# Pontus Stenetorp

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### **Education**

PhD, University of Tokyo, Computer Science.
"On the Applicability and Representation of Lexical Prior Knowledge"
MSc Eng, Royal Institute of Technology (KTH), Computer Science.
"Automated Extraction of Swedish Neologisms using a Temporally Annotated Corpus"

# Work experience

Senior Research Associate, University College London, London, United Kingdom. 2017–
Multi-step inference using deep memory-based models.

Research Associate, University College London, London, United Kingdom. 2015–2017

Models learning from a minimal amount of human supervision.

Postdoctoral Research Fellow, University of Tokyo, Tokyo, Japan. 2013–2015

Joint learning of latent categories, structures, and their representations.

**Special Project Research Associate**, *National Institute of Informatics*, Tokyo, Japan. **2013** Vector composition and representation learning for dependency parsing.

**Teaching Assistant**, *Royal Institute of Technology (KTH)*, Stockholm, Sweden. **2006–2009** Weekly lectures for up to 15 students for several classes.

**Quality-Assurance Engineer**, *LucidEra Inc.*, San Mateo, California, USA.

2008
Performance testing and test automation.

**Software Developer**, *Norrorts Konferens HB*, Djursholm, Sweden. **2006–2007** Software development for conference activities.

# **Achievements**

# **Funding**

<b>Grant</b> , Centre for Doctoral Training in Data Intensive Science PhD Studentship Grant, Co-PI, GBP 80,000.	2017–2021
Fellowship, Japan Society for the Promotion of Science (JSPS), JPY 8,688,000.	2013-2015
Grant, KAKENHI #13F03041, PI, JPY 2,300,000.	2013-2015
Scholarship, Monbukagakusho (MEXT), JPY 1,740,000.	2012-2013
Stipend, University of Tokyo Overseas Visit Support, JPY 220,000.	2012
Scholarship, Japan Student Services Organization (JASSO), JPY 780,000.	2011-2012
Stipend, Royal Swedish Academy of Sciences (KVA), SEK 100,000.	2011
Stipend, Royal Swedish Academy of Sciences (KVA), SEK 100,000.	2010
Stipend, Lars Hierta Memorial Foundation, SEK 35,000.	2010
Stipend, Ebba Danelius Foundation, SEK 120,000.	2009
Stipend, Adolf Lindgren Foundation, SEK 16,000.	2008

#### **Awards**

Outstanding paper, 15th Conference of the European Chapter of the Association for	2017
Computational Linguistics (EACL 2017).	
Best presentation, JSPS London Research Promotion Conference.	2016
Best proposal, Facebook Al Research (FAIR), USD 1,250.	2016
Nomination, Gerd Eriksson Teaching Award, KTH.	2007
Nomination, Gerd Eriksson Teaching Award, KTH.	2006

### **Services**

### Organising committee

**2017**: Conference on Empirical Methods in Natural Language Processing (EMNLP)

2016: Programme Chair, JuliaCon 2016 (274 attendees)

2015: Biomedical Linked Annotation Hackathon (BLAH)

2013: BioNLP Shared Task (22 groups participating)

2011: BioNLP Shared Task (24 groups participating)

### **Programme committee**

**2017**: BioNLP, EACL, EMNLP, Ethics in NLP, Games4NLP, IJCNLP, JuliaCon, WiNLP, and RepEval

2016: AKBC, COLING, EMNLP, IJCAI, JuliaCon, and SCIDOCA

2015: EMNLP and JuliaCon2013: BioNLP and IJCNLP

2012: BioNLP and SMBM

### Departmental services

**2015**—: *Hiring committee member*, University College London (3 hires)

**2015**—: *PhD student screening committee member*, University College London

#### Other

2015-: Lead Organiser, South England Natural Language Processing (SE NLP) Meetup

**2016**: Organiser, Google Summer of Code (GSoC) for the Julia programming language

2013: Local Organiser, The 5th International Symposium on Languages in Biology and Medicine

# **Teaching**

#### **Classes**

Lecturer, University College London, London, UK.

2015-

Research Methods (COMP3095) and Research Group Project (COMP3096). Weekly project-based classes.

