

Annie Louis

CONTACT INFORMATION	School of Informatics University of Edinburgh 10 Crichton Street Edinburgh EH8 9AB	alouis@inf.ed.ac.uk http://homepages.inf.ed.ac.uk/alouis
RESEARCH INTERESTS	I develop natural language processing and machine learning techniques to both understand how people use language, and build language-related technology. In particular, I create models which infer how documents and conversations are structured and the impressions they make on the readers and listeners. I am pursuing how this technology can be used to automatically assess the quality of documents, to summarize and generate text, improve search of social media content, and help with software engineering.	
CURRENT EMPLOYMENT	Research Associate , April 2017 to present <i>School of Informatics, University of Edinburgh, Edinburgh, UK</i> Turing Research Fellow , October 2017 to present <i>Alan Turing Institute, London, UK</i> Adjunct Professor , December 2018 to present <i>School of Computer Science, McGill University, Montreal, Canada</i>	
EDUCATION	Ph.D. in Computer and Information Science , May 2013 <i>University of Pennsylvania, Philadelphia, USA</i> Master of Science in Engineering, Computer and Information Science , Aug 2009 <i>University of Pennsylvania, Philadelphia, USA</i> Bachelor of Computer Science and Engineering , May 2007 <i>College of Engineering, Guindy, Anna University, Chennai, India</i>	
PREVIOUS EMPLOYMENT	Lecturer , January 2016 - March 2017 <i>University of Essex, Colchester, UK</i> Research Associate , February 2015 to December 2015 <i>University of Edinburgh, Edinburgh, UK</i> Newton International Fellow , January 2013 to February 2015 <i>University of Edinburgh, Edinburgh, UK</i> Research Intern - Future Social Experience , Summer 2011 <i>Microsoft Research, Redmond, Washington, USA</i> Research Intern - Search Sciences , Summer 2010 <i>Yahoo! Labs, Sunnyvale, California, USA</i> Research Intern - Automated Scoring , Summer 2009 <i>Educational Testing Services, Princeton, New Jersey, USA</i>	
HONORS AND AWARDS	Newton International Fellowship, 2013-2015 Awarded by The British Academy and Royal Society to 40 post-doctoral researchers from around the world. The fellowship provides support for two years at a UK institution and follow-up funding to maintain collaborations with UK researchers.	

Best Paper Award, Conference on Empirical Methods on Natural Language Processing and Computational Natural Language Learning (EMNLP), 2012

Best Student Paper Award, 11th Annual SIGdial Meeting on Discourse and Dialogue (SIG-DIAL), 2010

Runner up: ‘Best Research Abstract’ at the SIGAI Career Network Conference 2015

Among the 25% of NAACL 2015 reviewers acknowledged for “exceptionally well-written and constructive reviews”

Among the 14% of ACL 2014 reviewers acknowledged for “extremely helpful reviews to the area chairs and authors”

Best Reviewer Award EMNLP-CoNLL 2012 - “for select reviewers whose reviews were particularly useful to the program committee and authors”

INVITED
TALKS

Alan Turing Institute, London, October 2018

McGill University, Montréal, Canada, November 2017

Google Natural Language Understanding Workshop, New York, USA, July 2017

Heidelberg Institute for Theoretical Studies, Heidelberg, Germany, April 2017

University of Cambridge, Cambridge, UK, March 2016

University of Edinburgh, Edinburgh, UK, March 2016

Signal Media Ltd., London, UK, January 2016

Université catholique de Louvain, Louvain-la-Neuve, Belgium, October 2015

University of Essex, Colchester, UK, September 2015

Toyota Technological Institute, Chicago, USA, April 2015

University of Michigan, Ann Arbor, USA, March 2015

University of Glasgow, Scotland, UK, November 2014

University of Sheffield, South Yorkshire, UK, November 2014

Google Research, Mountain View, USA, September 2014

Georgia Institute of Technology, Atlanta, USA, March 2014

Emory University, Atlanta, USA, March 2014

Saarland University, Saarbrücken, Germany, October 2013, March 2014

ACL Workshop on Predicting and Improving Text Readability for Target Reader Population, Sofia, Bulgaria, August 2013 (**Keynote Talk**)

AT&T Labs Research, New Jersey, USA, November 2010

IBM Open House on Statistical Machine Learning and its Applications (SMiLe), IBM T.J Watson Center, New York, USA, October 2009

THESIS

[1] Annie Louis, “Predicting Text Quality: Metrics for Content, Organization and Reader Interest”, *University of Pennsylvania*, January 2013.

