

Hauptseminar  
Summer Semester 2014

**Intelligent Computer-Assisted Language Learning:  
Connecting CL research and real-life learning tasks**

**Abstract:**

Computational Linguistics can inform adaptive learning environments, where learners are incrementally supported in their learning through immediate, individual feedback. While on the research-side, the benefits have clearly been established, interactive online workbooks using CL techniques still are virtually absent from schools today. Following an overview of the relevant issues, concepts and CL techniques, in this hands-on seminar we will work on bridging the gap between state-of-the-art CL techniques (as, e.g., highlighted in the CoNLL-2013 Shared Task: Grammatical Error Correction) and the real-life language tasks used in school today (for which a German schoolbook publisher is providing us electronic versions).

**Instructor:**

- Detmar Meurers
  - *Office:* Room 1.28, Blochbau (Wilhelmstr. 19)
  - *Email:* dm@sfs.uni-tuebingen.de
  - *Office hours:* Tuesdays 10:00–12:00 (please arrange slot by email beforehand)

**Course meets:**

- Thursdays, 10:15–13:45 in 1.13 (or 2.28 as needed) (SfS, Blochbau, Wilhelmstr. 19)
  - Note: Following the standard rules, missing more than two meetings unexcused, automatically results in failing the class. If you have to miss class for a valid reason, let me know by email **before** class.

**Language:**

- The course language is English, but may be switched to German if desired by all.

**Credits:** 10 CP in MA ISCL

**Moodle page:** <https://moodle02.zdv.uni-tuebingen.de/course/view.php?id=833>

## Syllabus (this file):

- html-Version (<http://purl.org/dm/14/ss/hs>)
- pdf-Version (<http://purl.org/dm/14/ss/hs/syllabus.pdf>)

**Nature of course and our expectations:** This Hauptseminar intends to provide an overview of the concepts and issues involved in research in this domain. Participants are expected to

1. regularly and actively participate in class, read the papers assigned by any of the presenters and post a question on Moodle to the “Reading Discussion Forum” on each reading *at the latest on the day before it is discussed* in class. (20% of grade)
2. explore and present a topic (40% of grade):
  - select one of the sub-topics
  - thoroughly research the topic, taking our literature pointers as a starting point
  - prepare the presentation with slides and discuss the presentation with one of the instructors in the week before the presentation
  - start a new Moodle thread on the “Reading Discussion Forum” specifying what every course participant should read to prepare for your presentation a week before your presentation
  - present the topic in class
3. write and submit a term paper (40% of grade)

**Academic conduct and misconduct:** Research is driven by discussion and free exchange of ideas, motivations, and perspectives. So you are encouraged to work in groups, discuss, and exchange ideas. At the same time, the foundation of the free exchange of ideas is that everyone is open about where they obtained which information. Concretely, this means you are expected to always make explicit when you’ve worked on something as a team – and keep in mind that being part of a team always means sharing the work.

For text you write, you always have to provide explicit references for any ideas or passages you reuse from somewhere else. Note that this includes text “found” on the web, where you should cite the url of the web site in case no more official publication is available.

## Topics:

- Theory:
  - Intelligent Computer-Assisted Language Learning
    - \* ILTS Overview
    - \* Learner Modeling
    - \* Meaning Assessment
  - Error detection and correction: Papers from CoNLL Shared Task in Grammatical Error Correction 2013 (five error types) and 2014 (all errors).
- Practice:
  - From true/false to scaffolding feedback:
    - \* general difference highlighting
    - \* (learner) language specific feedback
    - \* contextualization
  - Examples from real-life teaching context:
    - \* CALL Grammar Exercises
    - \* Vocabulary learning with Diesterweg CamdenTown
    - \* Online workbook activities for CamdenTown
      - Error detection and correction module developed and tested on CoNLL Shared Task data
  - Related work: Generating activities in VIEW (Meurers et al. 2010)
    - \* input enhancement
    - \* selecting targets and distractors in VIEW, informed by learner modeling (learner corpora, system use)

## Sessions:

- 17.4.
- 24.4.
- [1.5. *Tag der Arbeit*]
- 8.5.
- 15.5.
- 22.5.
- [29.5. *Christ Himmelfahrt*]

- 5.6.
- [12.6. *Pfingstpause*]
- [19.6. *Fronleichnam*]
- 26.6.
- 3.7.
- 10.7.
- 17.7. (alternative final meeting slot needed)

## References

- Meurers, D. (2012). Natural Language Processing and Language Learning. In C. A. Chapelle (ed.), *Encyclopedia of Applied Linguistics*, Oxford: Wiley. URL <http://purl.org/dm/papers/meurers-12.html>.
- Meurers, D., R. Ziai, L. Amaral, A. Boyd, A. Dimitrov, V. Metcalf & N. Ott (2010). Enhancing Authentic Web Pages for Language Learners. In *Proceedings of the 5th Workshop on Innovative Use of NLP for Building Educational Applications (BEA-5) at NAACL-HLT 2010*. Los Angeles: Association for Computational Linguistics, pp. 10–18. URL <http://aclweb.org/anthology/W10-1002.pdf>.

Last update: April 16, 2014