

# Li Li

Multimedia Lab, TARA center, University of Tsukuba  
1-1-1 Tennodai, Tsukuba, Ibaraki, 3058577, Japan

☎ +81 29 853 6566 | ✉ lili@mmlab.cs.tsukuba.ac.jp

## RESEARCH INTERESTS

---

Audio signal processing, machine learning and speech analysis

## EDUCATION

---

- |           |                                                                                                                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CURRENT   | Ph.D. student in Department of Computer Science, Graduate School of Systems and Information Engineering, University of Tsukuba, Japan.                                                                                                                                                  |
| MAR. 2018 | M.S. degree in Engineering, Department of Computer Science, Graduate School of Systems and Information Engineering, University of Tsukuba, Japan.<br>Topic: Monaural speech enhancement with non-negative matrix factorization<br>Advisors: Prof. Shoji Makino and Dr. Hirokazu Kameoka |
| MAR. 2016 | Research Student in University of Tokyo, Japan.                                                                                                                                                                                                                                         |
| JULY 2014 | B.E. degree in Engineering, Department of Information Management and Engineering, Shanghai University of Finance and Economics, China.                                                                                                                                                  |

## RESEARCH & WORK EXPERIENCES

---

- |                     |                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|
| APRIL 2018-CURRENT  | Research fellow (DC1) of Japan Society of Promotion of Science (JSPS), Japan.                                                |
| APRIL 2016-CURRENT  | Research Intern in NTT Communication Science Laboratories, NTT Corporation, Japan.                                           |
| JULY 2018-AUG. 2018 | Research student in Toda Laboratory, University of Nagoya, Japan.<br>Topic: Singing voice modeling for singing style control |

## AWARDS

---

- |           |                                                                                                                                   |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|
| Nov. 2018 | The 2nd IEEE Signal Processing Society Tokyo Joint Chapter Student Award.                                                         |
| MAR. 2018 | Chair Award of the Department of Computer Science, Graduate School of Systems and Information Engineering, University of Tsukuba. |
| MAR. 2016 | The 13th Best Student Presentation Award from The Acoustical Society of Japan (ASJ).                                              |

## FUNDINGS

---

- |           |                                                                                   |
|-----------|-----------------------------------------------------------------------------------|
| 2018-2021 | Grant-in-Aid for JSPS Fellows, Japan Society of the Promotion of Science (JSPS).  |
| AUG. 2017 | Travel Support for Overseas Dispatch of Graduate Students, University of Tsukuba. |
| MAR. 2017 | Travel Support for Overseas Dispatch of Graduate Students, University of Tsukuba. |

## LANGUAGES

---

Chinese (native), English (fluent), Japanese (fluent)

## COMPUTER SKILLS

---

Programming: MATLAB, python, C

## PUBLICATIONS

---

### JOURNAL PAPERS

- [1] H. Kameoka, T. Higuchi, M. Tanaka, and **L. Li**, “Non-negative matrix factorization with basis clustering using cepstral distance regularization,” *IEEE/ACM Transactions on Audio, Speech and Language Processing (TASLP)*, vol. 26, no. 6, pp. 1025-1036, Jun. 2018.

### PEER-REVIEWED CONFERENCE PAPERS

- [1] **L. Li** and H. Kameoka, “Deep clustering with gated convolutional networks,” in Proc. *2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP2018)*, pp. 16-20, Calgary, April 2018.
- [2] **L. Li**, H. Kameoka, and S. Makino, “Mel-generalized cepstral regularization for discriminative non-negative matrix factorization,” in Proc. *The 27th IEEE International Workshop on Machine Learning for Signal Processing (MLSP2017)*, Tokyo, Sep. 2017.
- [3] **L. Li**, H. Kameoka, T. Toda, and S. Makino, “Speech enhancement using non-negative spectrogram models with mel-generalized cepstral regularization,” in Proc. *The 18th Annual Conference of the International Speech Communication Association (Interspeech2017)*, pp. 1998-2002, Stockholm, Aug. 2017.
- [4] **L. Li**, H. Kameoka, and S. Makino, “Discriminative non-negative matrix factorization with majorization-minimization,” in Proc. *The 5th Joint Workshop on Hands-free Speech Communication and Microphone Arrays (HSCMA2017)*, pp. 141-145, San Francisco, Mar. 2017.
- [5] **L. Li**, H. Kameoka, T. Higuchi, and H. Saruwatari, “Semi-supervised joint enhancement of spectral and cepstral sequences of noisy speech,” in Proc. *The 17th Annual Conference of the International Speech Communication Association (Interspeech2016)*, pp. 3753-3757, San Francisco, Sep. 2016.

### PREPRINTS

- [1] S. Seki, H. Kameoka, **L. Li**, T. Tomoki and K. Takeda, “Generalized multichannel variational autoencoder for underdetermined source separation,” *arXiv:1810.00223 [stat.ML]*, Oct. 2018.
- [2] H. Kameoka, **L. Li**, S. Inoue and S. Makino, “Semi-blind source separation with multichannel variational autoencoder,” *arXiv:1808.00892 [stat.ML]*, Aug. 2018.

### NON-REVIEWED DOMESTIC WORKSHOP PAPERS

- [1] **L. Li** and H. Kameoka, “Multi-speaker separation using deep clustering with gated CNN,” *2018 Spring Meeting of Acoustical Society of Japan (ASJ)*, 1-4-17, pp. 453-456, Mar. 2018 (in Japanese).
- [2] **L. Li**, H. Kameoka, and S. Makino, “Auxiliary function approach to discriminative non-negative matrix factorization,” *2017 Spring Meeting of Acoustical Society of Japan (ASJ)*, 1-P-4, pp. 519-522, Mar. 2017 (in Japanese).
- [3] Y. Zou, **L. Li** and H. Kameoka, “Vocal tract spectrogram estimation with formant frequency contour factorization,” *2017 Spring Meeting of Acoustical Society of Japan (ASJ)*, 1-Q-41, pp. 323-326, Mar. 2017.
- [4] **L. Li**, H. Kameoka, T. Higuchi, H. Saruwatari, and S. Makino, “Joint enhancement of spectral and cepstral sequences of noisy speech,” *IEICE Technical Report*, SP2016-32, vol. 116, no. 189, pp. 29-32, Aug. 2016 (in Japanese).
- [5] **L. Li**, H. Kameoka, T. Higuchi, and H. Saruwatari, “Speech enhancement based on semi-supervised non-negative matrix factorization with cepstral distance regularization,” *2016 Spring Meeting of Acoustical Society of Japan (ASJ)*, 1-P-27, pp. 721-724, Mar. 2016 (in Japanese).