

NLP

Introduction to NLP

Administrative

Structure of the Course

- Four major parts:
 - Linguistic, mathematical, and computational background
 - Computational models of morphology, syntax, semantics, discourse, pragmatics
 - Core NLP technology: parsing, part of speech tagging, text generation, etc.
 - Applications: text classification, machine translation, information extraction, etc.
- Three major goals:
 - Learn the basic principles and theoretical issues underlying natural language processing
 - Learn techniques and tools used to develop practical, robust systems that can understand text and communicate with users in one or more languages
 - Gain insight into some open research problems in natural language

Available Books

- **Speech and Language Processing**
 - Daniel Jurafsky and James Martin
 - <http://www.cs.colorado.edu/~martin/slp.html>
- **Foundations of Statistical Natural Language Processing**
 - Chris Manning and Hinrich Schütze
 - <http://nlp.stanford.edu/fsnlp/>
- **Natural Language Understanding**
 - James Allen

Courses at Other Places

- **Brick-and-Mortar**
 - Johns Hopkins University (Jason Eisner)
 - Cornell University (Lillian Lee)
 - Stanford University (Chris Manning)
 - U. Maryland (Hal Daumé)
 - Berkeley (Dan Klein)
 - U. Texas (Ray Mooney)
- **Coursera**
 - Manning/Jurafsky (2012, survey)
 - Michael Collins (2013, more advanced)

The Association for Computational Linguistics (ACL)

The screenshot shows the ACL website homepage. The browser window title is "the Association for Computational Linguistics - Home - Mozilla Firefox". The address bar shows "http://www.aclweb.org/". The page features a navigation menu on the left with links like Home, News, Conferences, ACL Member Portal, Publications, CL Journal, TACL, Resources, Affiliations, SIGs, About the ACL, Contact Us, and ACL Policies. The main content area is divided into several sections:

- New ACL journal – Transactions of the Association for Computational Linguistics (TACL)**: Announces the launch of the TACL journal, following the decision of the ACL Executive Committee. It mentions that TACL targets papers of a similar scope to current conference proceedings and will also receive a presentation slot at the annual ACL conference.
- ACL Fellows Program**: Welcomes new Fellows and mentions the 2011 Fellows list. It provides a link to the ACL Fellows index and congratulates the new Fellows.
- Changes to the ACL executive board**: Announces the election of two new ACL members, Gertjan van Noord and Jian Su, to replace Ido Dagan and Lori Levin.

On the right side, there is a "POLL" section titled "What do you think of the new site?" with options: Love it, Hate it, and This is a new site?.

The footer of the browser window shows search results for "children" with navigation links like Next, Previous, Highlight all, Match case, and Phrase not found.

The Alphabet Soup

- NLP (Natural Language Processing)
- CL (Computational Linguistics)
- IR (Information Retrieval)
- SP (Speech Processing)
- HLT (Human Language Technology)
- NLE (Natural Language Engineering)
- ML (Machine Learning)

Research in NLP

- Conferences:

- ACL/NAACL, EMNLP, SIGIR, AAAI/IJCAI, Coling, HLT, EACL/NAACL, AMTA/MT Summit, ICSLP/Eurospeech

- Journals:

- Computational Linguistics, TACL, Natural Language Engineering, Information Retrieval, Information Processing and Management, ACM Transactions on Information Systems, ACM TALIP, ACM TSLP

- University centers:

- Berkeley, Columbia, Stanford, CMU, JHU, Brown, UMass, MIT, UPenn, USC/ISI, Illinois, Michigan, UW, Maryland, etc.
- Toronto, Edinburgh, Cambridge, Sheffield, Saarland, Trento, Prague, QCRI, NUS, and many others

- Industrial research sites:

- Google, MSR, Yahoo!, IBM, SRI, BBN, MITRE, AT&T Labs

- The ACL Anthology

- <http://www.aclweb.org/anthology>

- The ACL Anthology Network (AAN)

- <http://clair.eecs.umich.edu/aan/index.php>

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