Written (Scientific) Presentations —and the Term Paper!—

Cristina España-Bonet

UdS & DFKI

Seminar WE4NLP – Summer Semester 2018/2019

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OK, I NEED TO TRANSFER MY THOUGHTS FROM MY HEAD TO THIS SCREEN...
C'MON, WRITE!
WRITE! WRITE!
THEY'RE TOUCHING! TRANSMIT! TRANSMIT!
thud! thud!
JORGE CHAM © 2014
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Outline

1. Your Term Paper
2. Writting a Paper
3. Content & Structure
4. Tips & Recommendations
5. References & Remarks

Your Term Paper

Playing with Embeddings

Purpose:

1. Be able to work with embeddings
2. Conduct a set of experiments
3. Analyse the resuts
4. Write the process

Your Term Paper

Term Paper

- Three broad topics that include
  - Data processing
  - Embeddings
  - Detailed ablation study

Your Term Paper

Term Paper

- Three broad topics that include
  - Data processing
  - Embeddings
  - Detailed ablation study
- Fourth topic: suggest! But you must do
  - Data processing
  - Embeddings
  - Detailed ablation study

Your Term Paper

Term Paper: Choice 1

Analysis of Word Embeddings according to Corpus Size and Domain/Language

- Data: Wikipedia
  - Download dumps (`https://dumps.wikimedia.org`)
  - Extract text (several software)
- Look at the tasks that have been presented in class (or elsewhere) and find the test sets
- Pose a research question according to this topic and try to answer with experiments

Your Term Paper

Term Paper: Choice 2

Word Embeddings with Multiword Expressions

- Data: Wikipedia
  - Download dumps (`https://dumps.wikimedia.org`)
  - Extract text (several software)
  - Enrich with multiword expressions information
- Look for test sets to evaluate this task
- Pose a research question according to this topic and try to answer with experiments

Your Term Paper

Term Paper: Choice 3

Contextual Embeddings in use

- Data: Pre-trained contextual embeddings
  - Download your favourite(s) contextual embeddings
- Look at the tasks that have been presented in class (or elsewhere) and choose at least one
- Pose a research question according to this topic and try to answer with experiments

Your Term Paper

FAQs

1. **I'm lost, I don't know were to start**

   - What do you like more?
   - Look for tutorials on the topic you like more, you'll find inspiration
   - Look for shared tasks, you might find test sets

Your Term Paper

FAQs

2. My laptop is older than me...

- Low dimensional word embeddings,
- Low resourced languages, etc.
- Try Colab

Your Term Paper

FAQs

4. I have ideas but it's a lot of work for a term paper

- Make a team with n colleagues and join efforts
  - Do jointly the data processing
  - Pose a different research question on the data
  - Write n different papers with n different sets of experiments
  - Compare results if desired

Your Term Paper

FAQs

5. What do I do now?

1. Select an option
2. Pose a research question
3. Explain it to me!
4. Do the experiments
5. Write a paper (8 pages + references ACL style)
6. Send it to me by email before 19th of August

5. What do I do now? (II)

- If you wait the week before you won't have time
- I'll have a couple of hours for consulting at my office before the deadline

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Writting a Paper

Before starting to write an article...

think on:

1. The research question
2. The kind of paper
3. The length of the paper

Writting a Paper

Before starting to write an article...

think on:

1. The research question
2. The kind of paper
3. The length of the paper
4. The content & structure

Writting a Paper

Common types of articles

- Journal article
- Short article/letter
- Review article
- Conference paper
- Short conference paper
- System description paper
- ...

Content & Structure

1 Your Term Paper

2 Writting a Paper

3 Content & Structure

4 Tips & Recommendations

5 References & Remarks

Content & Structure

Introduction, Development, and End

A paper tells the story of your research

in a coherent and concise way

Content & Structure

Standard Structure

1. Title
2. Abstract
3. Keywords

Content & Structure

Standard Structure

1. Title
2. Abstract
3. Keywords

4. Introduction
5. State of the art

Content & Structure

Standard Structure

1. Title
2. Abstract
3. Keywords
4. Introduction
5. State of the art
6. Model
7. Method

Content & Structure

Standard Structure

1. Title
2. Abstract
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4. Introduction
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6. Model
7. Method
8. Experiments
9. Discussion
10. Conclusions

Content & Structure

Standard Structure

1. Title
2. Abstract
3. Keywords
4. Introduction
5. State of the art
6. Model
7. Method
8. Experiments
9. Discussion
10. Conclusions
11. Acknowledgements
12. References

Content & Structure

Reference

Springer Recommendations

https://www.springer.com/us/authors-editors/authorandreviewertutorials/writing-a-journal-manuscript

Content & Structure

Title, Abstract and Keywords

The **title** must grab the attention of potential readers

- Convey the main topics of the study
- Highlight the importance of the research
- Be concise
- Attract readers

Content & Structure

Title, Abstract and Keywords

The **abstract** must be a stand alone summary

- What was done?
- Why did you do it?
- What did you find?
- Why are these findings useful and important?

