Ethics of Intelligent Vehicles
Presentation and poster preparation

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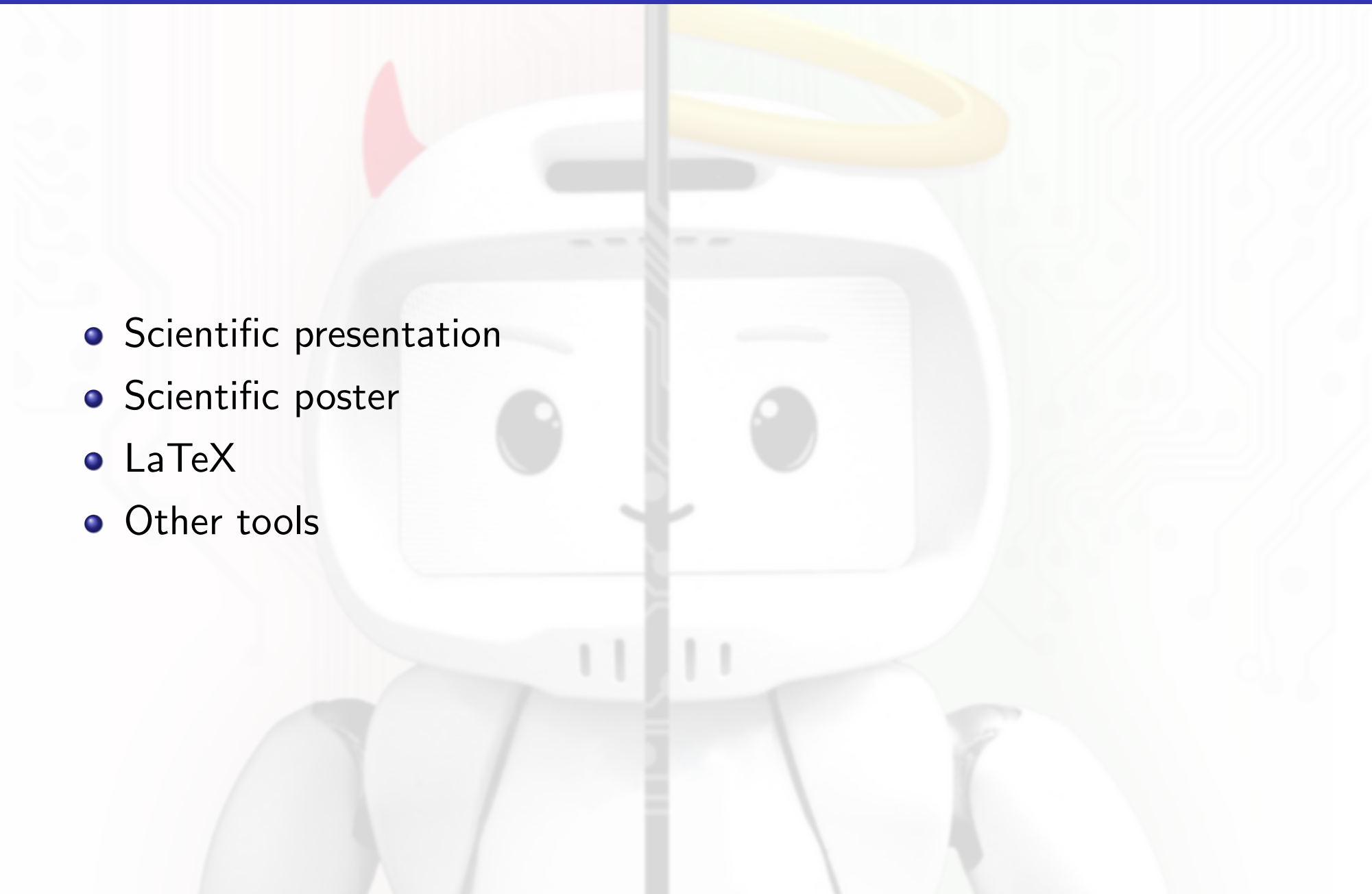
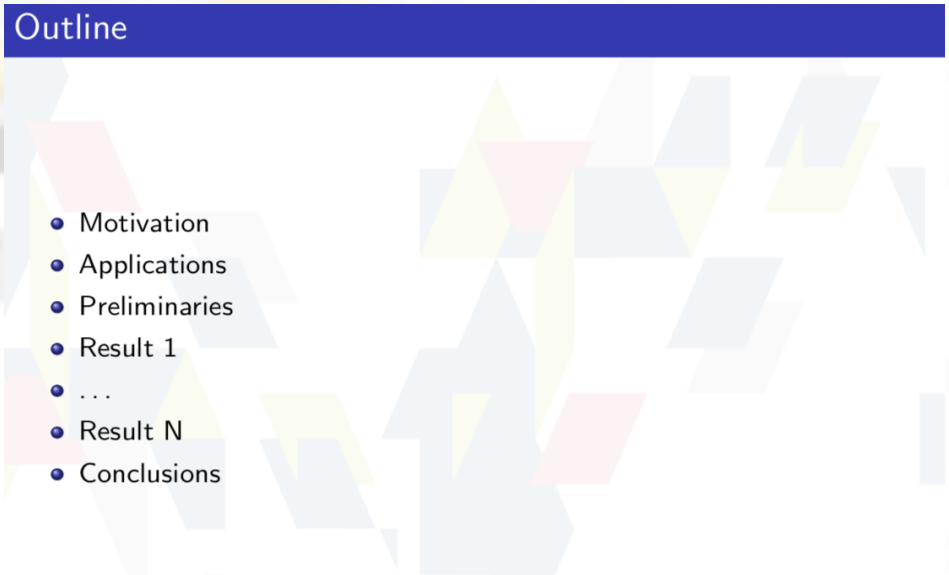
Outline



