

# Pierre LISON

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#### **Education**

2014 Ph.D. in Computer science

at the University of Oslo, Norway.

Dissertation: "Structured Probabilistic Modelling for Dialogue Management"

2008 M.Sc. in Language Science & Technology

at the University of Saarland, Saarbrücken, Germany.

Specialisation: Computational Linguistics

2006 B.Sc and M.Sc (ingénieur civil) in Computer Science

at the University of Louvain, Belgium.

Specialisation: Artificial Intelligence / Machine Learning

2006 Minor degree and 1st year of the M.A in Linguistics

at the University of Louvain, Belgium.

## Work experience

### 2016-present C

#### Chief Research Scientist

(Senior Research Scientist from 2016 to 2023)

 $Norsk\ Regnesentral$ 

Research on natural language processing and machine learning. Project leader for two RCN¹ projects: *CLEANUP* (Machine Learning for the Anonymisation of Unstructured Personal Data) and *GraphDial* (Graph-based Neural Models for Dialogue Management). Project Investigator in *CyberRisk* (semi-automatization of digital risk management) an applied research project in collaboration with Mnemonic AS. Participation in *NorwAI* (Norwegian Research Center for AI Innovation), *ENFIELD* (EU project on trustworthy and green AI), *BigInsight* (statistics for the knowledge economy), along with smaller R&D projects in collaboration with industrial or public sector partners.

#### 2019-present

#### Associate Professor (part-time)

Department of Informatics, University of Oslo

Part-time (20 %) teaching position at the university, involved in lecturing two courses and supervising master students in language technology.

## 2014-2016

## Postdoctoral Research Fellow

Department of Informatics, University of Oslo

Postdoctoral position funded by the Norwegian Research Council on "Dialogue Modelling for Statistical Machine Translation". Visiting Researcher at IDIAP (Swiss Federal Institute for Technology) in 2014.

## 2011-2014

## PhD Research Fellow

Department of Informatics, University of Oslo

<sup>&</sup>lt;sup>1</sup>Research Council of Norway

Research on spoken dialogue systems, and specifically probabilistic models for dialogue management. Doctoral dissertation defended in February 2014. Thesis supervisors: Stephan Oepen, Erik Velldal and Geert-Jan M. Kruijff.

## $2008\text{-}2010 \qquad \textbf{Researcher}$

German Research Centre for Artificial Intelligence (DFKI)

Research in human–robot interaction and spoken dialogue systems in two large EU-funded projects: CogX (2008-2012) and ALIZ-E (2010-2014).

2006-2008 Research assistant at DFKI, working on EU projects.

## Awards & Funding

2018-2022	Elected Member	r of the You	ıng Academv	of Norway

- 2020 "Graph-based Neural Models for Dialogue Management" funded by the Research Council of Norway (FRIPRO Young Research Talents).
- 2020 "Machine Learning for the Anonymisation of Unstructured Personal Data" funded by the Research Council of Norway (IKTPLUSS).
- 2019 Collaboration project "French-Norwegian Research Effort on Applied Dialogue Modelling" funded by the Research Council of Norway (AURORA).
- 2017 Phase 1 of research project "Speech Analytics for Emergency Response Services" funded by the Research Council of Norway (IKTPLUSS).
- 2015 Runner-up, E. W. Beth Dissertation Prize.
- 2014-2017 Postdoctoral project on "Dialogue Modelling for Statistical Machine Translation" funded by the Research Council of Norway (FRIPRO).

### **Supervision**

PhD Main supervisor for 3 PhD Research Fellows: Anthi Papadopoulou (UiO, together with Lilja Øvrelid & Ildikó Pilán), Nicholas Walker (NR+UiO, with Stefan Ultes) and Lucas Charpentier (UiO, with Nils Gruschka).

Co-supervisor for 2 PhD Research Fellows: *Syed Zohaib Hassan* (Simula, together with Michael Riegler, Pål Halvorsen and Saeed Shafiee Sabet) and *Anders Høst* (Simula, with Leon Moonen).

Master Supervision of master theses at UiO (8 finished).

## Teaching activities

2019-present Co-teacher for the bachelor course "Språkteknologiske metoder" and the master course "Natural Language Processing" at the University of Oslo.

2012 & 2014 Co-teacher for the master courses "Language Technology Applications" and "Search Technology" at the University of Oslo.

2009-2010 Lecturer for the master courses "Computational linguistics" (coordinator) and "Foundations of language science and technology" at the Univ. of Saarland.

#### Participation in committees

Program chairs Senior Area Chair for ACL Rolling Review, Dec. 2022 & Feb. 2023.

Senior Area Chair for EACL 2024 (speech and multimodality track).

Reviewing ARR, ACL (non-exhaustive) COLING, I

ARR, ACL, EACL, NAACL-HLT, EMNLP, IJCNLP, ICASSP, IJCAI, ICRA,

COLING, LREC, Interspeech, SIGDIAL, AAMAS, ACM Tiis, HRI.

#### **Technical Skills**

Programming Long programming experience in Python and Java. Familiarity with C/C++,

PHP, Javascript, SQL, Perl, Prolog, Mozart/Oz, Shell, Matlab, R.

Specialisations Artificial Intelligence: Deep learning, machine learning, probabilistic mod-

elling and inference, weak supervision, knowledge representation, search, plan-

ning, neuro-symbolic methods, human–robot interaction.

Language technology: Neural language models, machine learning for NLP,

computational semantics, dialogue systems, information retrieval, machine

translation, parsing algorithms, speech recognition & synthesis.

Foundations Algorithm design & analysis, formal languages, computer networks, signal

processing, databases and information systems, interaction design, software

engineering, agile development, high-performance computing.

