

Hitomi YANAKA

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RESEARCH INTERESTS

Computational Linguistics, Natural Language Processing (Especially, Natural Language Inference)
Semantics

EDUCATION

The University of Tokyo , Tokyo, Japan Ph.D, Department of Systems Innovation, School of Engineering Research Theme: Learning Semantic Textual Relatedness using Natural Deduction Proof Supervisor: Seiichi Koshizuka and Daisuke Bekki	09/2018 10/2015-
The University of Tokyo , Tokyo, Japan MS, Department of Chemical System Engineering, School of Engineering Research Theme: Method for Evaluation and Analysis of the Quality of Cancer Care Supervisor: Satoko Tsuru and Yoshinori Iizuka	03/2013 04/2011-
Waseda University , Tokyo, Japan BS, Department of Applied Chemistry, School of Advanced Science and Engineering	03/2011 04/2007-

MAIN PUBLICATION

Refereed Journal Papers

1. [Hitomi Yanaka](#) and Koji Mineshima, *Compositional Evaluation on Japanese Textual Entailment and Similarity*, Transactions of the Association for Computational Linguistics (TACL), Volume 10, pp.1266–1284, 2022.
2. [Hitomi Yanaka](#), Koji Mineshima, Pascual Martinez-Gomez, and Daisuke Bekki, *Learning Semantic Textual Relatedness using Natural Deduction Proofs*, Journal of Natural Language Processing, Vol.25, No.3, pp.295-324, 2018.

Refereed Conference Papers

1. [Hitomi Yanaka](#), Koji Mineshima, Kentaro Inui, *Exploring Transitivity in Neural NLI Models through Veridicality*, the 16th conference of the European Chapter of the Association for Computational Linguistics (EACL'21), 2021.
2. [Hitomi Yanaka](#), Koji Mineshima, Daisuke Bekki, Kentaro Inui, *Do Neural Models Learn Systematicity of Monotonicity Inference in Natural Language?*, the 58th Annual Meeting of the Association for Computational Linguistics (ACL'20), pp. 6105-6117, 2020. (Acceptance Rate: 28%)
3. [Hitomi Yanaka](#), Koji Mineshima, Daisuke Bekki, Kentaro Inui, Satoshi Sekine, Lasha Abzianidze and Johan Bos, *Can neural networks understand monotonicity reasoning?*, Analyzing and interpreting neural networks for NLP (BlackboxNLP'19) with ACL'19, pp.31-40, 2019.
4. [Hitomi Yanaka](#), Koji Mineshima, Daisuke Bekki, Kentaro Inui, Satoshi Sekine, Lasha Abzianidze and

Johan Bos, *HELP: A Dataset for Identifying Shortcomings of Neural Models in Monotonicity Reasoning*, the 8th Joint Conference on Lexical and Computational Semantics (*SEM'19) with NAACL-HLT'19, pp.250-255, 2019.

5. Hitomi Yanaka, Koji Mineshima, Pascual Martinez-Gomez, and Daisuke Bekki, *Acquisition of Phrase Correspondences using Natural Deduction Proofs*, 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT'18), pp.756-766, 2018. (Acceptance Rate: 29%)
6. Hitomi Yanaka, Koji Mineshima, Pascual Martinez-Gomez, and Daisuke Bekki, *Determining Semantic Textual Similarity using Natural Deduction Proofs*, The Conference on Empirical Methods in Natural Language Processing (EMNLP'17), pp.681-691, 2017. (Acceptance Rate: 26%)
7. Hitomi Yanaka and Yukio Ohsawa, *Clustering Documents on Case Vectors Represented by Predicate-argument Structures -Applied for Eliciting Technological Problems from Patents-*, 11th International Symposium Advances in Artificial Intelligence and Applications (AAIA'16), pp.175-180, 2016. (Acceptance Rate: 37%)