Guest lecturer, University College London, London, UK.

2015-

Statistical Natural Language Processing (COMPM083/COMPGI19). Guest lecturer for deep learning portion of course.

**Teaching Assistant**, Royal Institute of Technology (KTH), Stockholm, Sweden. 2005-2008 Algorithms, Data Structures and Complexity (DD1352), Introduction to Computer Science (DD1339), Programming Paradigms (DD1361), and Programming Techniques (DD1310). Lab assistance, homework grading, and flipped classroom lectures with up to 15 students.

# Supervision

**Co-supervisor**: *University College London*, Tom Crossland, *PhD*, 2021 (expected). Co-supervisor: University College London, Johannes Welbl, PhD, 2018 (expected). **Supervisor**: *University College London*, Sudhanshu Kasewa, *MSc*, 2017 (expected).

**Supervisor**: *University College London*, Jonas Vetterle, *MSc*, 2017 (expected).

**Supervisor**: University College London, Iuliana-Elena Parasca, MEng, 2017, now at Google Zürich.

Supervisor: University College London, Aleksandar Rusinov, MEng, 2017, now at Morgan Stanley.

Co-supervisor: Tohoku University, Shimaoka Sonse, MSc, 2017, now at Recruit Holdings Co, Ltd.

**Supervisor**: University College London, Jonathan Godwin, MSc, 2016, now at Bloomsbury Al.

Supervisor: University College London, Mark Neumann, MSc, 2016, now at the Allen Institute for Artificial Intelligence.

# **Invited talks**

Machines that read and reason, Language, Knowledge and People in Perspective Workshop, Leiden, Netherlands. Invited talk, paid travel and accommodation.	2017
Machine Learning Communities Day, Seldon/Google, London, UK. Invited participant.	2017
Learning to Generate Training Data, <i>University of Cambridge</i> , Cambridge, UK. Invited talk, paid travel.	2017
<b>Weakly Supervised Machine Reading</b> , CREST International Symposium on Big Data Application, Tokyo, Japan.	2017
Invited talk, with Isabelle Augenstein.  Weakly Supervised Machine Reading, Nara Institute of Science and Technology, Ikoma, Japan.	2017
Invited talk, with Isabelle Augenstein. <b>Learning to Generate Textual Data</b> , <i>National Institute of Advanced Industrial Science and Technology</i> , Tokyo, Japan.  Invited talk.	2017
<b>Learning to Generate Textual Data</b> , <i>Tohoku University</i> , Sendai, Japan. Invited talk, paid travel and accommodation.	2016
Learning to Generate Textual Data, National Institute of Informatics, Tokyo, Japan. Invited talk.	2016
Machines that read the scientific literature, Japan Society for the Promotion of Science (JSPS) London Japan-UK Research Promotion Conference, Embassy of Japan, London, UK. Invited talk, best presentation award.	2016

Natural Language Processing with Julia, Manchester Julia Workshop, University

of Manchester, Manchester, UK.