JOURNAL
ARTICLES

[2] Annie Louis, “Book Review: Natural Language Processing for Social Media. By A. Farzindar & D. Inkpen”, In *Computational Linguistics*, 2016.

[3] Annie Louis and Mirella Lapata, “Which Step Do I Take First? Troubleshooting with

Bayesian Models”, In *Transactions of the Association for Computational Linguistics*, 2015.

[4] Annie Louis and Ani Nenkova, “What Makes Writing Great? First Experiments on Article Quality Prediction in the Science Journalism Domain”, In *Transactions of the Association for Computational Linguistics*, 2013.

[5] Annie Louis and Ani Nenkova, “A Text Quality Corpus for Science Journalism”, In *Dialogue and Discourse, Special Issue on Annotating Pragmatic and Discourse Phenomena*, 2013.

[6] Annie Louis and Ani Nenkova, “Automatically Assessing Machine Summary Content Without a Gold-standard”, In *Computational Linguistics*, 2013.

CONFERENCE
PUBLICATIONS

[7] Ieva Staliunaite, Hannah Rohde, Bonnie Webber and Annie Louis, “Getting to Hearer-old: Charting Referring Expressions Across Time”, In *Proceedings of Empirical Methods in Natural Language Processing*, 2018.

[8] Annie Louis and Charles Sutton, “Deep Dungeons and Dragons: Learning Character-Action Interactions from Role-Playing Game Transcripts”, In *Proceedings of North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, 2018 (Short papers).

[9] Cristina Guerrero-Romero, Annie Louis and Diego Perez-Liebana, “Beyond Playing to Win: Diversifying Heuristics for GVGAI”, In *Proceedings of the Conference on Computational Intelligence (CIG)*, 2017.

[10] Annie Louis and Shay Cohen, “Conversation Trees: A Grammar Model for Topic Structure in Forums”, In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2015.

[11] Annie Louis, “A Bayesian Approach to Incorporate Background Knowledge during Automatic Text Summarization”, In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (ACL)*, 2014.

[12] Annie Louis and Bonnie Webber, “Structured and Unstructured Cache Models for SMT Domain Adaptation”, In *Proceedings of 14th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 2014.

[13] Annie Louis and Ani Nenkova, “Verbose, Laconic or Just Right: A Simple Computational Model of Content Appropriateness under Length Constraints”, In *Proceedings of 14th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 2014.

[14] Annie Louis and Ani Nenkova, “A Coherence Model based on Syntactic Patterns”, In *Proceedings of the Conference on Empirical Methods in Natural Language Processing and Computational Natural Language Learning (EMNLP-CoNLL)*, 2012. **[Best Paper Award]**

[15] Annie Louis and Todd Newman, “Summarization of Business-related Tweets: A Concept-based Approach”, In *Proceedings of the 24th International Conference on Computational Linguistics (COLING)*, 2012.

[16] Annie Louis and Ani Nenkova, “A Corpus of General and Specific Sentences from News”, In *Proceedings of the 8th International Conference on Language Resources and Evaluation (LREC)*, 2012.

[17] Annie Louis and Ani Nenkova, “Automatic Identification of General and Specific Sentences by Leveraging Discourse Annotations”, In *Proceedings of the 5th International Joint Conference on Natural Language Processing (IJCNLP)*, 2011.

