

# List of Publications

Tensor Learning Unit, RIKEN AIP

<https://qibinzhao.github.io>

## Conference Papers

- 2019**
- [1] W. He, L. Yuan, and N. Yokoya. 2019, "Total-variation-regularized tensor ring completion for remote sensing image reconstruction," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 8603–8607.
  - [2] C. Li, Z. Sun, J. Yu, M. Hou, and Q. Zhao. 2019, "Low-rank embedding of kernels in convolutional neural networks under random shuffling," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 3022–3026.
  - [3] L. Sui, X. Zhao, Q. Zhao, T. Tanaka, and J. Cao. 2019, "Localization of epileptic foci by using convolutional neural network based on ieeg," in *Artificial Intelligence Applications and Innovations (AIAI)*, Springer International Publishing, pp. 331–339.
  - [4] A. Wang, X. Song, X. Wu, Z. Lai, and Z. Jin. 2019, "Generalized dantzig selector for low-tubal-rank tensor recovery," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 3427–3431.
  - [5] A. Wang, X. Song, X. Wu, Z. Lai, and Z. Jin. 2019, "Latent Schatten TT norm for tensor completion," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 2922–2926.
  - [6] A. Wang, X. Song, X. Wu, Z. Lai, and Z. Jin. 2019, "Robust low-tubal-rank tensor completion," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 3432–3436.
  - [7] J. Yu, C. Li, Q. Zhao, and G. Zhao. 2019, "Tensor-ring nuclear norm minimization and application for visual : Data completion," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 3142–3146. DOI: 10.1109/ICASSP.2019.8683115.
  - [8] L. Yuan, C. Li, J. Cao, and Q. Zhao. 2019, "Randomized tensor ring decomposition and its application to large-scale data reconstruction," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 2127–2131.
  - [9] L. Yuan, C. Li, M. Danilo, J. Cao, and Q. Zhao. 2019, "Tensor ring decomposition with rank minimization on latent space: An efficient approach for tensor completion," in *The Thirty-Third AAAI Conference on Artificial Intelligence (AAAI-19)*.
  - [10] Q. Zhao, M. Sugiyama, L. Yuan, and A. Cichocki. 2019, "Learning efficient tensor representations with ring-structured networks," in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 8608–8612.
- 2018**
- [11] X. Cao, X. Zhao, and Q. Zhao. 2018, "Tensorizing generative adversarial nets," in *The Third International Conference On Consumer Electronics (ICCE) Asia*, pp. 206–212.

- [12] M. Hou, B. Chaib-draa, C. Li, and Q. Zhao. 2018, "Generative adversarial positive-unlabeled learning," in *Proceedings of the Twenty-Seventh International Joint Conference on Artificial Intelligence (IJCAI-18)*, pp. 2255–2261.
- [13] X. Kong, W. Kong, Q. Fan, Q. Zhao, and A. Cichocki. 2018, "Task-independent EEG identification via low-rank matrix decomposition," in *The IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, pp. 412–419.
- [14] T. M. Rutkowski, Q. Zhao, M. S. Abe, and M. Otake. 2018, "AI neurotechnology for aging societies—task-load and dementia EEG digital biomarker development using information geometry machine learning methods," in *NeurIPS Workshop*.
- [15] J. Yu, G. Zhou, Q. Zhao, and K. Xie. 2018, "An effective tensor completion method based on multi-linear tensor ring decomposition," in *APSIPA-ASC 2018*, pp. 1244–1349.
- [16] L. Yuan, J. Cao, X. Zhao, Q. Wu, and Q. Zhao. 2018, "Higher-dimension tensor completion via low-rank tensor ring decomposition," in *APSIPA-ASC 2018*, pp. 1071–1076.
- [17] L. Yuan, Q. Zhao, and J. Cao. 2018, "High-order tensor completion for data recovery via sparse tensor-train optimization," in *2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, pp. 1258–1262.
- [18] Q. Zhao, M. Sugiyama, L. Yuan, and A. Cichocki. 2018, "Learning efficient tensor representations with ring structure networks," in *Sixth International Conference on Learning Representations (ICLR Workshop)*.
- [19] X. Zhao, T. Tanaka, W. Kong, Q. Zhao, J. Cao, H. Sugano, and N. Yoshida. 2018, "Epileptic focus localization based on iEEG by using positive unlabeled (PU) learning," in *APSIPA-ASC 2018*, pp. 493–497.
- [20] X. Zhao, Q. Zhao, T. Tanaka, J. Cao, W. Kong, H. Sugano, and N. Yoshida. 2018, "Detection of epileptic foci based on interictal iEEG by using convolutional neural network," in *The 23rd International Conference on Digital Signal Processing (DSP)*.
- [21] X. Zhao, G. Cui, L. Yuan, T. Tanaka, Q. Zhao, and J. Cao. 2018, "A hybrid brain computer interface based on audiovisual stimuli p300," in *The Third International Conference On Consumer Electronics (ICCE) Asia*, pp. 206–212.
- 2017 [22] G. Cui, L. Zhu, Q. Zhao, J. Cao, and A. Cichocki. 2017, "A graph theory analysis on distinguishing EEG-based brain death and coma," in *International Conference on Neural Information Processing (ICONIP)*, ser. Lecture Notes in Computer Science, Springer, vol. 10637, pp. 589–595.
- [23] L. Gui, Q. Zhao, and J. Cao. 2017, "Brain image completion by Bayesian tensor decomposition," in *Proceedings of 22nd International Conference on Digital Signal Processing (DSP)*, IEEE, pp. 1–4.
- [24] Q. Shi, Y.-m. Cheung, and Q. Zhao. 2017, "Feature extraction for incomplete data via low-rank Tucker decomposition," in *Joint European Conference on Machine Learning and Knowledge Discovery in Databases (ECML PKDD)*, ser. Lecture Notes in Computer Science, IEEE, vol. 10534, pp. 564–581.

- [25] Y. Xin, Q. Wu, Q. Zhao, and Q. Wu. 2017, "Semi-supervised regularized discriminant analysis for EEG-based BCI system," in *International Conference on Intelligent Data Engineering and Automated Learning (IDEAL)*, Springer, pp. 516–523.
- [26] L. Yuan, Q. Zhao, and J. Cao. 2017, "Completion of high order tensor data with missing entries via tensor-train decomposition," in *International Conference on Neural Information Processing (ICONIP)*, ser. Lecture Notes in Computer Science, Springer, vol. 10634, pp. 222–229.

## Journal Papers

- 2019 [27] Q. Shi, Y. Cheung, Q. Zhao, and H. Lu. 2019, "Feature extraction for incomplete data via low-rank tensor decomposition with feature regularization," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, vol. 30, no. 6, pp. 1803–1817,
- [28] L. A. Suad, C. F. Caiafa, S. Cichowski, and E. M. Arnal. 2019, "Galactic hi supershells: Kinetic energies and possible origin," *Astronomy and Astrophysics*, vol. 624, no. A&A, pp. 1–11,
- [29] L. Yuan, Q. Zhao, L. Gui, and J. Cao. 2019, "High-order tensor completion via gradient-based optimization under tensor train format," *Signal Processing: Image Communication*, vol. 73, pp. 53–61,
- 2018 [30] L. Gui, X. Zhao, Q. Zhao, and J. Cao. 2018, "Image and video completion by using Bayesian tensor decomposition," *International Journal of Computer Science Issues (IJCSI)*, vol. 15, no. 5, pp. 1–8,
- [31] L. Gui, X. Zhao, Q. Zhao, and J. Cao. 2018, "Non-local image denoising by using Bayesian low-rank tensor factorization on high-order patches," *International Journal of Computer Science Issues (IJCSI)*, vol. 15, no. 5, pp. 16–25,
- [32] W. Kong, L. Wang, J. Zhang, Q. Zhao, and J. Sun. 2018, "The dynamic EEG microstates in mental rotation," *Sensors*, vol. 18, no. 9, p. 2920,
- [33] Y. Kumagai, R. Matsui, and T. Tanaka. 2018, "Music familiarity affects EEG entrainment when little attention is paid," *Frontiers in Human Neuroscience*, vol. 12, p. 444,
- [34] J. Lin, W. Chen, C. Shen, M. Chiu, Y. Kao, F. Lai, Q. Zhao, and A. Cichocki. 2018, "Visualization and sonification of long-term epilepsy electroencephalogram monitoring," *Journal of Medical and Biological Engineering*, vol. 38, no. 6, 943–952,
- [35] Y. Qiu, G. Zhou, Q. Zhao, and A. Cichocki. 2018, "Comparative study on the classification methods for breast cancer diagnosis," *Bulletin of the Polish Academy of Sciences. Technical Sciences*, vol. 66, no. 6, pp. 841–848,
- [36] J. Solé-Casals, C. F. Caiafa, Q. Zhao, and A. Cichocki. 2018, "Brain-computer interface with corrupted EEG data: A tensor completion approach," *Cognitive Computation*, vol. 10, no. 6, 1062–1074,
- [37] Y. Zhang, D. Guo, and F. Li, *et al.* 2018, "Correction to "correlated component analysis for enhancing the performance of SSVEP-based brain-computer interface",," *IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE)*, vol. 26, no. 8, pp. 1645–1646,

- [38] Y. Zhang, E. Yin, F. Li, Y. Zhang, T. Tanaka, Q. Zhao, Y. Cui, P. Xu, D. Yao, and D. Guo. 2018, "Two-stage frequency recognition method based on correlated component analysis for SSVEP-based BCI," *IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE)*, vol. 26, no. 7, pp. 1314–1323,
- [39] Y. Zhang, D. Guo, F. Li, E. Yin, Y. Zhang, P. Li, Q. Zhao, T. Tanaka, D. Yao, and P. Xu. 2018, "Correlated component analysis for enhancing the performance of SSVEP-based brain-computer interface.," *IEEE Transactions on Neural Systems and Rehabilitation Engineering (TNSRE)*, vol. 26, no. 5, pp. 948–956,

## Book

- 2017 [40] A. Cichocki, A.-H. Phan, Q. Zhao, N. Lee, I. Oseledets, M. Sugiyama, and D. P. Mandic, *et al.* 2017, *Tensor networks for dimensionality reduction and large-scale optimization: Part 2 applications and future perspectives*, ser. Foundations and Trends® in Machine Learning 6. Now Publishers, Inc., vol. 9, pp. 431–673.