

Computational Argumentation Seminar

# Seminar topics and literature

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# Topics for the seminar talks and articles

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## ▪ **Primary topics**

- a. Mining 1: Unit segmentation
- b. Mining 2: Unit type classification
- c. Mining 3: Relation identification
- d. Stance classification
- e. Classification of schemes
- f. Argumentation quality assessment
- g. Argumentation synthesis
- h. Visualization and interaction

## ▪ **Notice**

- Each seminar participant will be assigned one of these topics
- For each topic, the two articles are specified below provide the basis of both talks and the article
- In addition, at least (!) one further relevant article or similar has to be found and discussed in the long talk and the article

## ▪ **Secondary topics**

- i. Argumentative zoning
- j. Framing
- k. Overall argumentation
- l. Argumentation strategies
- m. Debate winner prediction
- n. The role of the participants
- o. Argument search
- p. Argumentative writing support
- q. Discourse and argumentation

# Topic assignment process

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## ▪ Your task

- Read through the topics and literature in this presentation

Presentation can be found on seminar web page

- Choose 3 topics with preferences, at least one primary topic

Example topic preferences: (1) d (2) j (3) a

- **Until Sunday, October 22, 23:59 GTM+2:** Send e-mail with preferences to us

{henning.wachsmuth, yamen.ajjour}@uni-weimar.de, subject: [seminar] Topic preferences

- Topic assignment will be announced in the next meeting

We will try to match your preferences as far as possible

## ▪ Important

- **Anyone who does not send the e-mail will NOT be graded for this seminar!**

# Literature for primary topics (1 of 4)

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## a. Mining 1: Unit segmentation

- **Ajjour et al. (2017)**. Yamen Ajjour, Wei-Fan Chen, Johannes Kiesel, Henning Wachsmuth, and Benno Stein. Unit Segmentation of Argumentative Texts. In Proceedings of the Fourth Workshop on Argument Mining, pages 118–128, 2017. <http://aclweb.org/anthology/W17-5115>
- **Persing and Ng (2016)**. Isaac Persing and Vincent Ng. End-to-End Argumentation Mining in Student Essays. In Proceedings of NAACL-HLT 2016, pages 1384–1394, 2016. <http://aclweb.org/anthology/N16-1164>

## b. Mining 2: Unit type classification

- **Stab and Gurevych (2014)**. Christian Stab and Iryna Gurevych. Identifying Argumentative Discourse Structures in Persuasive Essays. In Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing, pages 46–56, 2014. <http://aclweb.org/anthology/D14-1006>
- **Rinott et al. (2015)**. Ruty Rinott, Lena Dankin, Carlos Alzate Perez, M. Mitesh Khapra, Ehud Aharoni, and Noam Slonim. Show Me Your Evidence — An Automatic Method for Context Dependent Evidence Detection. In: Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing, pages 440–450, 2015. <http://aclweb.org/anthology/D15-1050>

# Literature for primary topics (2 of 4)

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## c. Mining 3: Relation identification

- **Carstens and Toni (2015)**. Lucas Carstens and Francesca Toni. Towards Relation based Argumentation Mining. In Proceedings of the 2nd Workshop on Argumentation Mining, pages 29–34, 2015. <http://aclweb.org/anthology/W15-0504>
- **Peldszus and Stede (2015)**. Andreas Peldszus and Manfred Stede. Joint Prediction in MST-style Discourse Parsing for Argumentation Mining. In Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing, pages 938–948, 2015. <http://aclweb.org/anthology/D15-1110>

## d. Stance classification

- **Bar-Haim et al. (2017)**. Roy Bar-Haim, Indrajit Bhattacharya, Francesco Dinuzzo, Amrita Saha, and Noam Slonim. Stance Classification of Context-Dependent Claims. In Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics: Volume 1, Long Papers, pages 251–261, 2017. <http://aclweb.org/anthology/E17-1024>
- **Hasan and Ng (2013)**. Kazi Saidul Hasan and Vincent Ng. Stance Classification of Ideological Debates: Data, Models, Features, and Constraints. In Proceedings of the Sixth International Joint Conference on Natural Language Processing, pages 1348–1356, 2013. <http://aclweb.org/anthology/I13-1191>

# Literature for primary topics (3 of 4)

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## e. Classification of schemes

- **Feng and Hirst (2011)**. Vanessa Wei Feng and Graeme Hirst. Classifying Arguments by Scheme. In Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics, pages 987–996, 2011. <http://aclweb.org/anthology/P11-1099>
- **Lawrence and Reed (2016)**. John Lawrence and Chris Reed. Argument Mining Using Argumentation Scheme Structures. In Proceedings of the Sixth International Conference on Computational Models of Argument, pages 379–390, 2016. [http://discovery.dundee.ac.uk/portal/files/12346360/FAIA287\\_0379.pdf](http://discovery.dundee.ac.uk/portal/files/12346360/FAIA287_0379.pdf)

