

Rachel Bawden

Researcher in Natural Language Processing

Personal details

Date of birth	04/10/1988	Nationality	British, naturalised French
E-mail	rachel.bawden@ed.ac.uk	Website	https://rbawden.github.io

Education and degrees

- 2019 **French lecturer qualifications**, *CNU*, Sections 7 (Linguistics) and 27 (Informatics).
- 29/11/2018 **PhD in computer science**, *Université Paris-Sud, Université Paris-Saclay*, Going beyond the sentence: Machine Translation of Dialogue in Context.
– Supervisors: Sophie Rosset (LIMSI, CNRS) and Thomas Lavergne (LIMSI, CNRS, Univ. Paris-Sud, Univ. Paris-Saclay)
– President: Nicolas Sabouret (LIMSI, CNRS, Univ. Paris-Sud, Univ. Paris-Saclay)
– Reviewers: Jörg Tiedemann (University of Helsinki) and Loïc Barrault (Université du Mans)
– Examiners: Lucia Specia (University of Sheffield and Imperial College) and Andrei Popescu-Belis (Haute École D'Ingénierie et de Gestion du Canton de Vaud)
- 2013–2015 **Master's degree in Computational Linguistics**, *Université Paris-Diderot*, First class ("mention très bien"). Machine learning, syntactic parsing, computational semantics, probabilities for NLP, machine translation, formal languages.
- 2012–2013 **Master's degree (first year) in Linguistic Engineering**, *Université Sorbonne Nouvelle*, First class ("mention très bien"). Corpus processing, formal grammars, lexicography, computational phonetics.
- 2007–2011 **Bachelor of Arts in French and Linguistics**, *Oxford University*, First Class. General linguistics, syntax, historical linguistics, sociolinguistics, French linguistics. Special subjects: phonetics/phonology, psycholinguistics.
- 2005–2007 **A-levels**, *The Latymer School, Edmonton, London*, French, English, Biology, Geography, four grade "A"s.

Professional experience

Research

- 2018–présent **Research associate**, *ILCC, University of Edinburgh*, Machine Translation of low resourced languages, Working with Alexandra Birch.
- 2015–2018 **PhD in computer science**, *LIMSI, CNRS, Univ. Paris-Sud, Université Paris-Saclay*, Going beyond the sentence: Machine Translation of Dialogue in Context.
- May–Aug 2017 **Research visit**, *ILCC, University of Edinburgh*, Neural machine translation of discourse. Collaboration with Alexandra Birch, Barry Haddow and Rico Sennrich.
- Feb–Aug 2015 **Master's research placement**, *Alpage (Inria & Université Paris-Diderot)*, Boosting for model selection for statistical syntactic parsing. Supervised by Benoit Crabbé.
- May–Aug 2014 **Master's research placement**, *LaTTiCe (CNRS & Université Sorbonne Nouvelle) and Télécom ParisTech*, Modelling communicative acts for an embodied conversational agent. Supervised by Frédéric Landragin and Chloé Clavel.

June–Aug 2013 **Master's research placement**, *MoDyCo Laboratory (CNRS & Université Paris-Ouest)*, Development and semi-automatic correction of a dependency treebank of spoken French. Supervised by Sylvain Kahane.

2013 **Translation proof-reading and revision**, *Lucien Tesnière, Elements of structural syntax, published in French in 1959, translated by Timothy Osborne and Sylvain Kahane, John Benjamins, Amsterdam, 2015.*

March–June 2013 **Research placement**, *MoDyCo Laboratory (CNRS & Université Paris-Ouest)*, Annotation of a treebank of spoken French for syntactic dependencies.

Teaching and supervision

2019 **Co-supervision of 2 MSC projects**, *School of Informatics, Edinburgh, UK.*

2016–17, 2017–18 **Introduction to Natural Language Processing**, *4th year*, Polytech Paris-Sud, Course supervisor: lectures, tutorials and practical classes (30hrs/year).

2017–18 **Algorithmics and C++**, *2nd year*, Polytech Paris-Sud, Practical classes (10hrs).

2015–16, 2016–17 **Databases**, *3rd year*, Polytech Paris-Sud, Tutorials and classes (24hrs/year).

2015–16, 2016–17 **Algorithmics/C**, *3rd year*, Polytech Paris-Sud, Tutorials and classes (27hrs+28hrs).

2015–16 **Tutoring in computer science**, *3rd year*, Polytech Paris-Sud (12hrs).

2009–2010 **English language assistant**, *4 primary schools in Le Puy-en-Velay, France.*

Community activities

2017–présent **Programme committees for conferences and workshops**, ACL'18,¹ ACL'19, EMNLP'18, LREC'17, ACL-SRW'17, NAACL-SRW'18-19, RECITAL'19.

2016 **Jury member of the Doctoral Prize**, *The Doctoral School of Science and Communication Technology (STIC), Université Paris-Saclay.*

2016 **Co-organiser of the PhD Day**, *LIMSI, CNRS.*

2016–2017 **PhD representative for the laboratory board**, *LIMSI, CNRS.*

Additional training

50hrs **Lisbon Machine Learning Summer School (LxMLS) 2016**, Instituto Superior Técnico (IST), *Lisbon, Portugal*

Computer skills

Languages **Python, C++**, Bash, C, Perl, Java, OCaml, Praat, SQL

Web technologies HTML, CSS, XML, XSL

Languages

Native speaker English

Fluent French

Interests

Piano Grade 8, 2006, Guildhall Exams

Saxophone alto Grade 8, 2005, Associated Board

¹Recognised as an "outstanding reviewer".