2016

Plenary talk, paid travel and accommodation. Natural Language Processing: History, motivations, and what the near future 2016 may hold for intelligent machines, Waseda University, Tokyo, Japan. Invited talk. Learning to Generate Textual Data, Al4Exam Workshop, National Institute of In-2016 formatics, Tokyo, Japan. Invited talk, paid travel and accommodation. 2016 **Defining Words with Words**, Kyoto University, Kyoto, Japan. Invited talk. **Defining Words with Words**, Osaka University, Osaka, Japan. 2016 Invited talk. Computers that Read: Uncovering the Structure of Language with Deep 2016 **Learning**, Artificial Intelligence Research (AIR) society, Osaka University, Osaka, Japan. Invited talk, with Jason Naradowsky. **Defining Words with Words**, *Tohoku University*, Sendai, Japan. 2016 Invited talk, paid travel and accommodation. **Defining Words with Words**, *University of Tokyo*, Tokyo, Japan. 2016 Invited talk. Leveraging Monolingual Data for Crosslingual Compositional Word Represen-2015 tations, Alan Turing Institute Deep Learning Workshop, Edinburgh, Scotland. Invited poster. Natural Language Processing, Google NLP PhD Summit, Zürich, Switzerland. 2015 Invited participant, paid travel and accommodation. 2015 Suitably naming a child with multiple nationalities using Julia, JuliaCon, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA. Invited talk. **Unified Annotation Tooling**, National Science Foundation-Sponsored Workshop, 2015 Sunny Isles Beach, Florida, USA. Invited participant, paid travel and accommodation. Computers and Language, Yamanashi Prefectural Hikawa High School, Yamanashi, 2014 Japan. Invited talk, paid travel. A Brief JuliaCon Report and Natural Language Processing with Julia, Julia-2014 Tokyo Meetup, Tokyo, Japan. Invited talk. Natural Language Processing with Julia, JuliaCon, University of Chicago, Chicago, 2014 Illinois, USA. Invited talk. 2012 A Year and a Few Months Later: Results and Musings on the State of NLP and BioNLP, Microsoft Research, Seattle, Washington, USA. Invited talk. Assisting Gene Mention Tagging by Utilising Largely Unsupervisedly Induced 2010 **Semantic Class Taggers**, *Tech Talks 'n Mix*, Google, Tokyo, Japan. Invited poster.

# **Commissions of Trust**

Chairman, KTH Japan Alumni Chapter, Tokyo, Japan. 2013–2015

**Chairman of the Education Committee**, Computer Science Chapter, Student Union at the Royal Institute of Technology, Stockholm, Sweden.

**Member of the Board**, Computer Science Chapter, Student Union at the Royal **2006–2007** Institute of Technology, Stockholm, Sweden.

Municipality Chairman, Piratpartiet (Pirate Party), Stockholm, Sweden. 2006

## **Certificates**

Test of English for International Communication (TOEIC), 990/990. 2013

Test of English as a Foreign Language (TOEFL), 120/120. 2009

Certificate of Advanced English (CAE), Grade A, University of Cambridge. 2004

# Language skills

Swedish: Native English: Fluent

Japanese: Intermediate German: Elementary

# Open source software and contributions

Creator: brat, a widely adopted text annotation tool.

**Contributor**: *Julia*, modern open-source programming language for technical computing. *A complete list of public software repositories can be found at: https://github.com/ninjin* 