Content & Structure

Introduction

The **introduction** must give some background to the reader

- What problem was studied?
- Which is the purpose?
- Why is it important?
- What have you done?
- *The rest of the paper is organised as follows...*

Content & Structure

State of the art

The **state of the art** is a review of the relevant related literature

- Gives context to your study
- How differs from previous work?
- How affects your work?

Content & Structure

State of the art

The **state of the art** is a review of the relevant related literature

- Gives context to your study
- How differs from previous work?
- How affects your work?

No *mandatory* position. After the introduction? With the discussion?

Content & Structure

Model

The **model** describes your theoretical part (if present)

- Derive your equations
- Describe the system
- Be as detailed as possible

Content & Structure

Method

The **method** describes your experimental part (if present)

- Describe your data, your test sets
- Describe how you conducted the experiments
- Details should be enough to reproduce them
- State all statistical tests
- Use the past tense

Content & Structure

Results

The **results** state what you found

- Present them in a logical order
- Do not duplicate data among figures, tables, and text
- Include the results of statistical analyses
- Use the past tense

Content & Structure

Discussion

The **discussion** is the analysis of the results

- Discuss your experiments
- Compare your results with those from other studies
- Mention any inconclusive results and try explain them
- Discuss what your results may mean

Content & Structure

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- Discuss what your results may mean

No *mandatory* position. With results? Conclusions? Alone?

Content & Structure

Conclusions

The **conclusions** put an end to the story

- Summarise your work
- Describe the strong points of the study
- Describe the limitations of your study
- If your findings are preliminary, suggest future studies

Content & Structure

Acknowledgements & References

The **acknowledgements** give credit to

- People who help
- Funding

The **references** group together all the cites

- Author, title, journal/conference, year, pages
- Different notations

Sample Bibliography

This is an example of a LaTeX document with a short bibliography generated from a call to the libguide.bib BibTeX citation database. In this example, we refer to papers co-written by several Bates faculty [1, 2, 3].

References

[1] D. Goncalves, P. Wong, and X. Zhao. Fixed point theory of spherical 3-manifolds. *Topology and its Applications*, 181:134–149, February 2015.

[2] K. L. Cottingham, H. A. Ewing, M. L. Greer, C. C. Carey, and K. C. Weathers. Cyanobacteria as biological drivers of lake nitrogen and phosphorus cycling. *Ecosphere*, 6(1):art1, January 2015. 10.1890/ES14-00174.1.

[3] N. Lundblad, S. Ansari, Y. Guo, and E. Moan. Observations of /4 structure in a low-loss radio-frequency-dressed optical lattice. *Physical Review A - Atomic, Molecular, and Optical Physics*, 90(5):art1, November 2014. 10.1103/PhysRevA.90.053612.

[Lau76; Wil99; Bae04; Cic95]

References

[Bae04] John C. Baez and Aaron D. Lauda. "Higher-Dimensional Algebra V: 2-Groups". Version 3. In: *Theory and Applications of Categories* 12 (2004), pp. 423–491. arXiv: `math/0307200v3`.

[Cic95] Marcus Tullius Cicero. *De natura deorum. Über das Wesen der Götter.* Latin and German. Ed. and trans. by Ursula Blank-Sangmeister. With an afterw. by Klaus Thraede. Stuttgart: Reclam, 1995.

[Lau76] Kurt Laue and Helmut Stenger. *Strangpressen: Verfahren, Maschinen, Werkzeuge.* 1976.

[Wil99] Oscar Wilde. *The Importance of Being Earnest: A Trivial Comedy for Serious People.* English and American drama of the Nineteenth Century. Leonard Smithers and Company, 1899. Google Books: `4HIWAAAAYAAJ`.

Content & Structure

References

This is a citation Newman (2014), '10 Countries That Have Secular Governments' (2014), Wallace (1966), MiddleKid (2007).

References

MiddleKid. (2007, January 22). Re: The unfortunate prerequisites and consequences of partitioning your mind [Web log comment]. Retrieved from http : / / scienceblogs . com / pharyngula / 2007 / 01 / the _ unfortunate _ prerequisites.php

Newman, S. (2014, July 4). Religion in the middle ages. Retrieved July 4, 2014, from http://www.thefinertimes.com/Middle-Ages/religion-in-the-middle-ages.html. (The Finer Times: War, Crime and History Resource)

10 Countries That Have Secular Governments. (2014, July 11). Retrieved July 11, 2014, from http://religion.answers.com/secularism/10-countries-that-have-secular-governments

Wallace, A. (1966). *Religion: an anthropological view.* New York: Random House.

