

# Rachel Bawden

*Researcher in Natural Language Processing*

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## Personal details

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

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## 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.

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## 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,<sup>1</sup> EMNLP, LREC, ACL-SRW, NAACL-SRW, RECITAL.
- 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

<sup>1</sup>Recognised as an "outstanding reviewer".

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## 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.