NORIKI NISHIDA

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RESEARCH AREAS

I work in the area of natural language processing and computational linguistics. Particularly, I am interested in computational modeling of natural language text beyond the scope of a sentence and automatic document analysis such as discourse parsing. My primary research goal is to model the regularities of discourse coherence and support human communications and knowledge discovery using the findings.

PROFESSIONAL EMPLOYMENT

Postdoctoral Researcher, RIKEN Center for Advanced Intelligence Project (AIP), April 2020 - Present.
Visiting Researcher, The University of Tokyo, July 2020 - Present.

EDUCATION

Ph.D. of Information Science and Technology *March 2020*
Department of Creative Informatics
Graduate School of Information Science and Technology
The University of Tokyo

Dissertation title: "Unsupervised Induction of Natural Language Discourse Structure Based on Rhetorical Structure Theory"
Advisor: Hideki Nakayama

Master's Degree in Information Science and Technology *March 2017*
Department of Creative Informatics
Graduate School of Information Science and Technology
The University of Tokyo

Thesis title: "Unsupervised Learning of Syntactically Plausible Word Representations by Solving Word Ordering"
Advisor: Hideki Nakayama

Bachelor's Degree in Engineering *March 2015*
Department of Information and Communication Engineering
Faculty of Engineering
The University of Tokyo

Thesis title: "Hand Gesture Recognition Using Recurrent Convolutional Neural Networks"
Advisor: Hitoshi Iba, Yoshihiko Hasegawa

WORK HISTORY

- **Postdoctoral Researcher**, RIKEN AIP, April 2020 - Present.
- **Visiting Researcher**, The University of Tokyo, April 2020 - Present.

- **Young Research Fellow (DC2)**, the Japan Society for the Promotion of Science, April 2018 - March 2020.
- **External Collaborator**, the PLU Group in AIRC, April 2016 - March 2020.
- **Part-time Software Engineer**, Logarhythm Inc., November 2014 - August 2015.

TEACHING

- **Teaching Assistant** in Data Science, The University of Tokyo, October 2017 - March 2018.
- **Teaching Assistant** in Basic Programming Exercise, The University of Tokyo, October 2014 - March 2015.

PUBLICATIONS

Journal papers

- **Out-of-Domain Discourse Dependency Parsing via Bootstrapping: An Empirical Analysis on Its Effectiveness and Limitation.**
  Noriki Nishida and Yuji Matsumoto.
  Transactions of the Association for Computational Linguistics, to appear.
- **Unsupervised Discourse Constituency Parsing Using Viterbi EM.**
  Noriki Nishida and Hideki Nakayama.
  Transactions of the Association for Computational Linguistics, vol.8, pp.215–230, 2020.
- **Zero-Resource Machine Translation by Multimodal Encoder-Decoder Network with Multimedia Pivot.**
  Hideki Nakayama and Noriki Nishida.
  Machine Translation, vol.31, no.1, pp.49–64, 2017.

International conferences/workshops

- **An Empirical Study of Proxy-labeling for Adaptation of Discourse Dependency Parsing.**
  Noriki Nishida and Yuji Matsumoto.
  In Fourth International Workshop on SCIentific DOCument Analysis, 2020.
- **Preliminary Experiments of Span-based Distant Supervision for Biomedical NER.**
  Shibahara Takayoshi, Ikuya Yamada, Noriki Nishida, Shanshan Liu, Kouji Kozaki, Taro Watanabe, Yuji Matsumoto.
  In Fourth International Workshop on SCIentific DOCument Analysis, 2020.
- **A Visually-grounded First-person Dialogue Dataset with Verbal and Non-verbal Responses.**
  Hisashi Kamezawa, Noriki Nishida, Nobuyuki Shimizu, Takashi Miyazaki, Hideki Nakayama.
  In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing, 2020.
- **Coherence Modeling Improves Implicit Discourse Relation Recognition.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 19th Annual Meeting of the Special Interest Group on Discourse and Dialogue, 2018.