- [18] Annie Louis, Aravind Joshi and Ani Nenkova, “Discourse Indicators for Content Selection in Summarization”, In *Proceedings of the 11th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL)*, 2010. **[Best Student Paper Award]**
- [19] Annie Louis, Aravind Joshi, Rashmi Prasad and Ani Nenkova, “Using Entity Features to Classify Implicit Discourse Relations”, In *Proceedings of the 11th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL)*, 2010.
- [20] Emily Pitler, Annie Louis and Ani Nenkova, “Automatic Evaluation of Linguistic Quality in Multi-Document Summarization”, In *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL)*, 2010.
- [21] Annie Louis and Ani Nenkova, “Creating Local Coherence: An Empirical Assessment”, In *Proceedings of Human Language Technologies: The 11th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL-HLT)*, 2010.
- [22] Annie Louis and Ani Nenkova, “Automatic Summary Evaluation without using Human Models”, In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2009.
- [23] Annie Louis and Ani Nenkova, “Performance Confidence Estimation for Automatic Summarization”, In *Proceedings of the 12th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 2009.
- [24] Emily Pitler, Annie Louis and Ani Nenkova, “Automatic Sense Prediction for Implicit Discourse Relations in Text”, In *Proceedings of the Joint conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP)*, 2009.
- [25] Ani Nenkova and Annie Louis, “Can You Summarize This? Identifying Correlates of Input Difficulty for Generic Multidocument Summarization”, In *Proceedings of the 46th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT)*, 2008.
- [26] Mostafazadeh, N., Roth, M., Louis, A., Chambers, N., and Allen, J., “LSDSem 2017 shared task: The story cloze test”, In *Proceedings of the 2nd Workshop on Linking Models of Lexical, Sentential and Discourse-level Semantics*, EACL 2017.
- [27] Hannah Rohde, Anna Dickinson, Chris Clark, Annie Louis and Bonnie Webber, “Recovering Discourse Relations: Varying Influence of Discourse Adverbials”. In *Proceedings of Workshop on Computational Semantics: Linking Lexical, Sentential and Discourse-level Models*, EMNLP 2015.
- [28] Annie Louis, “Automatic Metrics for Genre-specific Text Quality”, In *Proceedings of NAACL Student Research Workshop*, 2012.
- [29] Annie Louis, “Predicting Text Quality for Scientific Articles”, In *Proceedings of AAAI-SIGART Doctoral Consortium*, 2011.
- [30] Annie Louis and Ani Nenkova, “Text Specificity and Impact on Quality of News Summaries”, In *Proceedings of ACL-HLT Workshop on Monolingual Text to Text Generation*, 2011.
- [31] Annie Louis, Eric Crestan, Youssef Billawala, Rao Shen, Fernando Diaz and Jean-Francois Crespo, “Use of Query Similarity for Improving Presentation of News Verticals”, In *Proceedings of VLDB Workshop on Very Large Data Search*, 2011.
- [32] Annie Louis and Derrick Higgins, “Off-topic Essay Detection using Short Prompt Texts”,

In *Proceedings of NAACL-HLT Workshop on Innovative Use of NLP for Building Educational Applications*, 2010.

BOOK
CHAPTERS [33] Ani Nenkova, Jieun Chae, Annie Louis, and Emily Pitler, “Structural Features for Predicting the Linguistic Quality of Text: Applications to Machine Translation, Automatic Summarization and Human-Authored Text”, In *Emiel Krahmer and Mariet Theune, editors, Empirical Methods in Natural Language Generation: Data-oriented Methods and Empirical Evaluation*, Springer, 2010.

PATENTS Annie Louis and Todd Newman, *Microblog Summarization*,
Assignee: Microsoft Technology Licensing, LLC (Redmond, WA)
Patent Number: US 9152625, 2015

RESEARCH
FUNDING Newton International Fellowship: *Bringing Structure and Coherence to Statistical Machine Translation*, Jan 2013 - Feb 2015. Value: £80,564. Royal Society and British Academy.

TEACHING
EXPERIENCE **University of Essex**, Colchester, UK
Instructor
CE314: Natural Language Engineering, Fall 2016
CE902: Professional Practice and Research Methodology, Spring 2016, 2017

University of Pennsylvania, Philadelphia, USA
Certificate in College and University Teaching, 2012
Given to Ph.D. students who have demonstrated laudable dedication to teaching.

Teaching Assistant
CIS 430: Introduction to Human Language Technology, Fall 2008
CIS 120: Introduction to Programming Languages and Techniques, Spring 2009
CIS 530: Introduction to Natural Language Processing, Fall 2010

STUDENT
SUPERVISION *PhD thesis examiner*
Bo Wang, 2018 (External Examiner, University of Warwick)
Ahmed Rashed A. Alzahrani, 2017 (Internal Examiner, University of Essex)
Ans Alghamdi, 2016 (Internal Examiner, University of Essex)

M.Sc. Thesis
Matthew Grenander, 2018 (Co-supervisor, McGill University)

Undergraduate Thesis
Antonia Calvi, 2018 (Supervisor, University of Edinburgh)
Zheng Zhao, 2018 (Supervisor, University of Edinburgh)
Jeremy Liu, Antony Vo, Qian Wang, 2012 (Co-supervisor, University of Pennsylvania)

