Hongwei Bran Li

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RESEARCH INTERESTS

Medical image Analysis

- Radiomics, Super Resoltuion, Segmentation, and Image Synthesis

Machine Learning

- Probabilistic Models, Uncertainty Estimation, Representation Learning, Algorithm Benchmark

Clinical Translation of Machine Learning Methods

EDUCATION

Ph.D. in Computer Science (Summa cum Laude),

Technical University of Munich 09.2017-09.2023

- **Advisor**: Bjoern Menze
- **Thesis committee**: Daniel Rueckert, Tammy Riklin Raviv, and Koen Van Leemput

Visiting Ph.D. student, DQBM, University of Zurich and ETH AI Center, Switzerland 11.2020-08.2023

- Research projects with Prof. Rolf Kümmerli on image segmentation and with Prof. Bjoern Menze

Visiting M.Sc. student, School of Computing, University of Dundee, UK 12.2016-07.2017

M.Sc. in Informatics, Sun Yat-sen University, China, 09.2014-07.2017

B.Sc. in Electrical Engineering, Guangdong University of Technology, China 09.2009-07.2013

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher at Massachusetts General Hospital, Harvard Medical School 08.2023-Present

- **Advisors**: Juan Eugenio Iglesias, Matthew Rosen
- **Projects**: (1) 3D Diffusion Models for Imaging (2) Uncertainty Estimation for High-Dimensional Features

Research Assistant in University of Zurich and University Hospital 11.2020-07.2023

- Project: Self-supervised Deep Learning for Large-scale Medical Datasets.

Data Scientist in AI startup Orbem (part-time) 12.2019-12.2020

- Project: Deep-learning-based Classification Models for 3D MR Imaging of the Eggs.

Research Assistant in TUM University Hospital (part-time) 12.2019-11.2020

- Project: Generative Methods for MR Image Synthesis and Validation on Multiple Sclerosis Patients.

GRANTS AND FELLOWSHIPS

Postdoctoral Mobility Grant from Swiss National Foundation (top 30%, PI, 128k CHF) 2023

Individual Postdoctoral Grant (top 30%, University of Zurich, PI, 46k CHF) 2021

Nvidia GPU Research Grant (top 10%, PI, = 6k Euros) 2021

Master Research and Ph.D. Fellowships from China Scholarship Council 2016, 2017

AWARDS AND HONORS

Outstanding Reviewer (top 2%) for Conf. on Computer Vision and Pattern Recognition (CVPR) 2024

Best Paper Runner-Up at MIDL (top 2%, co-author) 2022

Winner of MICCAI White Matter Hyperintensities Segmentation Challenge (1/20, Team Lead) 2017

Outstanding Bachelor Thesis on Retinal Image Classification Using Machine Learning 2013

ACADEMIC ACTIVITIES

Area Chair/Senior PC: MICCAI 2024

Founding Committee and Lead Organizer of MICCAI Challenges (benchmark)

- Fetal Brain Tissue Annotation and Segmentation Challenge (FeTA) 2021,2022,2024
- Brain MR Image Synthesis for Image Segmentation Challenge (BraTS) 2023,2024
- Uncertainty Quantification in Medical Image Segmentation (QUBIQ). 2020,2021

Co-organizer of MICCAI Challenges (benchmark)

- Topology-Aware Anatomical Segmentation of the Circle of Willis for CTA and MRA. 2023, 2024
- Dental Enumeration and Diagnosis on Panoramic X-rays 2023
- Enlarged Perivascular Spaces (EPVS) Segmentation Challenge 2024

Co-organizer of Conference Track: Special Track on AI in Medical Imaging in CBMS 2023&2024.

Guest Editor

- Frontiers in Human Neuroscience**,** "*Advances in Computational Neuroimaging for Neurological Diseases*"

Organization Support: International Conference on Medical Imaging with Deep Learning (MIDL) 2022

Reviewer for Journals, Conferences and Workshops

- MICCAI (2019-2023), MIDL (2019-2024), CVPR (2021-2024), ECCV (2022, 2024), NeurIPS 2024, AAAI (2023, 2025)
- Nature Communications, NeuroImage
- Transaction on Medical Imaging, Medical Image Analysis (14 times)
- IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE-JBHI (10 times)
- MICCAI UNSURE/PIPPI/BrainLes workshops, etc.