### Dissemination and public outreach

See website for scientific talks, posters and public outreach activities.

#### Miscellaneous

Language skills — English (fluent), Norwegian (fluent), German (passive), Dutch (passive),

French (native).

## Selected publications

- [1] N. WALKER, S. ULTES, and P. LISON. "Retrieval-Augmented Neural Response Generation Using Logical Reasoning and Relevance Scoring". In: *Proceedings of the 27th Workshop on the Semantics and Pragmatics of Dialogue (SemDial 2023)*. Maribor, Slovenia, 2023.
- [2] J. Barnes, S. Touileb, P. Mæhlum, and P. Lison. "Identifying Token-Level Dialectal Features in Social Media". In: *Proceedings of the 24th Nordic Conference on Computational Linguistics* (NoDaLiDa). Tórshavn, Faroe Islands, 2023, pp. 146–158.
- [3] A. Papadopoulou, Y. Yu, P. Lison, and L. Øvrelid. "Neural Text Sanitization with Explicit Measures of Privacy Risk". In: Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing (Volume 1: Long Papers). Online: Association for Computational Linguistics, 2022, pp. 217–229.
- [4] I. PILÁN, P. LISON, L. ØVRELID, A. PAPADOPOULOU, D. SÁNCHEZ, and M. BATET. "The Text Anonymization Benchmark (TAB): A Dedicated Corpus and Evaluation Framework for Text Anonymization". In: *Computational Linguistics* 48.4 (2022), pp. 1053–1101.
- [5] E. M. WEITZENBOECK, P. LISON, M. CYNDECKA, and M. LANGFORD. "The GDPR and unstructured data: is anonymization possible?" In: *International Data Privacy Law* 12.3 (2022), pp. 184–206.

- [6] P. LISON, I. PILÁN, D. SANCHEZ, M. BATET, and L. ØVRELID. "Anonymisation Models for Text Data: State of the art, Challenges and Future Directions". In: Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (Volume 1: Long Papers). Online: Association for Computational Linguistics, 2021, pp. 4188–4203.
- [7] P. LISON, J. BARNES, and A. HUBIN. "skweak: Weak Supervision Made Easy for NLP". In: Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing: System Demonstrations. Online: Association for Computational Linguistics, 2021, pp. 337–346.
- [8] P. LISON, J. BARNES, A. HUBIN, and S. TOUILEB. "Named Entity Recognition without Labelled Data: A Weak Supervision Approach". In: *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics*. Online: Association for Computational Linguistics, 2020, pp. 1518–1533.
- [9] P. LISON, J. TIEDEMANN, and M. KOUYLEKOV. "OpenSubtitles 2018: Statistical rescoring of sentence alignments in large, noisy parallel corpora". In: Proceedings of the 11th International Conference on Language Resources and Evaluation (LREC-2018). Miyazaki, Japan, 2018.
- [10] P. LISON and S. BIBAUW. "Not All Dialogues are Created Equal: Instance Weighting for Neural Conversational Models". In: *Proceedings of the 18th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2017)*. Saarbrücken, Germany, 2017, pp. 384–394.
- [11] P. LISON and R. MEENA. "Automatic Turn Segmentation of Movie & TV Subtitles". In: Proceedings of the 2016 Spoken Language Technology Workshop (SLT 2016). San Diego, CA, USA: IEEE, 2016, pp. 245–252.
- [12] P. Dragone and P. Lison. "Classification and Resolution of Non-Sentential Utterances in Dialogue". In: *Italian Journal of Computational Linguistics* 2.1 (2016).
- [13] P. LISON and C. KENNINGTON. "OpenDial: A Toolkit for Developing Spoken Dialogue Systems with Probabilistic Rules". In: *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics, Demonstrations track (ACL 2016)*. Berlin, Germany, 2016, pp. 67–72.
- [14] S. Stoyanchev, P. Lison, and S. Bangalore. "Rapid Prototyping of Form-driven Dialogue Systems Using an Open-source Framework". In: *Proceedings of the 17th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2016)*. Los Angeles, 2016, pp. 216–219.
- [15] P. LISON and J. TIEDEMANN. "OpenSubtitles2016: Extracting Large Parallel Corpora from Movie and TV Subtitles". In: *Proceedings of the 10th International Conference on Language Resources and Evaluation (LREC 2016)*. Portorož, Slovenia, 2016.
- [16] P. LISON. "A hybrid approach to dialogue management based on probabilistic rules". In: Computer Speech & Language 34.1 (2015), pp. 232–255.
- [17] J. WYATT, A. AYDEMIR, M. BRENNER, M. HANHEIDE, N. HAWES, P. JENSFELT, M. KRISTAN, G.-J. M. KRUIJFF, P. LISON, A. PRONOBIS, K. SJÖÖ, D. SKOČAJ, A. VREČKO, H. ZENDER, and M. ZILLICH. "Self-Understanding & Self-Extension: A Systems and Representational Approach". In: IEEE Transactions on Autonomous Mental Development 2.4 (2010), pp. 282–303.
- [18] P. LISON. "Probabilistic Dialogue Models with Prior Domain Knowledge". In: *Proceedings of the 13th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL)*. Seoul, South Korea, 2012, pp. 179–188.
- [19] G.-J. M. Kruijff, P. Lison, T. Benjamin, H. Jacobsson, H. Zender, and I. Kruijff-Korbayová. "Situated Dialogue Processing for Human-Robot Interaction". In: *Cognitive Systems*. Ed. by H. I. Christensen, A. Sloman, G.-J. M. Kruijff, and J. L. Wyatt. Vol. 8. Cognitive Systems Monographs. Heidelberg, Germany: Springer Verlag, 2010.