Interns
Ieva Staliunaite, 2018 (Co-supervisor, University of Edinburgh)
Paul Wu, 2018 (Co-supervisor, McGill University)
Jingyun Liu, 2017 (Co-supervisor, McGill University)
Ziyang Xu, 2017 (Co-supervisor, University of Edinburgh)
Sarah McGillion, 2014 (Supervisor, University of Edinburgh)

PROFESSIONAL
ACTIVITIES

Leadership

- Elected to SIGDIAL Scientific Advisory Committee 2017-
- Associate Editor, Discourse and Dialogue 2018-

Chair

- Program Co-chair: SIGDIAL 2017
- Senior Area Chair: ACL 2019
- Area Co-chair: NAACL 2018, NAACL 2016, ACL 2016, *SEM 2016
- Demo Co-chair: NAACL 2019
- Workshop Co-chair: EMNLP 2016
- Student Research Workshop Co-chair: ACL 2014, NAACL 2013
- Student Volunteers Chair: NAACL-HLT 2015

Event organizer

- Workshop Co-organizer: *Computational Semantics: Linking Lexical, Sentential and Discourse-level Models*, EACL 2017
- Workshop Co-organizer: *Uphill Battles in Language Processing: Scaling Early Achievements to Robust Methods*, EMNLP 2016
- Workshop Co-organizer: *Computational Semantics: Linking Lexical, Sentential and Discourse-level Models*, EMNLP 2015

University service

- Athena SWAN Committee: *Focusing on the school's commitment towards advancement and representation of women in STEM careers*, School of Computer Science and Electronic Engineering, University of Essex, 2016
- Academic Offences Committee, University of Essex, 2016

Grant Proposal Reviewer

- The Israel Science Foundation (ISF) 2015
- Council for the Humanities of the Netherlands Organisation for Scientific Research (NWO) 2014

Book Reviewer

Computational Linguistics 2016

Journal Reviewer

Transactions of ACL (2014, 2015, 2016, 2017, 2018, 2019), Computational Linguistics (2009, 2014, 2015), Journal of Artificial Intelligence Research (2010, 2014, 2015), Artificial Intelligence (2015), Journal of Natural Language Engineering (2012, 2014, 2015), Computer Speech and Language (2015), Information Processing and Management (2015), IEEE Transactions on Audio, Speech and Language Processing (2014), ITL Special Issue on Readability and Text Simplification (2013), Transactions on Information Systems (2012, 2015), Transactions on Asian and Low-Resource Language Information Processing (2017)

Programme Committee Member/Conference Reviewer

ACL (2010, 2011, 2012, 2013, 2014, 2015, 2017, 2018), NIPS (2018), IJCNLP(2017), WWW (2016), NAACL-HLT (2010, 2012, 2013, 2015, 2019), AACL (2013, 2016), IJCAI (2011, 2013), EACL (2012, 2014), LREC (2012, 2014, 2016), EMNLP (2012, 2013, 2017), RANLP (2009, 2011, 2013, 2015), SIGDIAL (2014, 2015, 2016, 2019), CoNLL (2014, 2015), *SEM (2015, 2017), CLT (2014)

Workshop Reviewer

Women and Underrepresented Minorities in NLP Workshop (WiNLP) 2017 European Summer School in Logic, Language and Information (ESSLLI) 2015
Vector Space Modeling for NLP: NAACL-HLT 2015
Innovative Use of NLP for Building Educational Applications: ACL-HLT 2011, NAACL-

HLT 2012, NAACL-HLT 2013, ACL 2014, NAACL-HLT 2015, NAACL 2016
Predicting and Improving Text Readability: NAACL-HLT 2012, ACL 2013, EACL 2014
Metaphor in NLP: ACL 2014, NAACL-HLT 2015
Linguistic Annotation and Interoperability with Discourse: ACL 2013
Evaluation Metrics and System Comparison for Automatic Summarization: NAACL-HLT 2012
Student Research Workshop: NAACL-HLT 2009, ACL (2012, 2017), RANLP (2013, 2015)

Staff Reporter

IEEE Speech and Language Processing Technical Committee Newsletter, 2009-2010

Co-organizer

- CLUNCH (weekly Computational Linguistics seminars), University of Pennsylvania, Fall 2008, Spring 2009, Spring 2012
- Machine Learning for NLP Reading Group, University of Edinburgh, Spring 2014
- 40YCL@Essex, Celebrating 40 Years of Computational Linguistics at University of Essex, July 2016