

# How to present a paper

Michael Wiegand

Institute for Computational Linguistics  
Heidelberg University

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# Motivation

This presentation is about  
how to give a good presentation

## Why is this important?

- ▶ *Sell* your work
- ▶ Audience  $\neq$  asleep
- ▶ Audience understands and remembers most important points

# Overview

1 Preparation

2 Content

3 Style

# Planning your talk

If someone remembers **one** thing from your talk,  
what should it be?

- ▶ Check the material
- ▶ Identify central topics and claims
- ▶ Outline the talk
- ▶ What story do you want to tell?

# Planning your talk

## Start your slides on **paper**

- ▶ No technical/design distractions
- ▶ Start messy, then simplify

## Don't start at the beginning

- ▶ Start with the central point
- ▶ All further explanations should support this

# The Audience

## Who is your audience?

- ▶ Don't expect everyone to be an expert.
- ▶ Don't underestimate your audience either.

## Attention Span

- ▶ Average adult: 20 minutes
- ▶ Prolong attention span periodically:
  - ▶ Give a demonstration or example
  - ▶ Change medium (e.g. use whiteboard)
  - ▶ Interact with the audience



# Software

## Powerpoint *et cetera*

- ▶ **Pro:** Easy to use, graphical tweaks easy
- ▶ **Con:** OS-limitations, must be installed on machine
- ▶ **Temptation:** Effects and transitions

## LaTeX Beamer

- ▶ **Pro:** Clean, consistent, native formula support, OS-agnostic
- ▶ **Con:** Inflexible, graphical tweaks difficult
- ▶ **Temptation:** Long texts and lists

# Practice

## **Practice** your talk!

- ▶ Practice multiple times
- ▶ Use friends or family as audience
- ▶ When practising alone, speak in complete sentences



# Time

## Manage your time

- ▶ Better too short than too long
- ▶ Throw out anything you don't discuss
- ▶ Don't panic: First practice talk will take way too long

# Checklist

## When using your own computer

- ▶ Does it work with the projector? Check ahead of time!
- ▶ Bring monitor adapter
- ▶ Use charger cable
- ▶ Turn all messengers off (+ phone silent)
- ▶ Is the desktop presentable?

## When using another computer

- ▶ Can it play your presentation format?
- ▶ Always bring PDF version as backup

# Checklist: Miscellaneous

## Aids

- ▶ Remote ⇒ More mobility
- ▶ Laser pointer ⇒ for large/high screens
- ▶ USB stick ⇒ FAT formatted, containing presentation **and** PDF backup.
- ▶ Water bottle

# Checklist

## Slides

- ▶ Proof read your slides
- ▶ Go through final version in **presentation mode**  
⇒ Find unintended transitions/animations

# Overview

1 Preparation

2 Content

3 Style

# Structure of a presentation

1. Introduction / Motivation
2. Background
3. Methods / Solution
4. Experiments / Results
5. Conclusion

Be flexible

Depending on your topic, the perfect structure might be different.

“The first thing we do, let’s kill all the lawyers.”

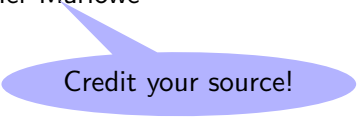
Social justice in Shakespeare’s plays

John Doe

Department of Conspiracy Theories  
Greendale Community College

based on

“The True Shakespeare”  
by Christopher Marlowe



Credit your source!

# Introduction & Motivation

## What?

- ▶ What is your general topic?
- ▶ Why would we want to know about it?
- ▶ Why is the state of the art not sufficient?

## How?

- ▶ Give a general intuition.
- ▶ Show a concrete example.
- ▶ **Beware:** Don't get too specific



# Overview

1. Introduction / Motivation
2. Background
3. Methods / Solution
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## Section names

Give your sections meaningful names.

