

Computational Argumentation Seminar

Seminar Kick-off Meeting

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October 11, 2017

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Arguments and argumentation

▪ Argument

- A conclusion (claim) supported by premises (reasons) (Walton et al., 2008)
- Conveys a stance on a controversial topic (Freeley and Steinberg, 2009)

Conclusion
Premises

Conclusion *The death penalty should be abolished.*

Premise 1 *It legitimizes an irreversible act of violence.*

Premise 2 *As long as human justice remains fallible, the risk of executing the innocent can never be eliminated.*

- Often some argument units implicit (Toulmin, 1958)
- Most natural language arguments are defeasible (Walton, 2006)
- Arguments follow some inference scheme (Walton et al., 2008)

▪ Argumentation

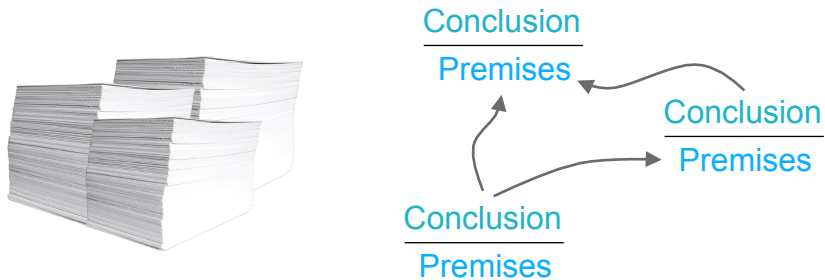
- Usage of arguments to achieve persuasion, agreement, ...
- Includes rhetorical and dialectical aspects

Conclusion
Premises

Computational argumentation

■ Computational argumentation

- Computational analysis and synthesis of natural language argumentation
- Usually data-driven



$$(1 - \alpha) \cdot \frac{p(d) \cdot |D|}{|A|} + \alpha \cdot \sum_i \frac{\hat{p}(c_i)}{|P_i|}$$



■ Research on computational argumentation

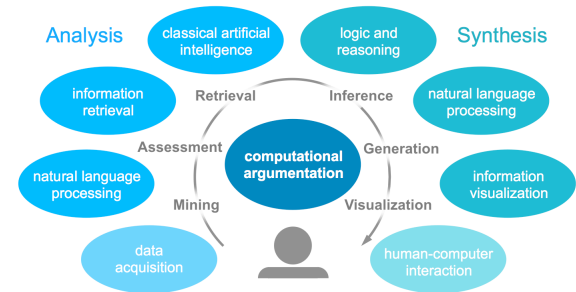
- [Models](#) of arguments and argumentation
- [Computational methods](#) for analysis and synthesis
- [Resources](#) for development and evaluation
- [Applications](#) built upon the models and methods



Goals of the seminar

■ You will learn about...

- Basics of computational argumentation
- Webis research in this area
- Selected state-of-the-art research in detail



■ You will practice...

- **Acquiring** relevant literature and knowledge on a research topic assigned to you
- **Understanding** key concepts and methods related to your topic
- **Presenting** your topic in short and in depth
- **Writing** a scientific text about your topic



Orga

▪ Advisors

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▪ Web page

- www.webis.de
> Teaching > WS 2017 / 18 > Seminar "Computational Argumentation"
- www.uni-weimar.de/en/media/chairs/computer-science-and-media/webis/teaching/ws-201718/computational-argumentation-seminar/

▪ Seminar info

- Master CSM, HCI, CS4DM, DE
- 3 ECTS (tasks and grading on next slide)
- B11, room 015
- Wednesday 11:00 (schedule on slide after next one)

Tasks and grading

- **Short talk, 5–7 minutes (~10% of the grade)**

Slide templates available upon request

- Overview given and further literature; structure the topic
- Presentation: Outline of the topic



- **Long talk, 30–40 minutes (~40%)**

Slide templates available upon request

- Understand literature in detail; create a coherent "story"
- Presentation: Detailed summary and discussion of the topic



- **Article, 8 pages + references (~40%)**

Required: Use ACL-style files provided for Latex (recommended!) and Word

- Create a written, possibly extended form of the long talk
- Article: Detailed summary and discussion of the topic



- **Participation (~10%)**

- Questions and discussions within the meetings



Schedule

▪ Introduction

- Oct 11 (today) First meeting, organizational
- Oct 18 Introductory talk on computational argumentation
- [until Oct 22](#) Choose seminar topic
- Oct 25 Introductory talk on Webis research + topic assignment
- Nov 1 Introductory talk on presenting

▪ Short and long talks

- Oct 25 – Nov 8 Overview literature, meet with us, prepare short talk
- [Nov 8](#) Short talks on all chosen topics
- Nov 8 – Nov 29 Study literature, meet with us, prepare long talk
- [Nov 29 – Jan 31](#) Long talks, ~1 topic per week

Talk schedule may be adapted depending on the number of participants

▪ Articles

- Jan 31 – Mar 23 Meet with us, write article about your topic
- [until Mar 23](#) Submission of articles

References

- **Freeley and Steinberg (2009).** Austin J. Freeley and David L. Steinberg. *Argumentation and Debate*. Cengage Learning, 12th edition, 2008.
- **Toulmin (1958).** Stephen E. Toulmin. *The Uses of Argument*. Cambridge University Press, 1958.
- **Walton (2006).** Douglas Walton. *Fundamentals of Critical Argumentation*. Cambridge University Press, 2006.
- **Walton et al. (2008).** Douglas Walton, Christopher Reed, and Fabrizio Macagno. *Argumentation Schemes*. Cambridge University Press, 2008.