- Scientific presentation
- Scientific poster
- LaTeX
- Other tools

Scientific presentation: a standard structure

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



- Motivation
- Applications
- Preliminaries
- Results
- Conclusions

Scientific presentation: tips

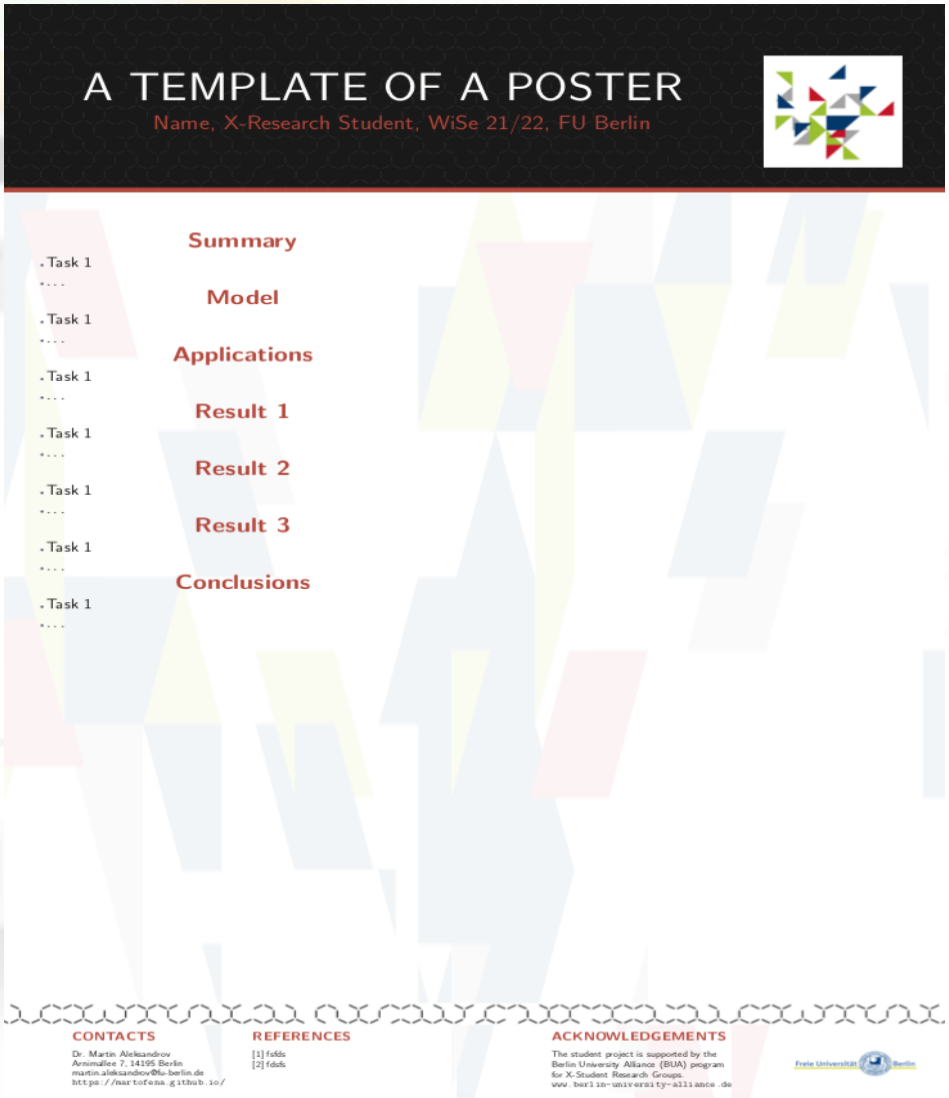
1. Organize your thoughts (i.e. sections)
2. Have a strong opening (e.g. a question?)
3. Define terms early (i.e. preliminaries)
4. Finish with a summary
5. Design slides to introduce important information
6. Time yourself (e.g. 5-15 min.)
7. Create effective notes for yourself (e.g. large font)
8. Practice,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