- **Word Ordering as Unsupervised Learning Towards Syntactically Plausible Word Representations.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 8th International Joint Conference on Natural Language Processing, 2017.
- **Generating Video Description Using Sequence-to-Sequence Model with Temporal Attention.**
  Natsuda Laokulrat, Sang Phan, Noriki Nishida, Raphael Shu, Yo Ehara, Naoaki Okazaki, Yusuke Miyao, Shin'ichi Satoh, Hideki Nakayama.
  In Proceedings of the 26th International Conference on Computational Linguistics, 2016.
- **Multimodal Gesture Recognition Using Multi-Stream Recurrent Neural Network.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 7th Pacific-Rim Symposium on Image and Video Technology, 2015.

Domestic conferences

- **Exploiting Discourse Irreducibility for Unsupervised Nuclearity Classification.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 26th Annual Meeting of the Association for Natural Language Processing, 2020.
  Young Researcher Encouragement Award.
- **Unsupervised Paraphrase Generation by Reordering Noun Phrases.**
  Shota Sugiura, Noriki Nishida, Hideki Nakayama.
  In Proceedings of the 26th Annual Meeting of the Association for Natural Language Processing, 2020.
- **RST Discourse Structure Improves Story Ending Generation.**
  Hong Chen, Noriki Nishida, Raphael Shu, Naoaki Okazaki, Hideki Nakayama.
  In Proceedings of the 26th Annual Meeting of the Association for Natural Language Processing, 2020.
- **Discourse Constituent-Context Model for Unsupervised Discourse Constituency Parsing.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 25th Annual Meeting of the Association for Natural Language Processing, 2019.
- **Vision Mediated Story Generation.**
  Hong Chen, Raphael Shu, Noriki Nishida, Hideki Nakayama.
  In Proceedings of the 25th Annual Meeting of the Association for Natural Language Processing, 2019.
- **Semi-Supervised Implicit Discourse Relation Recognition Using Coherence Modeling.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 24th Annual Meeting of the Association for Natural Language Processing, 2018.
- **Automatic Coding Style Evaluation Using Recurrent Neural Networks.**
  Yuki Kobayashi, Noriki Nishida, Shigeru Chiba.
  In Proceedings of the 34th Japan Society for Software Science and Technology (JSSST) Annual Conference, 2017.
  Student Incentive Award.

- **Learning Syntactically Plausible Word Representations by Solving Word Ordering.**
  Noriki Nishida and Hideki Nakayama.
  In Proceedings of the 31st Annual Conference of the Japan Society for Artificial Intelligence, 2017.
  Annual Conference Award.

AWARDS

- **Outstanding Reviewer**, the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP), December 2020.
- **Young Researcher Encouragement Award**, the Annual Meeting of the Association for Natural Language Processing (NLP), March 2020.
- **Annual Conference Award**, the Japanese Society of Artificial Intelligence (JSAI), July 2017.

TALKS

- **Towards Unsupervised Discourse Parsing.**
  The Perception and Language Understanding (PLU) Group in Artificial Intelligence Research Center (AIRC), Japan, November 2018.
- **Deep Learning for Computer Vision.**
  Kansai Chapter of the Acoustic Society of Japan, March 2016.
- **Deep Learning for Video Recognition.**
  Prometech Simulation Conference, Japan, September 2015.

RESEARCH GRANTS

- **JSPS KAKENHI Grant-in-Aid for Early-Career Scientists**, April 2021 - March 2024.
- **JSPS KAKENHI Research Fellowship for Young Scientists (DC2)**, April 2018 - March 2020.

ACADEMIC ACTIVITIES

- Journal Reviewer
  - Language Resources and Evaluation: 2021
  - Transaction of ANLP: 2020-
- Conference Reviewer
  - ACL: 2020-
  - EMNLP: 2020-
  - NAACL: 2021-
  - EACL: 2021-
  - AAAI: 2019
  - IJCAI: 2018, 2020
  - ANLP (domestic conference): 2021-
  - MIRU (domestic conference): 2020-

SKILLS

Natural Language Processing	Document/sentence structure analysis, text mining
Machine Learning	Unsupervised learning, deep learning, multimodal processing
Computer Vision	Video (gesture) recognition, OpenCV
Programming	Python, Java, C, C++, SQL, Linux