

# NORIKI NISHIDA

RIKEN Center for Advanced Intelligence Project (AIP)

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## RESEARCH AREAS

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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 document analysis technologies such as discourse parsing. I am also interested in document-level information extraction and knowledge acquisition.

## PROFESSIONAL EMPLOYMENT

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**Postdoctoral Researcher**, RIKEN Center for Advanced Intelligence Project (AIP), April 2020 - Present.

**Visiting Researcher**, The University of Tokyo, July 2020 - Present.

## EDUCATION

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### **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

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- **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

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- **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

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### 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

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- **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

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- **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

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- **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

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

## SKILLS

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**Natural Language Processing**

**Machine Learning**

**Computer Vision**

**Programming**

Document/sentence structure analysis, text mining

Unsupervised learning, deep learning, multimodal processing

Video (gesture) recognition, OpenCV

Python, Java, C, C++, SQL, Linux