Scientific presentation: tips

1. a large font: $>=$ 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

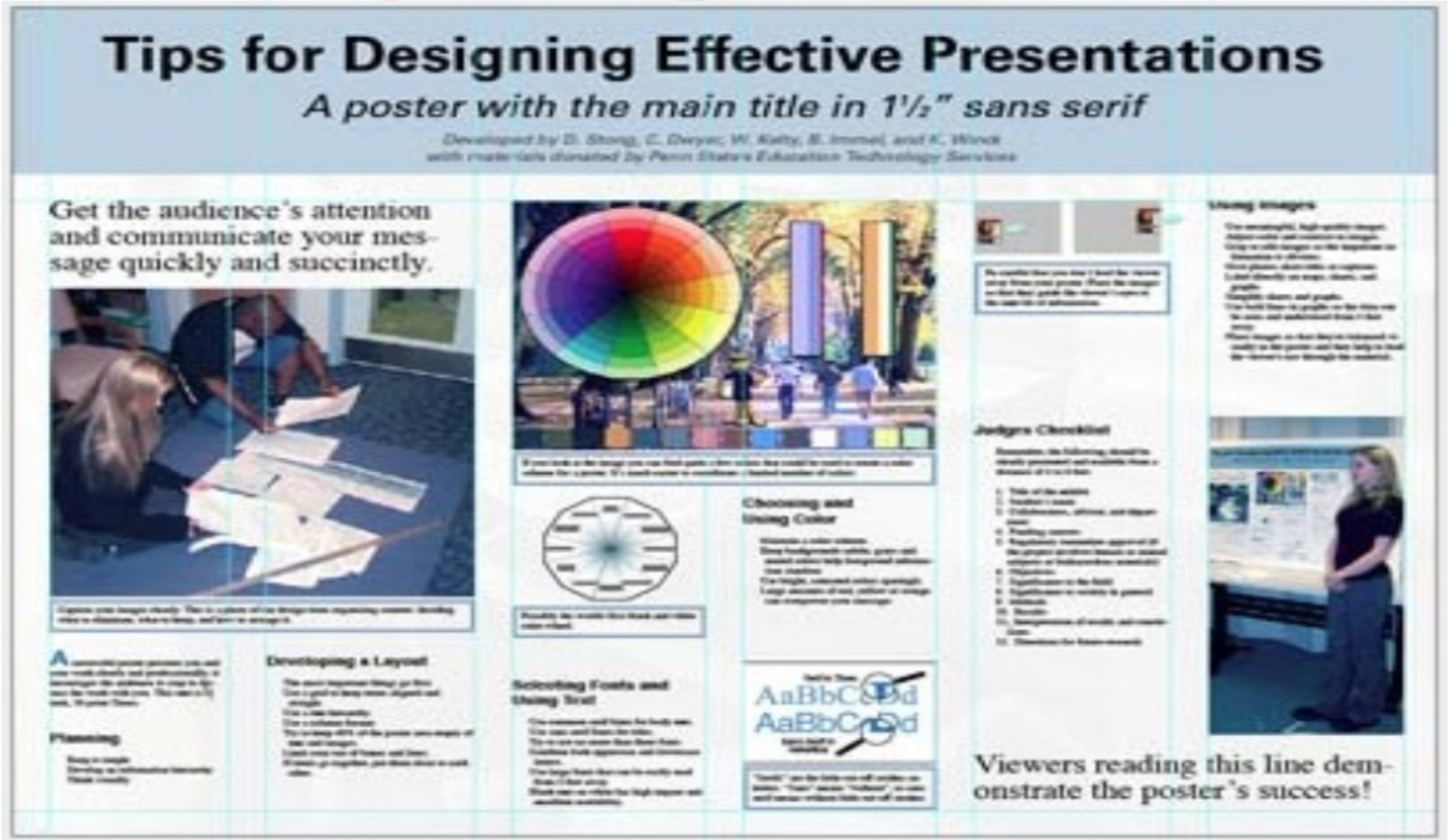
- Title
- Presenter name(s)
- 2-3 sentence Summary
- Model and applications
- Results
- Conclusions
- Bottom line



