Task 1  
.....

**Result 3**  
-Task 1  
.....

**Conclusions**  
-Task 1  
.....

**CONTACTS**  
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**REFERENCES**  
[1] Müller  
[2] Müller

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www.fu-berlin.de/bua/11-1211/2021-22

Logo of the University of Bamberg

# Scientific poster: tips

- 1 Size: *A0/A1*
- 2 Readability: *from  $\approx$  10 feet away*
- 3 Title: *short & draws interest*
- 4 Word count: *300-800 words*
- 5 Text: *clear & to the point*
- 6 Elements: *bullets, numbering, & headlines*
- 7 Visuals: *effective graphics, colors, & fonts*
- 8 Layout: *consistent & clean*

# Scientific poster: example 1

## Tips for Designing Effective Presentations

*A poster with the main title in 1 1/2" sans serif*

*Developed by D. Shong, C. Dwyer, W. Kufly, E. Inwood, and K. Wink  
with materials donated by Penn State's Education Technology Services*

Get the audience's attention and communicate your message quickly and succinctly.



A poster can't always stand for itself. It's a poster of the things you're presenting, whether they're data, ideas, or images.

**A** scientific poster presentation can and should identify and promote research, a technique, or address a topic in a way that is both clear and concise. This applies to all, from the title to the text.

### Planning

Be sure to include:  
• Research or educational objectives  
• Visuals, if possible

### Developing a Layout

The main message (title) is first. Use a grid to help choose layout and design.  
• Use a color hierarchy.  
• Use a consistent design.  
• The layout should be the same size as the poster.  
• Use a consistent design.  
• Use a consistent design.  
• Use a consistent design.



A color wheel is the best way to choose colors. The color wheel is a circular color chart that shows the color of a color wheel in a circle.



Usually the color wheel is used to choose colors.

### Choosing and Using Color

Choose a color scheme.  
• Use a color scheme.  
• Use a color scheme.  
• Use a color scheme.

### Selecting Fonts and Using Text

The audience will focus on the text.  
• Use a consistent design.  
• Use a consistent design.  
• Use a consistent design.



Font size is important. The font size should be large enough to be read from a distance.



A poster that is too small is hard to read. The poster should be large enough to be read from a distance.

### Judges Checklist

- Remember the following guidelines when you present your poster. It will make it easier to read and understand.
1. Title of the poster
  2. Author names
  3. Institution, address, and telephone
  4. Funding sources
  5. Purpose of the poster
  6. Summary of the poster
  7. Objectives of the poster
  8. Methods
  9. Results
  10. Conclusions of the poster
  11. Acknowledgments

### Using Images

The scientific poster should include images that are relevant to the topic. The images should be clear and easy to understand. The images should be placed in a way that is easy to see and understand.



Viewers reading this line demonstrate the poster's success!

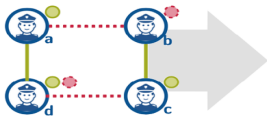




## Selecting Matchings via Multiwinner Voting: How Structure Defeats a Large Candidate Space

Niclas Boehmer, Markus Brill, Ulrike Schmidt-Kraepelin (TU Berlin)

### Motivation



### Matching Elections

**Proportional Representation Ideal:** A group making up a  $p$ -fraction of the agents should not be "less happy" than if this group could decide on  $\lfloor p \cdot k \rfloor$  of the matchings.

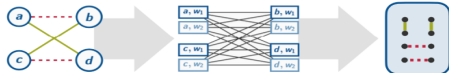
Embedding into Approval-Based Multiwinner Elections:

$A = \{ \text{agents } a, b, c, d \}$     **Goal:** Select  $k$  Matchings representing the agents proportionally.

$C = \{ \text{matchings } \dots \}$     **!** Matching elections have an exponential candidate space.

### Computational Results

Rules	Party-Approval Elections	Matching Elections	Bipartite/Symmetric ME	*
w-Thiele	NP-hard [1]	NP-hard (★)	P (★)	★ this paper
seq-w-Thiele	P	P (★)	P	
seq-Phragmén	P [2]	P (★)	P	
Rule X	P [3]	P (★)	P	



### Axiomatic Results

Rules	Party-Approval Elections	Symmetric Matching Elections
PAV	core stability [1]	core stability
seq-w-Thiele	not PJR [4]	EJR (★), not core stability (★)
seq-Phragmén	PJR, not EJR [2]	PJR, not EJR (★)
Rule X	EJR, not core stability [3]	EJR, not core stability (★)

### References

- [1] M. Brill, P. Gilis, D. Peters, U. Schmidt-Kraepelin, and H. Wilken. "Approval based approximation." (AAAI 2020)
- [2] M. Brill, R. Freeman, S. Janson, and M. Lückner. "Phragmén's voting methods and justified representation." (AAAI 2017)
- [3] D. Peters and F. Shmerin. "Proportionality and the limits of welfare." (EC 2020)
- [4] H. Aziz, M. Brill, V. Conitzer, E. Elkind, R. Freeman, and T. Walsh. "Justified representation in approval-based committee voting." (AAAI 2015)



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# Other tools



## MS Word

- ▶ reports
- ▶ articles
- ▶ review

## MS Excel

- ▶ graphs
- ▶ tables
- ▶ charts

## MS PowerPoint

- ▶ presentation
- ▶ poster
- ▶ video

- ▶ run LaTeX
- ▶ try also Word and PowerPoint
- ▶ make a simple graph in Excel
- ▶ prepare an initial presentation template
- ▶ prepare an initial poster template