## f. Argumentation quality assessment

- **Habernal and Gurevych (2016)**. Ivan Habernal and Iryna Gurevych. 2016. Which Argument is More Convincing? Analyzing and Predicting Convincingness of Web Arguments using Bidirectional LSTM. In Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 1589–1599. <http://aclweb.org/anthology/P16-1150>
- **Wachsmuth et al. (2017b)**. Henning Wachsmuth, Nona Naderi, Yufang Hou, Yonatan Bilu, Vinodkumar Prabhakaran, Tim Alberdingk Thijm, Graeme Hirst, and Benno Stein. Computational Argumentation Quality Assessment in Natural Language. In Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics, pages 176–187, 2017. <http://aclweb.org/anthology/E17-1017>

# Literature for primary topics (4 of 4)

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## g. Argumentation synthesis

- **Reisert et al. (2015)**. Paul Reisert, Naoya Inoue, Naoaki Okazaki, Kentaro Inui. A Computational Approach for Generating Toulmin Model Argumentation. In Proceedings of the 2nd Workshop on Argumentation Mining, pages 45–55, 2015. <http://aclweb.org/anthology/W15-0507>
- **Bilu and Slonim (2016)**. Yonatan Bilu and Noam Slonim. Claim Synthesis via Predicate Recycling. In Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics, pages 525–530, 2016. <http://aclweb.org/anthology/P16-2085>

## h. Visualization and interaction

- **Reed et al. (2017)**. Chris Reed, Katarzyna Budzynska, Rory Duthie, and Mathilde Janier, and Barbara Konat, and John Lawrence, and Alison Pease, and Mark Snaith. The Argument Web: an Online Ecosystem of Tools, Systems and Services for Argumentation. In Philosophy & Technology 30(2):137–160, 2017. <https://link.springer.com/content/pdf/10.1007%2Fs13347-017-0260-8.pdf>
- **El-Assady et al. (2017)**. Mennatallah El-Assady, Annette Hautli-Janisz, Valentin Gold, Miriam Butt, Katharina Holzinger, and Daniel Keim. Interactive Visual Analysis of Transcribed Multi-Party Discourse. In Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics-System Demonstrations, pages 49–54, 2017. <http://aclweb.org/anthology/P17-4009>

# Literature for secondary topics (1 of 5)

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## i. Argumentative zoning

- **Teufel and Kan (2009)**. Simone Teufel and Min-Yen Kan. Robust Argumentative Zoning for Sensemaking in Scholarly Documents. In Proceedings of the 2009 International Conference on Advanced Language Technologies for Digital Libraries, pages 154–170, 2009.  
<https://pdfs.semanticscholar.org/5957/991ed4eb4fb097e9cde5e3a4c34840c6e36e.pdf>
- **Teufel (2014)**. Simone Teufel. Scientific Argumentation Detection as Limited-domain Intention Recognition. In Proceedings of the Workshop on Frontiers and Connections between Argumentation Theory and Natural Language Processing, 2014. <http://ceur-ws.org/Vol-1341/paper14.pdf>

## j. Framing

- **Naderi and Hirst (2015)**. Nona Naderi and Graeme Hirst. 2015. Argumentation Mining in Parliamentary Discourse. In Principles and Practice of Multi-Agent Systems – International Workshops: IWECC 2014, CMNA XV and IWECC 2015, Revised Selected Papers, pages 16–25, 2015.  
[ftp://ftp.db.toronto.edu/public\\_html/cs/ftp/pub/gh/Naderi+Hirst-CMNA-2015.pdf](ftp://ftp.db.toronto.edu/public_html/cs/ftp/pub/gh/Naderi+Hirst-CMNA-2015.pdf)
- **Menini et al. (2017)**. Stefano Menini, Federico Nanni, Simone Paolo Ponzetto, and Sara Tonelli. Topic-Based Agreement and Disagreement in US Electoral Manifestos. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 2928–2934, 2017. <http://aclweb.org/anthology/D17-1317>



# Literature for secondary topics (2 of 5)

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## k. Overall argumentation

- **Wachsmuth et al. (2017c)**. Henning Wachsmuth and Benno Stein. A Universal Model of Discourse-Level Argumentation Analysis. Special Section of the ACM Transactions on Internet Technology: Argumentation in Social Media, 17(3):28:1–28:24, 2017. <https://dl.acm.org/citation.cfm?doid=2957757>
- **Wachsmuth et al. (2017f)**. Henning Wachsmuth, Giovanni Da San Martino, Dora Kiesel, and Benno Stein. The Impact of Modeling Overall Argumentation with Tree Kernels. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 2369–2379, 2017. <http://aclweb.org/anthology/D17-1252>