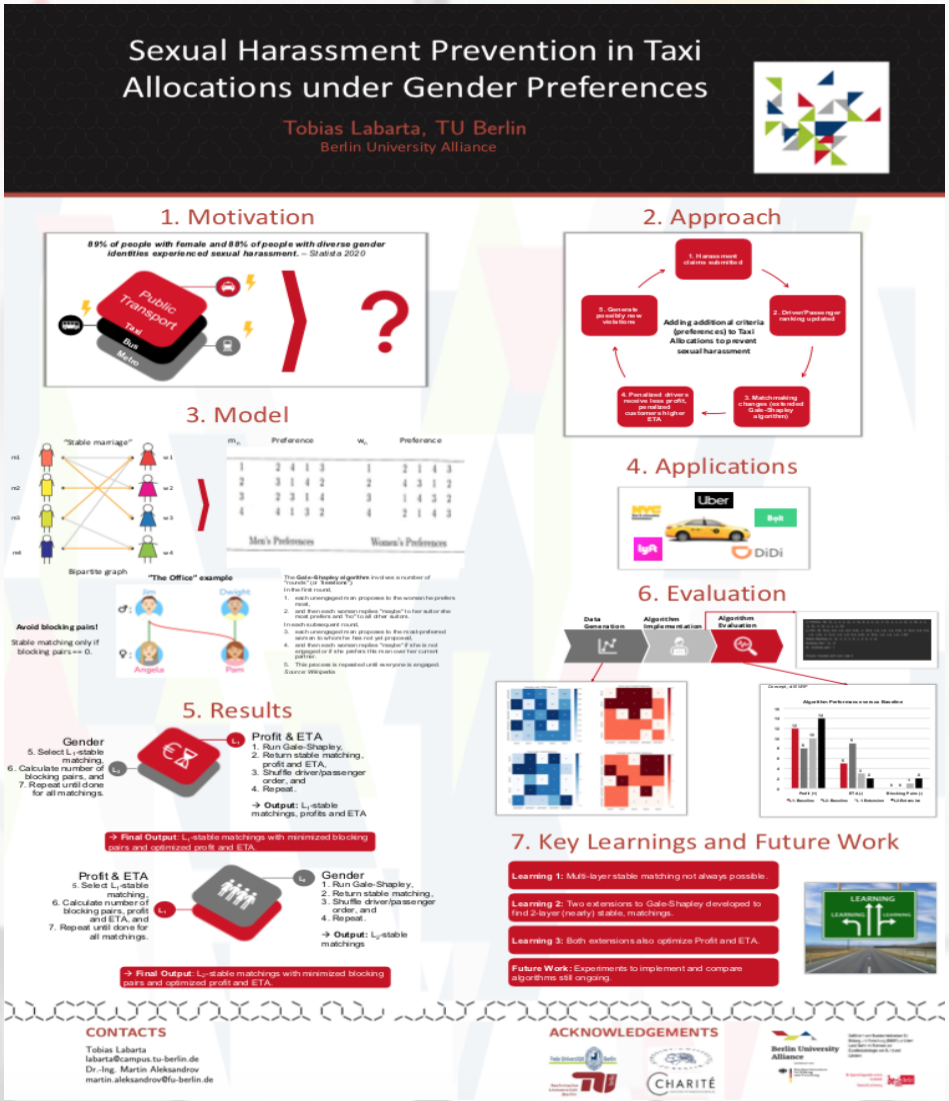
Scientific poster: tips

1. Size: *A0/A1*
2. Readability: *from* ≈ 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



Scientific poster: example 2

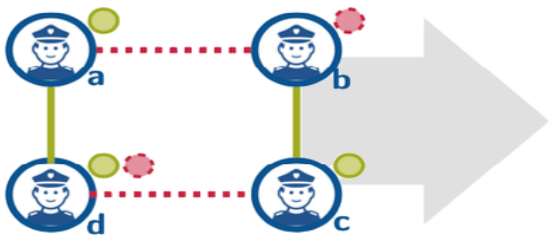


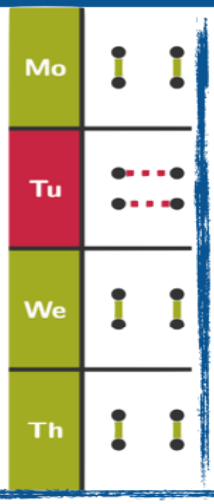
Scientific poster: example 3

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

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

Motivation



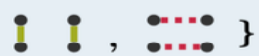


Matching Elections

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:

$A = \{$  $\}$

$C = \{$  $\}$

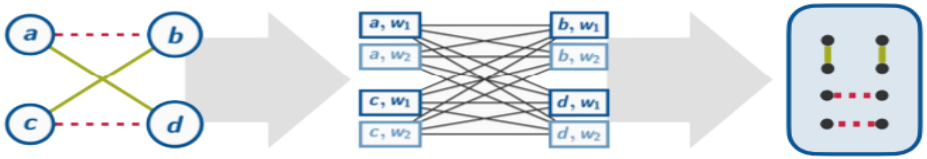
Goal: Select k Matchings representing the agents **proportionally**.

⚠ 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 (★)
seq-w-Thiele	P	P (★)	P
seq-Phragmén	P [2]	P (★)	P
Rule X	P [3]	P (★)	P

★ this paper



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. Gölz, D. Peters, U. Schmidt-Kraepelin, and K. Wilker, "Approval-based apportionment" (AAAI 2020)
[2] M. Brill, R. Freeman, S. Janson, and M. Lackner, "Phragmén's voting methods and justified representation" (AAAI 2017)
[3] D. Peters and P. Skowron, "Proportionality and the limits of welfarism" (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)

LaTeX: https://www.latex-project.org/

- reports
- articles
- reviews
- presentations
- posters
- magazines
- books
- leaflets
- advertisements
- brochures