# Background

## What?

- ▶ Establish basic knowledge for your topic
- ▶ Put in context with related work

## How?

- ▶ Is the paper based on existing works?
- ▶ How is paper different from standard approaches?
- ▶ Introduce work that will be used in the evaluation

# Related work

## Brevity

- ▶ Discuss related work only **briefly**
- ▶ Discuss only what helps to motivate/evaluate the paper

## Location

You might move related work to the evaluation

- ▶ **Pro:** Just-in-time information
- ▶ **Con:** Disruptive if complicated to explain

# Methods / Solution

## What?

- ▶ Explain new approach and its advantages.
- ▶ Show how approach solves concrete problem.
- ▶ Does the approach generalize?

## How?

- ▶ **Examples!**
- ▶ Diagrams

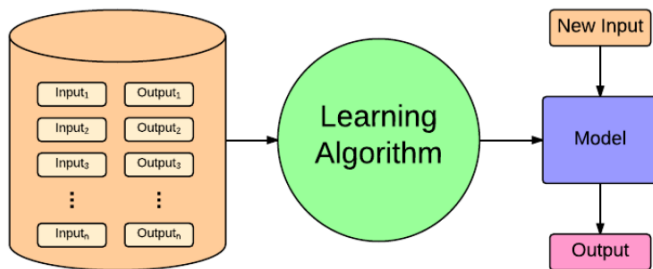
# Examples

## Examples are your main weapon!

- ▶ Use examples **first**, generalise afterwards
- ▶ Use **short** examples
- ▶ Even if short, examples must illustrate the concept
- ▶ Consider using the whiteboard
  - ▶ You might want to prepare this before the talk starts

# Diagrams

When showing methods/structures, use diagrams (instead of lists) whenever possible.



# Formulas

$$\begin{aligned}
 & -\frac{1}{2}\partial_\nu g_\mu^a \partial_\nu g_\mu^a - g_s f^{abc} \partial_\mu g_\nu^a g_\mu^b g_\nu^c - \frac{1}{4}g_s^2 f^{abc} f^{ade} g_\mu^b g_\nu^c g_\mu^d g_\nu^e + \\
 & \quad \frac{1}{2}ig_s^2(\bar{q}_i^\sigma \gamma^\mu q_j^\sigma)g_\mu^a + \bar{G}^a \partial^2 G^a + g_s f^{abc} \partial_\mu \bar{G}^a G^b g_\mu^c - \\
 & \partial_\nu W_\mu^+ \partial_\nu W_\mu^- - M^2 W_\mu^+ W_\mu^- - \frac{1}{2}\partial_\nu Z_\mu^0 \partial_\nu Z_\mu^0 - \frac{1}{2c_w^2}M^2 Z_\mu^0 Z_\mu^0 - \\
 & \frac{1}{2}\partial_\mu A_\nu \partial_\mu A_\nu - \frac{1}{2}\partial_\mu H \partial_\mu H - \frac{1}{2}m_h^2 H^2 - \partial_\mu \phi^+ \partial_\mu \phi^- - M^2 \phi^+ \phi^- - \\
 & \frac{1}{2}\partial_\mu \phi^0 \partial_\mu \phi^0 - \frac{1}{2c_w^2}M\phi^0 \phi^0 - \beta_h \left[ \frac{2M^2}{g^2} + \frac{2M}{g}H + \frac{1}{2}(H^2 + \phi^0 \phi^0 + \right. \\
 & \quad \left. 2\phi^+ \phi^-) \right] + \frac{2M^4}{g^2}\alpha_h - igc_w [\partial_\nu Z_\mu^0 (W_\mu^+ W_\nu^- - W_\nu^+ W_\mu^-) - \\
 & \quad \frac{1}{2}ig[W_\mu^+ (\phi^0 \partial_\mu \phi^- - \phi^- \partial_\mu \phi^0) - W_\mu^- (\phi^0 \partial_\mu \phi^+ - \phi^+ \partial_\mu \phi^0)] + \\
 & \quad \frac{1}{2}g\frac{1}{c_w}(Z_\mu^0 (H\partial_\mu \phi^0 - \phi^0 \partial_\mu H) - ig\frac{s_w}{c_w}Z_\mu^0 (W_\mu^+ \phi^- - W_\mu^- \phi^+) + \\
 & \quad ig s_w M A_\mu (W_\mu^+ \phi^- - W_\mu^- \phi^+), \quad \text{As you can clearly see...} \\
 & \quad \left. - \frac{1}{2}g^2\frac{s_w^2}{c_w}Z_\mu^0 \phi^0 (W_\mu^+ \phi^- + W_\mu^- \phi^+) + \frac{1}{2}g^2 s_w A_\mu \phi^0 (W_\mu^+ \phi^- + W_\mu^- \phi^+) \right]
 \end{aligned}$$

# Formulas

Don't put (large) formulas on your slide!