### **Publications**

- 32. Sonse Shimaoka, Pontus Stenetorp, Kentaro Inui, and Sebastian Riedel. Neural Architectures for Fine-grained Entity Type Classification In Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics: Volume 1, Long Papers, Valencia, Spain, April 2017. (Outstanding paper award, acceptance rate: 27%)
- 31. Galen Han, Mark Menezes, Leah Halaseh, Jędrzej Stuczyński, Daniele Menara, Sebastian Riedel, and Pontus Stenetorp. Towards a Word Sheriff 2.0: Lessons learnt and the road ahead Games4NLP Symposium, Valencia, Spain, April 2017.
- 30. Jonathan Godwin, Pontus Stenetorp, and Sebastian Riedel. **Deep Semi-Supervised Learning with Linguistically Motivated Sequence Labeling Task Hierarchies** arXiv, December 2016.
- 29. Neumann Mark, Pontus Stenetorp, and Sebastian Riedel. Learning to Reason with Adaptive Computation Interpretable Machine Learning for Complex Systems at the 2016 Conference on Neural Information Processing Systems (NIPS), Barcelona, Spain, December 2016.
- 28. Guillaume Bouchard, Pontus Stenetorp, and Sebastian Riedel. Learning to Generate Textual Data In Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing, Austin, Texas, November 2016. (Acceptance rate: 26%)
- 27. Iuliana-Elena Parasca, Andreas Lukas Rauter, Jack Roper, Aleksandar Rusinov, Guillaume Bouchard, Sebastian Riedel, and Pontus Stenetorp. Defining Words with Words: Beyond the Distributional Hypothesis In Proceedings of the 1st Workshop on Evaluating Vector-Space Representations for NLP, Berlin, Germany, August 2016. (Best proposal award)
- 26. Sonse Shimaoka, Pontus Stenetorp, Kentaro Inui, and Sebastian Riedel. An Attentive Neural Architecture for Fine-grained Entity Type Classification In Proceedings of the 5th Workshop on Automated Knowledge Base Construction, San Diego, California, USA, June 2016. (Citations: 6)
- Jin-Dong Kim, Kevin Cohen, Nigel Collier, Zhiyong Lu, and Pontus Stenetorp. Introduction to the Biomedical Linked Annotation Hackathon (BLAH) 2015 Symposium In BioMed Central Proceedings, August 2015.
- Kazuma Hashimoto, Pontus Stenetorp, Makoto Miwa, and Yoshimasa Tsuruoka. Task-Oriented Learning of Word Embeddings for Semantic Relation Classification In Proceedings of the Nineteenth Conference on Computational Natural Language Learning, Beijing, China, July 2015. (Acceptance rate: 30%, citations: 12)
- 23. Sampo Pyysalo, Jorge Campos, Juan Miguel Cejuela, Filip Ginter, Kai Hakala, Chen Li, Pontus Stenetorp, and Lars Juhl Jensen. **Sharing annotations better: RESTful Open Annotation** *In Proceedings of ACL-IJCNLP 2015 System Demonstrations, Beijing, China, July 2015.* (Citations: 7)
- 22. Hubert Soyer, Goran Topić, Pontus Stenetorp, and Akiko Aizawa. CroVeWA: Crosslingual Vector-Based Writing Assistance In Proceedings of the 2015 Conference of the North American Chapter of the Association for Computational Linguistics: Demonstrations, Denver, Colorado, USA, June 2015.
- 21. Hubert Soyer, Pontus Stenetorp, and Akiko Aizawa. Leveraging Monolingual Data for Crosslingual Compositional Word Representations In Proceedings of the 3rd International Conference on Learning Representations, San Diego, California, USA, May 2015. (Acceptance rate: 20%, citations: 16)
- Kazuma Hashimoto, Pontus Stenetorp, Makoto Miwa, and Yoshimasa Tsuruoka. Jointly Learning Word Representations and Composition Functions Using Predicate-Argument Structures In Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing, Doha, Qatar, October 2014. (Acceptance rate: 27%, citations: 15)