Other tools

MS Word

- reports
- articles
- review

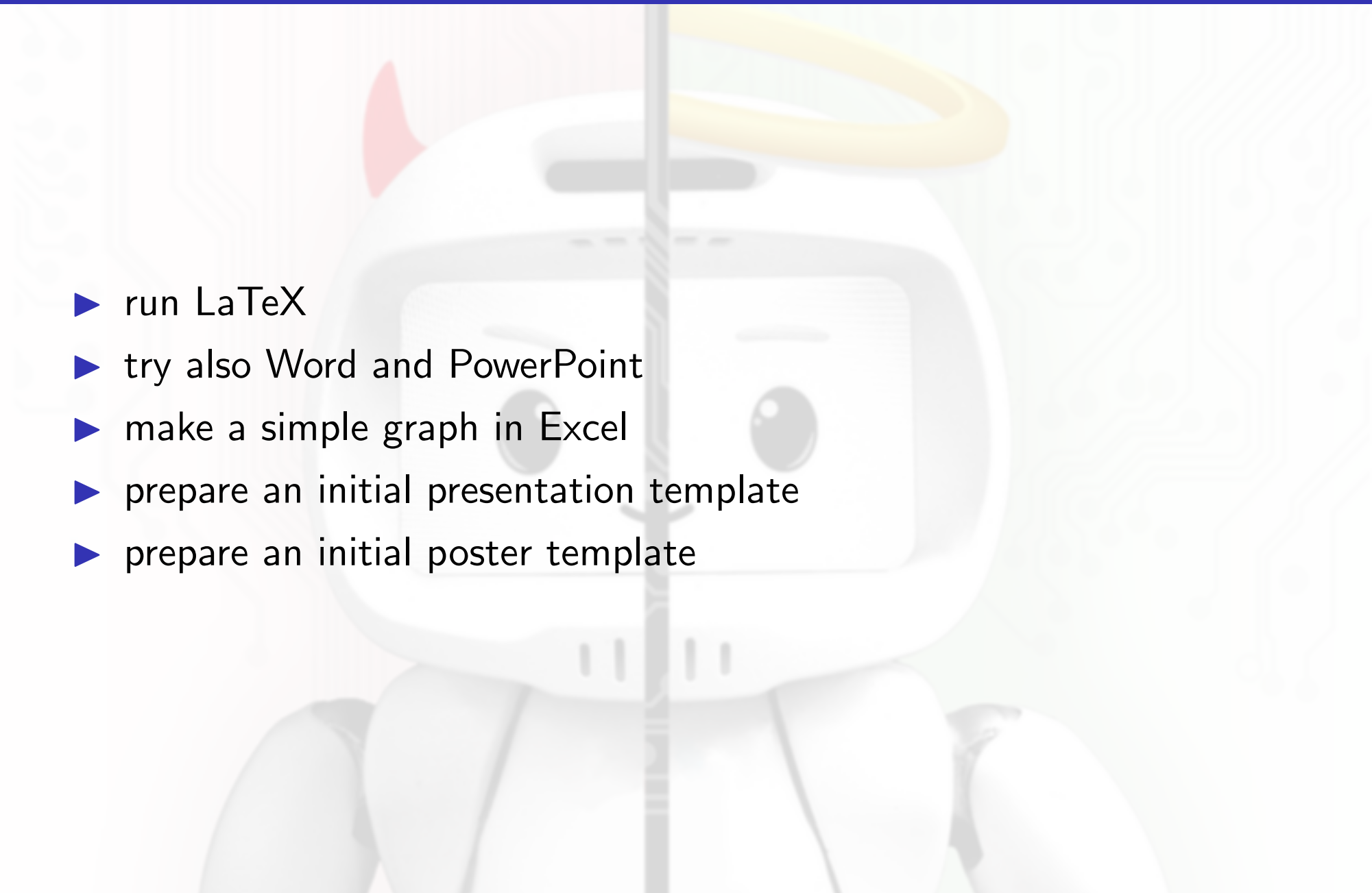
MS Excel

- graphs
- tables
- charts

MS PowerPoint

- presentation
- poster
- video

Activities



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