Publications

PhD Thesis

- [1] Rachel Bawden. *Going beyond the sentence: Contextual Machine Translation of Dialogue*. PhD thesis, LIMSI, CNRS, Université Paris-Sud, Université Paris-Saclay, Orsay, France, 2018.

Journal Article

- [2] Rachel Bawden, Chloé Clavel, and Frédéric Landragin. Towards the generation of dialogue acts in socio-affective ECAs: a corpus-based prosodic analysis. *Language Resources and Evaluation*, 4(2):821–838, 2016. First online 31 July 2016.

Book Chapters

- [3] Sylvain Kahane, Kim Gerdes, and Rachel Bawden. Microsyntactic annotation. In Anne Lacheret-Dujour, Sylvain Kahane, and Paola Pietrandrea, editors, *Rhapsodie – A Prosodic and Syntactic Treebank for Spoken French*, chapter 4. John Benjamins, Amsterdam, 2019.
- [4] Kim Gerdes, Sylvain Kahane, Rachel Bawden, Julie Belião, Eric de la Clergerie, and Ilaine Wang. Annotation tools for syntax. In Anne Lacheret-Dujour, Sylvain Kahane, and Paola Pietrandrea, editors, *Rhapsodie – A Prosodic and Syntactic Treebank for Spoken French*, chapter 7. John Benjamins, Amsterdam, 2019.
- [5] Anne Lacheret-Dujour, Sylvain Kahane, Rachel Bawden, Serge Fleury, and Ilaine Wang. Exploration of the Rhapsodie corpus: Data structure, formats and query tools. In Anne Lacheret-Dujour, Sylvain Kahane, and Paola Pietrandrea, editors, *Rhapsodie – A Prosodic and Syntactic Treebank for Spoken French*, chapter 15. John Benjamins, Amsterdam, 2019.

Conference Papers

- [6] Rachel Bawden, Rico Sennrich, Alexandra Birch, and Barry Haddow. Evaluating Discourse Phenomena in Neural Machine Translation. In *Proceedings of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, NAACL'18*, pages 1304–1313, New Orleans, USA, 2018.
- [7] Rachel Bawden, Thomas Lavergne, and Sophie Rosset. Detecting context-dependent sentences in parallel corpora. In *Proceedings of the 25th Conférence sur le Traitement Automatique des Langues Naturelles, TALN'18*, pages 393–400, Rennes, France, 2018.
- [8] Rachel Bawden. Machine Translation, it's a question of style, innit? The case of English tag questions. In *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, EMNLP'17*, pages 2497–2502, Copenhagen, Denmark, 2017.
- [9] Rachel Bawden. Machine Translation of Speech-Like Texts: Strategies for the Inclusion of Context. In *Proceedings of the 19th REcontres jeunes Chercheurs en Informatique pour le TAL, RECITAL'17*, pages 1–14, Orléans, France, 2017.
- [10] Rachel Bawden and Benoit Crabbé. Boosting for Efficient Model Selection for Syntactic Parsing. In *Proceedings of the 26th International Conference on Computational Linguistics, COLING'16*, pages 1–11, Osaka, Japan, 2016.
- [11] Rachel Bawden. Cross-lingual Pronoun Prediction with Linguistically Informed Features. In *Proceedings of the 1st Conference on Machine Translation, WMT'16*, Berlin, Germany, 2016.
- [12] Rachel Bawden, Guillaume Wisniewski, and Hélène Maynard. Investigating gender adaptation for speech translation. In *Proceedings of the 23rd Conférence sur le Traitement Automatique des Langues Naturelles, TALN'16*, Paris, France, 2016.
- [13] Rachel Bawden, Marie-Amélie Botalla, Kim Gerdes, and Sylvain Kahane. Correcting and Validating Syntactic Dependency in the Spoken French Treebank. In *Proceedings of the 9th International Conference on Language Resources and Evaluation, LREC'14*, pages 2320–2325, Reykjavik, Iceland, 2014.

Technical Report

- [14] Sylvain Kahane, Kim Gerdes, Pietrandrea Paola, Benzitoun Christophe, Rachel Bawden, Marie-Amélie Botalla, and Adèle Désoyer. *Protocole de codage microsyntaxique*, 2013. Translated into English by Rachel Bawden as "Protocol for micro-syntactic coding".

Master's Thesis

- [15] Rachel Bawden. Boosting for model selection in syntactic parsing. Master's thesis, Inria (Alpage), Paris, France, 2015. Supervision by Benoît Crabbé.

Oral communications and invited talks

- 2018 Mediating Bilingual Human Dialogues with Machine Translation, *SICSA Workshop on Conversational AI*, Heriot Watt University, Edinburgh, UK.
- 2019 Discourse and Context in Machine Translation, *Invited talk*, MSC Course in Informatics: Natural Language Understanding, Generation, and Machine Translation, Edinburgh, UK.