AWARDS and FUNDINGS

Funai Information Technology Award for Young Researchers	2023
JST PRESTO Research Funding “Logical Inference System between Data and Text For Decision Making”	present 10/2021-
Honda R&D Institute Collaborative Research “Mobility interaction based on machine learning and logic approaches”	present 11/2022-
Microsoft Research Asia Collaborative Research (Computing for Sustainable Future)	03/2022 04/2021-
UTEC-UTokyo FSI Research Grant Program 「理論言語学と自然言語処理の融合による意味処理技術の開発」	03/2023 04/2021-
人工知能学会第 34 回全国大会優秀賞 「ニューラルネットワークによる自然言語推論の可能性」	2020
人工知能学会第 33 回全国大会優秀賞 「テキスト情報と画像情報を組み合わせた論理推論システムの構築」	2019
Kakenhi (Early-career scientists) 「形式意味論と言語処理の融合による構成的言語モデルの開発」	03/2023 04/2020-
AIP-AIST Challenging Research Funding 「汎用言語系人工知能モデルの構築による超少数データ上での言語処理の実現」	03/2021 04/2020-
JST AIP-PRISM Research Funding "Linguistically-oriented dataset creation for Recognizing Textual Entailment"	03/2019 08/2018-
Best Paper Award "Towards Understanding Bilingual Textual Entailment and Similarity" The ESSLLI 2018 Workshop on NLP in the Era of Big Data, Deep Learning, and Post Truth,	08/2018

Sofia, Bulgaria	
JST AIP Network Lab Award "Learning semantic relations using natural deduction proof"	04/2018
Young Researcher Award The 24th annual meeting of the Association for Natural Language Processing	03/2018
JST AIP Challenge Research Funding "Learning semantic relations using natural deduction proof"	03/2018 08/2017-
JASSO Scholarship Exemption from Refund "Establishing a quality measurement system for cancer care process"	03/2013 04/2011-

WORK EXPERIENCE

The University of Tokyo , Tokyo, Japan Associate Professor, Excellent Young Researcher at Department of Computer Science, Graduate School of Information Science and Technology	Present 8/2023-
The University of Tokyo , Tokyo, Japan Lecturer, Excellent Young Researcher at Department of Computer Science, Graduate School of Information Science and Technology	7/2023 4/2021-
RIKEN Center for Advanced Intelligence Project (AIP) , Tokyo, Japan Guest Researcher at Natural language understanding team	Present 5/2021-
Ochanomizu University , Tokyo, Japan Part-time lecturer at Center for Interdisciplinary AI and Data Science	Present 11/2018-
RIKEN Center for Advanced Intelligence Project (AIP) , Tokyo, Japan Postdoctoral Researcher at Natural language understanding team	3/2021 10/2018-
University of Groningen , Groningen, Netherlands Guest researcher at Center for Language and Cognition	12/2018 11/2018-
Ochanomizu University , Tokyo, Japan Research Assistant at Center for Simulation Sciences	09/2018 06/2017-
The University of Tokyo , Tokyo, Japan Research Assistant at Department of Systems Innovation, Graduate School of Engineering	09/2018 01/2016-
Nomura Research Institute , Tokyo, Japan Application Engineer at Department of Patent Information Service	12/2015 04/2013-
The Overseas Human Resources and Industry Development Association (HIDA) , Teaching Assistant for the Quality Management Course	03/2012
Mitsubishi Research Institute , Consulting Intern	09/2011
Goldman Sachs , Investment Banking Intern	08/2011

The University of Tokyo , Tokyo, Japan Teaching Assistant at Department of Chemical System Engineering, Graduate School of Engineering	03/2013 04/2011-
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SKILLS and COURSEWORK

Certifications	Information Security Specialist (IPA): Security Experts' exam Applied Information Technology Engineer (IPA): Software Engineers' exam Fundamental Information Technology Engineer (IPA): Software Engineers' exam
Languages and Scripts	Expert: Python, Perl Proficient: Shell Script, Prolog, Coq, HTML, CSS, JavaScript Familiar: Java, XML, JSON
Software Tools	Microsoft Office, Latex, Git, Redmine, Slack, SQL, ASP.NET
Foreign Language	English, Japanese (native level)
Coursework	Ph.D: Natural Language Processing, Computational Semantics, Machine Learning MS: Quality Management, Chemical Engineering, Biotechnology

SOCIAL WORK EXPERIENCE

Member of Japan Women Engineers Forum (JWEF)	01/2016- 03/2018
Public Relations Student Assistant at Ttime, School of Engineering, University of Tokyo	03/2013- 04/2011

PERSONAL PROFILE

Playing the Jazz Piano:

<https://www.youtube.com/channel/UCSRBP109-MYDq0sxK1qihA>

Writing Essays:

<https://www.nikkan.co.jp/articles/view/00383265>