## l. Argumentation strategies

- **Al-Khatib et al. (2017)**. Khalid Al-Khatib, Henning Wachsmuth, Matthias Hagen, and Benno Stein. Patterns of Argumentation Strategies across Topics. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 1362–1368, 2017. <http://aclweb.org/anthology/D17-1142>
- **Hidey et al. (2017)**. Christopher Hidey, Elena Musi, Alyssa Hwang, Smaranda Muresan, Kathleen McKeown. Analyzing the Semantic Types of Claims and Premises in an Online Persuasive Forum. In: Proceedings of the 4th Workshop on Argument Mining, pages 11–21, 2017. <http://aclweb.org/anthology/W17-5102>

# Literature for secondary topics (3 of 5)

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## m. Debate winner prediction

- **Tan et al. (2016).** Chenhao Tan, Vlad Niculae, Cristian Danescu-Niculescu-Mizil, and Lillian Lee. Winning Arguments: Interaction Dynamics and Persuasion Strategies in Good-faith Online Discussions. In Proceedings of the 25th International Conference on World Wide Web, pages 613–624, 2016. <https://dl.acm.org/citation.cfm?id=2883081>
- **Wang et al. (2017).** Lu Wang, Nick Beauchamp, Sarah Shugars and Kechen Qin. Winning on the Merits: The Joint Effects of Content and Style on Debate Outcomes. Transactions of the Association for Computational Linguistics, vol. 5, pages 219–232, 2017. <http://aclweb.org/anthology/Q17-1016>

## n. The role of the participants

- **Duthie et al. (2016).** Rory Duthie, Katarzyna Budzynska, and Chris Reed. Mining Ethos in Political Debate. In Proceedings of the Sixth International Conference on Computational Models of Argument, pages 299–310, 2016. [http://discovery.dundee.ac.uk/portal/files/12346427/FAIA287\\_0299.pdf](http://discovery.dundee.ac.uk/portal/files/12346427/FAIA287_0299.pdf)
- **Lukin et al. (2017).** Stephanie Lukin, Pranav Anand, Marilyn Walker and Steve Whittaker. Argument Strength is in the Eye of the Beholder: Audience Effects in Persuasion. In Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics: Volume 1, Long Papers, pages 741–752, 2017. <http://aclweb.org/anthology/E17-1070>

# Literature for secondary topics (4 of 5)

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## o. Argument search

- **Roitman et al. (2016)**. Haggai Roitman, Shay Hummel, Ella Rabinovich, Benjamin Sznajder, Noam Slonim, and Ehud Aharoni. On the Retrieval of Wikipedia Articles Containing Claims on Controversial Topics. In Proceedings of the 25th International Conference Companion on World Wide Web, pages 991–996, 2016. <https://dl.acm.org/citation.cfm?id=2872518.2891115>
- **Wachsmuth et al. (2017)**. Henning Wachsmuth, Martin Potthast, Khalid Al-Khatib, Yamen Ajjour, Jana Puschmann, Jiani Qu, Jonas Dorsch, Viorel Morari, Janek Bevendorff, and Benno Stein. Building an Argument Search Engine for the Web. In Proceedings of the Fourth Workshop on Argument Mining, pages 49–59, 2017. <http://aclweb.org/anthology/W17-5106>

## p. Argumentative writing support

- **Wachsmuth et al. (2016)**. Henning Wachsmuth, Khalid Al-Khatib, and Benno Stein. Using Argument Mining to Assess the Argumentation Quality of Essays. In: Proceedings of the 26th International Conference on Computational Linguistics, pages 1680–1692, 2016. <http://aclweb.org/anthology/C16-1158>
- **Stab (2017)**. Christian Stab. Argumentative Writing Support by means of Natural Language Processing, Appendix A. PhD thesis, TU Darmstadt, 2017. <http://tuprints.ulb.tu-darmstadt.de/6006/1/PhD-Thesis-ChristianStab.pdf>

# Literature for secondary topics (5 of 5)

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## p. Discourse and argumentation

- **Cabrio et al. (2013)**. Elena Cabrio, Sara Tonelli, and Serena Villata. A Natural Language Account for Argumentation Schemes. In Proceedings of the XIIIth International Conference on AI\*IA 2013: Advances in Artificial Intelligence - Volume 8249, Pages 181-192, 2013. Available upon request at us.
- **Peldszus and Stede (2016)**. Andreas Peldszus and Manfred Stede. Rhetorical Structure and Argumentation Structure in Monologue Text. In Proceedings of the 3rd Workshop on Argument Mining, pages 103–112, 2016. <http://aclweb.org/anthology/W16-2812>