Content & Structure

References

Add a **reference** to

- Establish the origin of ideas
- Justify claims
- Provide a context for your work
- Show there is interest your field of research

Tips & Recommendations

1 Your Term Paper

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Tips & Recommendations

General

1. Use LaTeX
2. Use LaTeX & BibTeX
3. Use LaTeX & BibTeX & Beamer

Tips & Recommendations

Similarly to talks...

- Stand alone tables & figures
- Make readable tables
- Readable plots with axis and labels
- Non-misleading information
- Acknowledge other's data

Tips & Recommendations

Tables

- Write a clear and concise legend/caption
- Write only the significant digits
- Provide units when needed
- Mark statistical significance when possible
- Use legible font type and size

Tips & Recommendations

Tables

Table 7: BLEU scores for translations involving languages not seen at all in training, es and fr, on the *tst2010* under the zero-shot training condition.

	beam size		factors + 4-ensembles			
	w5	w10	w	wpsm	wb	wpsmb
$en2fr$	1.08	1.10	**1.11**	1.00	1.04	1.04
$fr2en$	2.36	2.11	2.41	3.63	**5.07**	5.02
$en2es$	1.18	1.25	1.29	0.99	1.02	**1.36**
$es2en$	2.93	2.69	3.09	4.87	6.75	**7.25**

Tips & Recommendations

Plots

- Write a clear and concise legend/caption
- Label all axes
- Specify units for quantities
- Label all curves and data sets
- Use distinct colors/line styles
- Use legible font type and size