- ▶ Try to explain methods without formulas
- ▶ If you *have* to use a formula, walk the audience through it step by step
  - ▶ Explain both verbally and on slides
  - ▶ Don't explain just **What**, but **Why**!



# Formulas

feature paths can have different importance

$$p(w|w_h) = \sum_{f \in F(w)} p(w|f) \sum_{f_h \in F_X(w_h)} p(f|f_h) \prod_{w_{h_i}} p(f_{h_i}|w_{h_i})$$

word is mixture of features normalization

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Thanks to Andrea Fischer for this LaTeX solution.

# Overview Redux

## Summarise

Periodically remind the audience where we are in the big picture.

1. Introduction / Motivation
2. Background
3. Methods / Solution
4. Experiments / Results
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# Experiments / Results

## What?

- ▶ Evaluate the method's performance
- ▶ Compare against baseline and/or state of the art

## How?

- ▶ Evaluate only aspects that you have introduced already
- ▶ Explain what the results **mean**

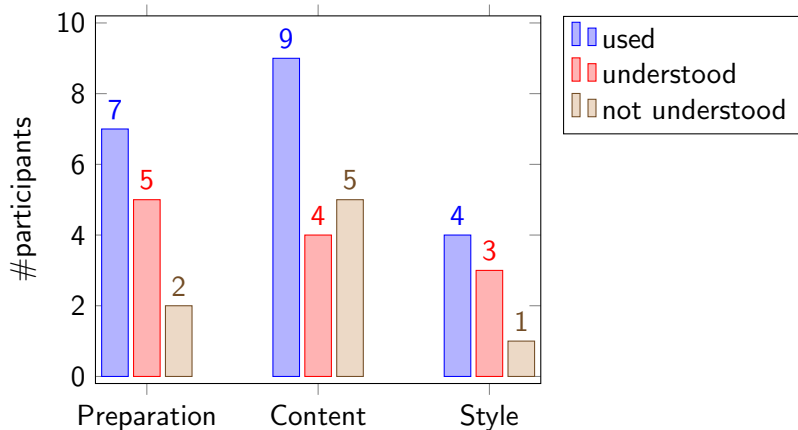
## Presenting results: Tables

- ▶ First describe what information the table actually contains
- ▶ Highlight important numbers.
- ▶ Show only what is necessary (but no less)
- ▶ Explain the numbers ( $\neq$  reading numbers aloud)

	English		German		Arabic	
	Acc	CER	Acc	CER	Acc	CER
Baseline	75.8	0.26	84.4	0.16	50.5	0.51
Filter	91.7	0.20	74.6	0.26	<b>81.7</b>	0.25
CRF	82.9	0.19	<b>90.3</b>	0.13	–	–
CRF+Filter	<b>92.9</b>	0.09	83.1	0.06	–	–

## Presenting results: Graphs

Use graphs (instead of tables) whenever possible.



# Conclusion

## Conclusion

What have we learned?

Sum up in three sentences.

## Discussion

What is your own opinion of the paper?

Critically reflect.

## Future Work

Follow-up questions?

Improvements?

# Appendix

"Thank you" / "Questions?"

A stop sign. Not really necessary.

References

Required for archiving/later reference. Don't discuss.

Backup Slides

Did you cut something because it was too complicated? Are you expecting requests for more details on something? Hide it here.

# Q & A

## Types of Questions

- ▶ **Clarification:** Something in your talk was unclear.
- ▶ **Content:** Something in the paper was unclear/questionable.
- ▶ **Extension:** A new idea that goes beyond what the paper covered.



# Overview

1 Preparation

2 Content

3 Style

## Slides: An aid by any other name

Slides **support** your talk, not the other way around.

- ▶ Visual aid
- ▶ Summary of what you say
- ▶ Queue cards for you to keep talk on track.
- ▶ Only put things on a slide if you will actually discuss them.

## Slide Design

**Less is more**

# Slide Design

## Clean Design

- ▶ Use slide numbers  $\Rightarrow$  Will help in Q&A
- ▶ No fancy transitions/effects  $\Rightarrow$  Distracts audience

## Unveiling content

Show what you want your audience to think about at any given time. No more, no less

- ▶ Too much: Audience distracted by trying to read slides
- ▶ Too little: Too many rapid changes are also distracting

# Brevity

- ▶ Keep lists short
- ▶ Limit text to no more than 2 lines at a time
- ▶ No full sentences
  - ▶ It is unnecessary to write full sentences in slides, especially auxiliary words like determiners. Long texts make it hard to find the central point of a message and distract the audience from your speech.

# Font Size

- ▶ Make sure the text is readable to your audience.
- ▶ Don't turn your presentation into an eyesight test.
- ▶ If you need small font sizes, your slides are too full.
- ▶ Use font sizes 18-36 points.

# Font Type

- ▶ AVOID WRITING FULL SENTENCES IN CAPITALS. IT IS LESS READABLE.
- ▶ Avoid serif fonts:
  - ▶ Serif fonts are used for print media.
  - ▶ Sans serif fonts are more readable on screen.

# Colour

This is good for small rooms.

This is good for large rooms.

Never ever do this.

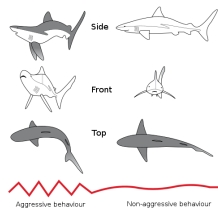
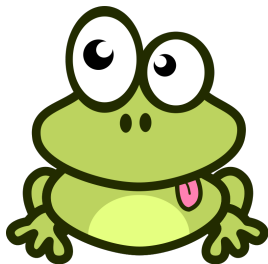


# Colour

- ▶ Many projectors have weak contrasts  $\Rightarrow$  use strong colours
- ▶ Beware of coloured/patterned backgrounds
- ▶ Think of people with red-green colour blindness
  - ▶ 8% of men, 0.4% of women
- ▶ Opinions on black background differ.  
To play it safe, use white background.

# Images

- ▶ Use images wherever they help to illustrate a point.
- ▶ Never use images that have nothing to do with your talk.
- ▶ Should have a good resolution and be readable **on projector**.



# Advice for Speech

Now that your slides are ready,  
let's make sure you present them well

- ▶ Don't rush: Speak slowly and clearly
- ▶ Look at your audience, not your slides
- ▶ Physically point out things on slides  
⇒ use hands, laser pointer, mouse cursor
- ▶ Keep your remaining time in mind

# Advice for Speech

## Flow of Speech

- ▶ You don't need to learn the entire talk by heart.
- ▶ Memorise your first two sentences.
- ▶ Memorise the transitions between topics.

## Reading is a sin

- ▶ Do not read from slides  $\Rightarrow$  causes monotonous fast speech
- ▶ Stand while you talk  $\Rightarrow$  Sitting tempts you to read
- ▶ Treat your slides like queue cards

# Disclaimer

Do not apply any of this blindly

- ▶ Break any rule if it makes your presentation better  
≠ easier for you
- ▶ Find your style. There is no single right way.

# Conclusion

- ▶ Think about content first (important points)
- ▶ Think about how to present it (slides, board, exercise)
- ▶ Entertain your audience (to a certain degree)
- ▶ Don't worry :-)

# References

This presentation was mainly based on the slides by **Marc Schulder** who used it for the Proseminar on sentiment analysis in summer semester 2015. Those slides reuse material from:

- ▶ A. Friedrich & A. Palmer: “Scientific Presentations: Expectations” (<http://www.coli.uni-saarland.de/courses/discourse-13/contents/slides/scientific-presentations-handout.pdf>)

Further sources:

- ▶ M. Püschel: “Small Guide to Making Nice Tables” (<http://www.inf.ethz.ch/personal/markusp/teaching/guides/guide-tables.pdf>)
- ▶ S. McConell: “Designing effective scientific presentations” (<http://www.youtube.com/watch?v=Hp7Id3Yb9XQ>)