

Curriculum Vitae

Bridget T. McInnes
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Current Status

I am currently completing a PhD in Computer Science at the University of Minnesota Twin Cities under the advisement of Dr. Ted Pedersen and Dr. John Carlis.

Education

- **University of Minnesota Duluth**

M.S., Computer Science, December 2004

Thesis Title: *Extending the Log-Likelihood Ratio to Improve Collocations Identification*

Advisor: Ted Pedersen

- **University of Minnesota Duluth**

B.S., Computer Science

Professional Experience

- Research Assistant

Computer Science and Engineering Department, University of Minnesota

Sep. 06 - present

- Conduct bio-NLP related research including hypothesis definition, experimental design and implementation, data analysis and publication writing.

- Student Research Scientist

National Library of Medicine, Bethesda, MD

Mar. 08 - Sep. 08

- Conducted research in unsupervised methods to disambiguate ambiguous words in the biomedical text.
- Conducted research to determine the semantic similarity between biomedical concepts in the Unified Medical Language System (UMLS).

- Teaching Assistant
Computer Science Department, University of Minnesota Duluth
Computer Science and Engineering Department, University of Minnesota Twin Cities
Sep. 02 - May. 06
 - Conducted programming labs and recitations for computer science classes including Software Development, Software Analysis and Design, Natural Language Processing, Data Structures and Algorithms, Data Modeling and Discrete Math.
- Research and Development Intern
Thomson Legal and Regulatory, Eagan, MN.
May 05 - Aug 05
May 06 - Aug 06
 - Researched information extraction and question answering.
- Student Research Scientist
Mayo Clinic, Rochester, MN
Jun. 03 - Sep. 03
Jun. 04 - Sep. 04
 - Researched and implemented a spelling correction tool to automatically correct misspelled words in clinical notes
 - Researched term identification in clinical notes

Honors and Awards

- Graduate Assistance in Areas of National Need (GAANN) Fellowship, 2006-2009
Awarded by the Computer Science and Engineering Department, University of Minnesota Twin Cities
- National Library of Medicine's Student Research Participation Program Fellowship, 2008
- Most Outstanding Teaching Assistant , 2004
Awarded by the Graduate School, University of Minnesota Duluth
- National Science Foundation scholarship, 2001-2002
Awarded by the Computer Science Department, University of Minnesota Duluth

Refereed Conference Publications

- McInnes, B. & Pedersen, T. & Carlis, J. (2007) Using UMLS Concept Unique Identifiers (CUIs) for Word Sense Disambiguation in the Biomedical Domain. In *Proceedings of the Annual Symposium of the American Medical Informatics Association*. Chicago, IL. [acceptance rate 45%]

Refereed Workshops Publications

- McInnes, B. (2008) An Unsupervised Vector Approach to Biomedical Term Disambiguation: Integrating UMLS and Medline. In *Proceedings of the Association for Computational Linguistics Student Research Workshop (ACL-SRW)*. Columbus, Ohio.
- McInnes, B. & Pedersen, T. & Pakhomov, S. (2007) Determining the Syntactic Structure of Medical Terms in Clinical Notes. In *Proceedings of the ACL Workshop BioNLP 2007: Biological, translational and clinical language processing*. pp. 9-16, Prague, Czech Republic. [acceptance rate 29%]

Workshop Publications

- Schilder F. & McInnes B. (2006) TLR at DUC 2006: Approximate tree similarity and a new evaluation regime. In *Proceedings of the Document Understanding Conference (DUC)*, New York, NY, USA.
- Schilder F. & McInnes B. (2006) Word and tree-based similarities for textual entailment. In *Proceedings of the Second PASCAL Challenges Workshop on Recognizing Textual Entailment (RTE-2)*, Venice, Italy.
- Schilder, F. & McCullom, A. & Zhou, A. & McInnes, B. (2005) TLR at DUC: Tree Similarity. In *Proceedings of the Document Understanding Conference (DUC)*, Vancouver, Canada.
- McInnes, B. & Pedersen, T. (2003) The Duluth Word Alignment System. In *Proceedings of the NAACL Workshop on Building and Using Parallel Texts: Data Driven Machine Translation and Beyond*. pp. 40-43. Edmonton, Canada.

Refereed Abstract Publications

- Pakhomov S. & McInnes, B. (2005) Resolving Structural Ambiguity of Medical Terms with Statistical Model Fitting. In *Proceedings of the Linguistic Society of America (LSA)*. Oakland, CA. (panel presentation)
- McInnes, B. & Pakhomov, S. & Pedersen T. & Chute, C. (2004) Incorporating Bigram Statistics to Spelling Correction Tools. In *Medinfo 2004: Proceedings of the 11th World Congress on Medical Informatics*. pp. 182. San Francisco, CA. IOS Press. (poster presentation) [acceptance rate: 73%]

Workshop Reviewing

- ACL 2008 BioNLP Workshop, June 2008, Columbus, Ohio. [1 paper]
- ACL 2005 Workshop on Building and Using Parallel Texts: Data Driven MT and Beyond, June 2005, Ann Arbor, MI. [3 papers]

Participation in Shared Tasks and Comparative Evaluations

- Second *i2b2* Shared Task Workshop Challenge in Natural Language Processing - “A Shared-Task on Obesity: Who’s obese and what co-morbidities do they (definitely/likely) have?”. Organized by the Informatics and Integrating Biology and the Beside (*i2b2*).
- Medical NLP Challenge - Classifying Clinical Free Text Using Natural Language Processing (2007): Participated with Ted Pedersen and Serguei Pakhomov. Organized by the Computational Medicine Center.

Professional Society Memberships

- Association for Computational Linguistics
- American Medical and Informatics Association
- Association for Computational Machinery