Tips & Recommendations

Plots

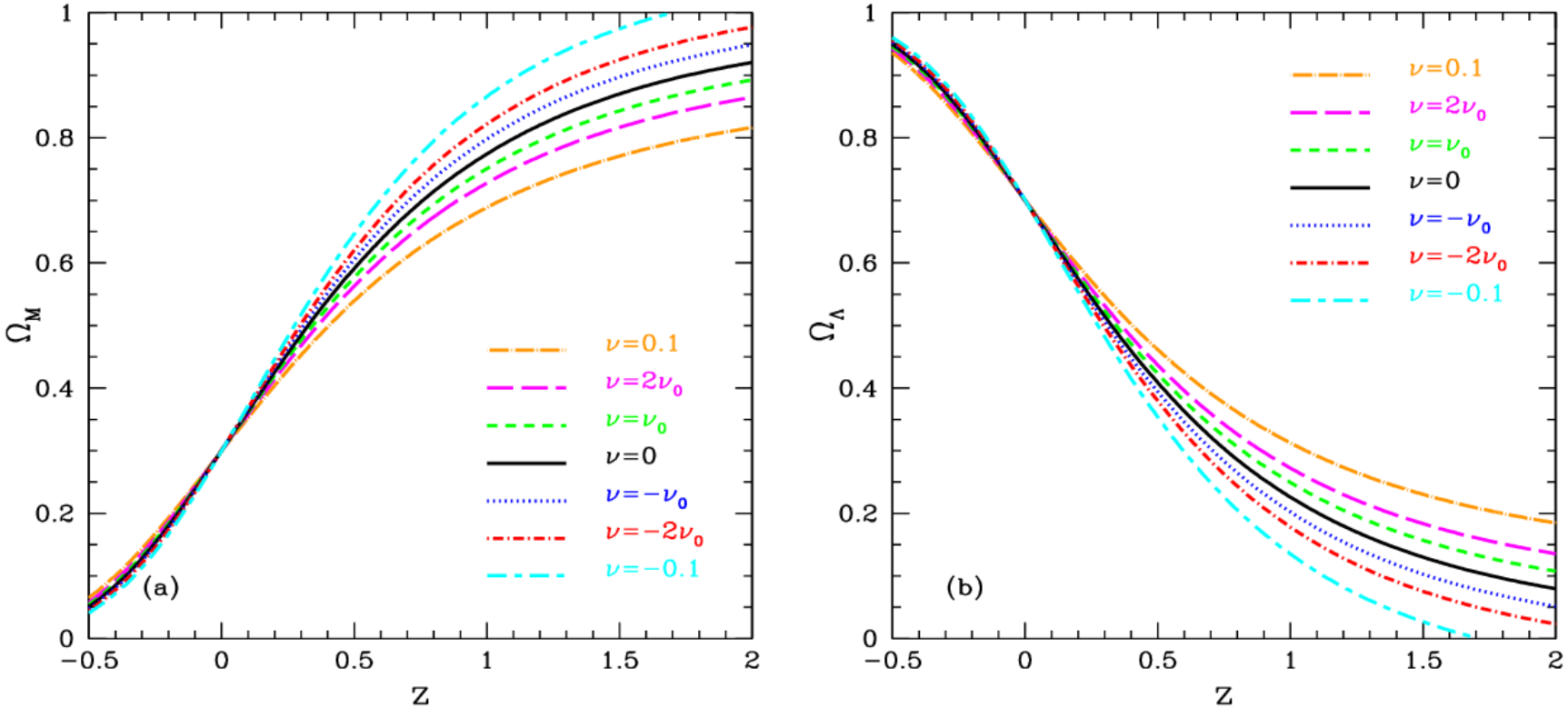

Figure 2: $\Omega_M(z;\nu)$ and $\Omega_\Lambda(z;\nu)$ versus redshift for a flat universe and different values of the parameter ν, with Ω_M^0 and Ω_Λ^0 as in Fig. 1.

References & Remarks

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References & Remarks

Where to know more

- Publishers such as Springer or Elsevier have tutorials
- Follow style guides
- Learn by reading others' papers

References & Remarks

Term paper

1. The research question
   assigned/choosen topic

2. The kind of paper
   Conference paper

3. The length of the paper
   8 pages + references

References & Remarks

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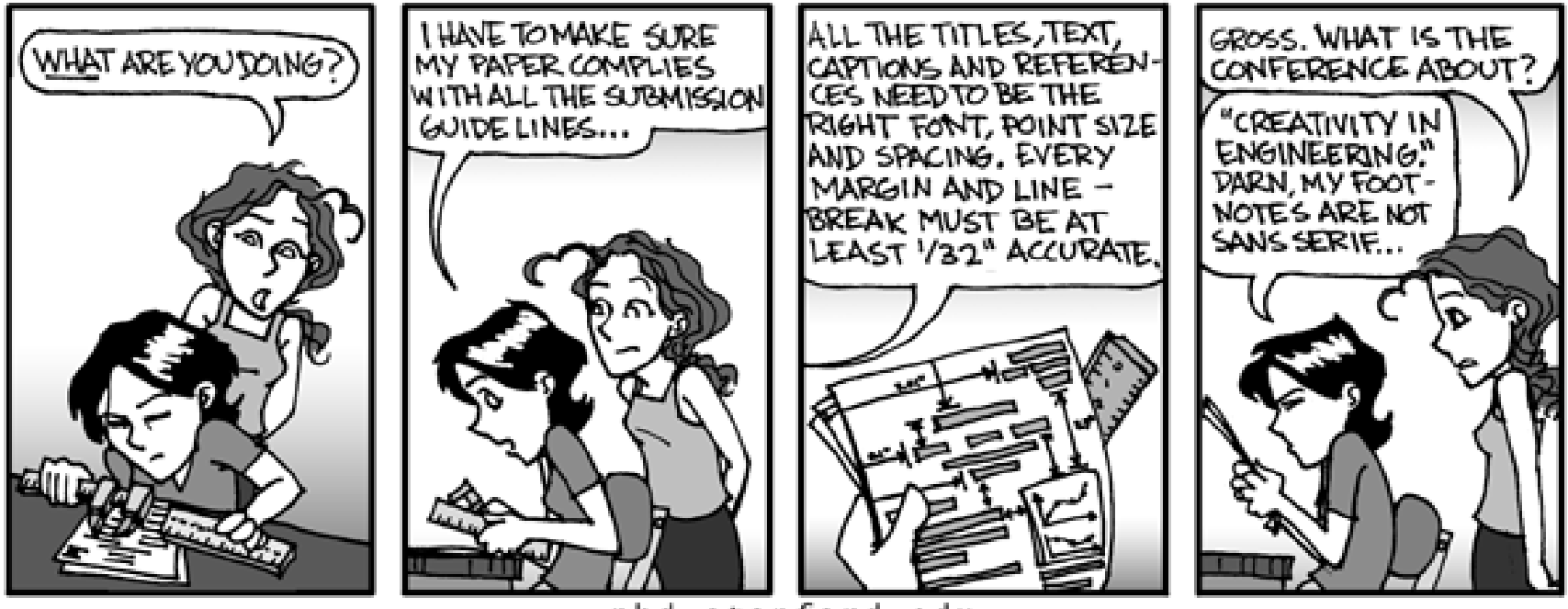
3. The length of the paper
   8 pages + references

4. The content & structure
   follow the previous structure

References & Remarks

Term paper



Thanks!

Questions?

Thanks!

Criticisms?

Not a good oral presentation!

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