Selected Invited Talks

1. "Quantifying white matter hyperintensity and brain volumes in heterogeneous clinical and low-field portable MRI", 21st IEEE International Symposium on Biomedical Imaging (ISBI 2024), Athens, Greece.

2. “Towards Robust Neuroimaging Analysis: Image Synthesis and Self-Supervised Radiomics”, Harvard Medical School. 08.2021. USA
3. “Machine Learning in MR Image Processing”, 3rd Retreat of BMMR Group, Germany 09.2019
4. “Fully Convolutional Networks Ensembles for White Matter Hyperintensities Segmentation in MR Images”, Edinburgh, SINAPSE, UK. 06.2018

TEACHING EXPERIENCE AND LECTURES

- Linear Algebra Practice (2015)
- Deep Learning Practice (2018, 2019)
- AI4Health Summer School Lecture on Medical Image Segmentation (Paris, 2023)

MENTORSHIP

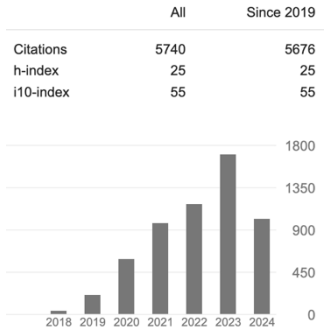
1. Kilian Schimitt, TUM master student *11.2023-05.2024*
   Thesis on machine unlearning for medical image classification (under review at MICCAI’2024)
2. Qingqiao Hu, UCLA master student, now a PhD candidate at Stony Brook University *11.2022-07.2024*
   Research projects on uncertainty estimation and probabilistic modeling
   (published at MICCAI’ 2022, under review at Pattern Recognition, and MICCAI’2024)
3. Agata Łabiak, TUM bachelor student *11.2021-05.2022*
   Bachelor project on the interpretability of contrastive learning
4. Maximilian Berger, TUM master student *11.2020-05.2021*
   Thesis on federated learning for medical imaging
5. Sunita Gopal, TUM master student *03.2020-09.2020*
   Thesis on disentangled learning for medical image synthesis
6. Yuqian Zhang, LMU master student *11.2019-06.2020*
   Research project on fMRI feature extraction and brain activity classification.

LIST OF REFEREES

- Bjoern Menze, PhD supervisor,
  Professor at University of Zurich, Switzerland
  Email: bjoern.menze@uzh.ch
- Juan Eugenio Iglesias, postdoctoral advisor,
  Associate Professor at MGH/Harvard Medical School, USA
  Email: jiglesiasgonzalez@mgh.harvard.edu
- Daniel Rueckert, collaborator / visit host,
  Professor at Technical University of Munich, Germany
  Email: daniel.rueckert@tum.de

PUBLICATIONS (full list; number of published articles: **75**; h-index: **25**; citations: **5740**)

As of June 30, 2024, my h-index is 25, with a total of 5,740 citations of my publications according to Google Scholar. My research primarily focuses on deep learning in medical image analysis and the development of advanced machine learning methods. Below, I list all my publications.



***** indicates co-first authorship

Publications independent of my PhD supervisor

[1] Yuan, J., Siakallis, L., **Li, H.B.**, Brandner, S., Zhang, J., Li, C., Mancini, L., and Bisdas, S. (2024). Structural-And DTI-MRI Enable Automated Prediction of IDH Mutation Status in CNS WHO Grade 2–4 Glioma Patients: A Deep Radiomics Approach. *BMC Medical Imaging*, 24(1), p.104.

[2] **Li, H.B.**, Rosen, M.S., Nasr, S., and Iglesias, J.E. (2024). Resolution and Stimulus-Agnostic Super-Resolution of Ultra-High-Field Functional MRI: Application to Visual Studies. *Proceedings of 21st IEEE International Symposium on Biomedical Imaging (ISBI 2024).*

[3] Polsinelli, M., **Li, H.B.,** Mignosi, F., Zhang, L., and Placidi, G. (2024). Siamese Network to Assess Scanner-Related Contrast Variability in MRI. *Image and Vision Computing*, 145, p.104997.

[4] Laso, P., Cerri, S., Sorby-Adams, A., