Ali Hashemi ⓘD, Ph.D. Fellow

✉ hashemi@tu-berlin.de 🐦 @alihashemi_ai

in https://www.linkedin.com/in/alihashemi-ai/

○ https://github.com/AliHashemi-ai

Research Publications

Books and Chapters

1. Flinth, A., Hashemi, A., & Kutyniok, G. (2017). Compressed sensing: From theory to praxis. In C. Chen (Ed.), *Compressive sensing of earth observations* (pp. 1–32).
   🔗 doi:https://doi.org/10.1201/9781315154626

Preprints

1. Cai, C., Hashemi, A., Chen, D., Chen, B., Diwakar, M., Haufe, S., … Nagarajan, S. S. (2022). Bayesian adaptive beamforming for robust high-resolution electromagnetic brain imaging.

2. Cai, C., Hashemi, A., Sekihara, K., Nagarajan, S. S., & Wu, W. (2022). Joint Bayesian estimation of brain sources and noise with augmented leadfield matrix.

3. Cai, C., Hinkley, L., Gao, Y., Hashemi, A., Haufe, S., Sekihara, K., & Nagarajan, S. S. (2022). Empirical Bayesian localization of event-related time-frequency neural activity dynamics.

4. Hashemi, A., Cai, C., Gao, Y., Ghosh, S., Müller, K.-R., Nagarajan, S. S., & Haufe, S. (2022). Joint learning of full-structure noise in hierarchical Bayesian regression models.
   🔗 doi:https://doi.org/10.1101/2021.11.28.470264

5. Flinth, A., & Hashemi, A. (2017b). Thermal source localization through infinite-dimensional compressed sensing. Retrieved from 🔗 https://arxiv.org/abs/1710.02016v1

Journal Articles

1. Cai, C., Hashemi, A., Diwakar, M., Haufe, S., Sekihara, K., & Nagarajan, S. S. (2021). Robust estimation of noise for electromagnetic brain imaging with the Champagne algorithm. *NeuroImage*, *225*, 117411.
   🔗 doi:https://doi.org/10.1016/j.neuroimage.2020.117411

2. Hashemi, A., Cai, C., Kutyniok, G., Müller, K.-R., Nagarajan, S., & Haufe, S. (2021). Unification of sparse Bayesian learning algorithms for electromagnetic brain imaging with the majorization minimization framework. *NeuroImage*, *239*, 118309. 🔗 doi:https://doi.org/10.1016/j.neuroimage.2021.118309

Conference Proceedings and Workshops

1. Hashemi, A., Cai, C., Gao, Y., Ghosh, S., Müller, K.-R., Nagarajan, S. S., & Haufe, S. (2021). Novel techniques for noise estimation in electromagnetic brain source imaging. In *13th international conference on bioelectromagnetism (ICBEM)* (Vol. 23, pp. 4/1–5). International Journal of Bioelectromagnetism. Retrieved from 🔗 http://ijbem.org/volume23/number1/04.pdf

2. Hashemi, A., Gao, Y., Cai, C., Ghosh, S., Müller, K. R., Nagarajan, S. S., & Haufe, S. (2021). Efficient hierarchical Bayesian inference for spatio-temporal regression models in neuroimaging. In *Thirty-Fifth Conference on Neural Information Processing Systems (NeurIPS).* Retrieved from 🔗 https://arxiv.org/abs/2111.01692v2

3. Cai, C., Hashemi, A., Diwakar, M., Haufe, S., Sekihara, K., & Nagarajan, S. S. (2020). Noise learning in empirical Bayesian source reconstruction algorithms for electromagnetic brain imaging. In *The Organization for Human Brain Mapping (OHBM).*

4 Hashemi, A., Cai, C., Kutyniok, G., Müller, K.-R., Nagarajan, S., & Haufe, S. (2020). Electromagnetic brain imaging using sparse Bayesian learning – noise learning and model selection. In *The Organization for Human Brain Mapping (OHBM)*.

5 Hashemi, A., Cai, C., Müller, K.-R., Nagarajan, S. S., & Haufe, S. (2020). Joint hierarchical Bayesian learning of full-structure noise for brain source imaging. In *Thirty-Forth Conference on Neural Information Processing Systems (NeurIPS), Medical Imaging meets NeurIPS (Med-NeurIPS) Workshop*. Retrieved from ⬩ http://www.cse.cuhk.edu.hk/~qdou/public/medneurips2020/39_MedNeurIPS_ 2020_Workshop_FUN_learning_Hashemi_et_al_Camera_ready.pdf

6 Hashemi, A., Andrade Loarca, H., Kutyniok, G., Haufe, S., & Müller, K.-R. (2019). Deep brain source imaging: An LSTM-inspired approach for EEG source localization based on sparse Bayesian learning. In *Signal Processing with Adaptive Sparse Structured Representations (SPARS)*.

7 Flinth, A., & Hashemi, A. (2018). Approximate recovery of initial point-like and instantaneous sources from coarsely sampled thermal fields via infinite-dimensional compressed sensing. In *2018 26th European Signal Processing Conference (EUSIPCO)* (pp. 1720–1724). IEEE. ⬩ doi:https://doi.org/10.23919/EUSIPCO.2018.8552939

8 Hashemi, A., & Haufe, S. (2018). Improving EEG source localization through spatio-temporal sparse Bayesian learning. In *2018 26th European Signal Processing Conference (EUSIPCO)* (pp. 1935–1939). IEEE. ⬩ doi:https://doi.org/10.23919/EUSIPCO.2018.8553004

9 Flinth, A., & Hashemi, A. (2017a). Soft recovery in infinite-dimensional compressed sensing with applications in thermal source localization and massive MIMO. In *International Matheon Conference on Compressed Sensing and its Applications (CSA)*.

10 Hashemi, A., Rostami, M., & Cheung, N.-M. (2016). Efficient environmental temperature monitoring using compressed sensing. In *2016 Data Compression Conference (DCC)* (pp. 602–602). IEEE. ⬩ doi:https://doi.org/10.1109/DCC.2016.100