- Pontus Stenetorp, Sampo Pyysalo, Sophia Ananiadou, and Jun'ichi Tsujii. Generalising Semantic Category Disambiguation with Large Lexical Resources for Fun and Profit Journal of Biomedical Semantics, June 2014.
- 18. Pontus Stenetorp. **Transition-based Dependency Parsing Using Recursive Neural Networks** Deep Learning Workshop at the 2013 Conference on Neural Information Processing Systems (NIPS), Lake Tahoe, Nevada, USA, December 2013. (Citations: 14)
- 17. Pontus Stenetorp, Wiktoria Golik, Thierry Hamon, Donald C. Comeau, Rezarta Islamaj Doğan, Haibin Liu, and W. John Wilbur. **BioNLP Shared Task 2013: Supporting Resources** *In Proceedings of the BioNLP Shared Task 2013 Workshop, Sofia, Bulgaria, August 2013.*
- 16. Pontus Stenetorp. On the Applicability and Representation of Lexical Prior Knowledge Doctor of Philosophy (PhD) Thesis, University of Tokyo, Tokyo, Japan, March 2013.
- 15. Pontus Stenetorp, Sampo Pyysalo, Goran Topić, Sophia Ananiadou, and Akiko Aizawa. **Normalisation with the brat rapid annotation tool** *In Proceedings of the 5th International Symposium on Semantic Mining in Biomedicine, Zürich, Switzerland, September 2012.*
- 14. Pontus Stenetorp, Hubert Soyer, Sampo Pyysalo, Sophia Ananiadou, and Takashi Chikayama. Size (and Domain) Matters: Evaluating Semantic Word Space Representations for Biomedical Text In Proceedings of the 5th International Symposium on Semantic Mining in Biomedicine, Zürich, Switzerland, September 2012. (Citations: 10)
- 13. Pontus Stenetorp, Sampo Pyysalo, Tomoko Ohta, Sophia Ananiadou, and Jun'ichi Tsujii. Bridging the Gap Between Scope-based and Event-based Negation/Speculation Annotations: A Bridge Not Too Far In Proceedings of the Workshop on Extra-Propositional Aspects of Meaning in Computational Linguistics, Jeju, Republic of Korea, July 2012.
- 12. Panot Chaimongkol, Pontus Stenetorp, and Aizawa Aizawa. **Utilising Bilingual Lexical Resources for Technical Term Extraction** *In Proceedings of The 26th Annual Conference of the Japanese Society for Artificial Intelligence, Yamaguchi, Japan, June 2012.*
- 11. Sampo Pyysalo, Pontus Stenetorp, Tomoko Ohta, Jin-Dong Kim, and Sophia Ananiadou. New Resources and Perspectives for Biomedical Event Extraction In BioNLP: Proceedings of the 2012 Workshop on Biomedical Natural Language Processing, Montréal, Canada, June 2012.
- 10. Pontus Stenetorp, Sampo Pyysalo, Goran Topić, Tomoko Ohta, Sophia Ananiadou, and Jun'ichi Tsujii. brat: a Web-based Tool for NLP-Assisted Text Annotation In Proceedings of the Demonstrations at the 13th Conference of the European Chapter of the Association for Computational Linguistics, Avignon, France, April 2012. (Citations: 330)
- 9. Pontus Stenetorp, Goran Topić, Sampo Pyysalo, Sophia Ananiadou, and Jun'ichi Tsujii. **stav: text annotation visualiser** *In Proceedings of NLP2012, Hiroshima, Japan, March 2012.*
- 8. Pontus Stenetorp, Sampo Pyysalo, Sophia Ananiadou, and Jun'ichi Tsujii. Almost Total Recall: Semantic Category Disambiguation Using Large Lexical Resources and Approximate String Matching In Proceedings of the Fourth International Symposium on Languages in Biology and Medicine, Singapore, Singapore, December 2011.
- 7. Pontus Stenetorp, Sampo Pyysalo, Sophia Ananiadou, and Jun'ichi Tsujii. Investigating Approaches to Semantic Category Disambiguation Using Large Lexical Resources and Approximate String Matching Information Processing Society of Japan Special Interest Groups Notes, Ishigaki, Japan, November 2011.

- 6. Pontus Stenetorp, Goran Topić, Sampo Pyysalo, Tomoko Ohta, Jin-Dong Kim, and Jun'ichi Tsujii. BioNLP Shared Task 2011: Supporting Resources In Proceedings of BioNLP Shared Task 2011 Workshop, Portland, Oregon, USA, June 2011. (Citations: 36)
- 5. Pontus Stenetorp, Sampo Pyysalo, and Jun'ichi Tsujii. SimSem: Fast Approximate String Matching in Relation to Semantic Category Disambiguation In Proceedings of BioNLP 2011 Workshop, Portland, Oregon, USA, June 2011. (Citations: 5)
- 4. Pontus Stenetorp. Automated Extraction of Swedish Neologisms using a Temporally Annotated Corpus Master of Science in Engineering (MSc Eng) Thesis, Royal Institute of Technology (KTH), Stockholm, Sweden, March 2010.
- 3. Pontus Stenetorp, and Jason Jingshi Li. **Evaluating Cases in Legal Disputes as Rival Theories**New Frontiers in Artificial Intelligence, March 2010. (10.1007/978-3-642-14888-0\_6)
- 2. Jason Jingshi Li, and Pontus Stenetorp. Evaluating cases in legal disputes as rival theories In Proceedings of the Third International Workshop on Juris-informatics (JURISIN 2009), Tokyo, Japan, November 2009.
- 1. Han-Cheol Cho, Do-Gil Lee, Jung-Tae Lee, Pontus Stenetorp, Jun'ichi Tsujii, and Hae-Chang Rim. A Novel Word Segmentation Approach for Written Languages with Word Boundary Markers In Proceedings of the ACL-IJCNLP 2009 Conference Short Papers, Suntec, Singapore, August 2009. (Acceptance rate: 26%)

Citations are counted as unique publications citing the work according to Google Scholar. Only citation counts greater than or equal to 5 are shown.