

# NORIKI NISHIDA

RIKEN Center for Advanced Intelligence Project (AIP)

Nihonbashi 1-chome Mitsui Bldg., 15th floor, 1-4-1 Nihonbashi, Chuo-ku, Tokyo 103-0027, Japan

(+81)9056548111 ◇ noriki.nishida@riken.jp

<https://norikinishida.github.io>

## RESEARCH INTERESTS

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I work in the area of computational linguistics and natural language processing. I am interested in uncovering structures and rules from linguistic phenomena in a data-driven manner. In particular, I am working on problems related to text-level parsing and knowledge acquisition from text.

## PROFESSIONAL EMPLOYMENT

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**Post-doctoral Researcher**, RIKEN Center for Advanced Intelligence Project (AIP), April 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

## PROFESSIONAL EXPERIENCES

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- **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 - Present.
- **Part-time Software Engineer**, Logarhythm Inc., November 2014 - August 2015.
- **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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### Under Review

- A work on unsupervised discourse nuclearity identification.

### Journal Articles

- **Unsupervised Discourse Constituency Parsing Using Viterbi EM.**  
Noriki Nishida and Hideki Nakayama.  
 Transactions of the Association for Computational Linguistics, to appear.
- **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.

### Refereed Conference Proceedings

- **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, and 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.

### Non-refereed 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, and 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, and 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](#), and 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](#), and 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.

## TALKS

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

## GRANTS

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- **Young Research Fellowship (DC2)** from the Japan Society for the Promotion of Science with research fund of approximately 75,000 USD/year, April 2018 - March 2020.

## AWARDS

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- **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.

## 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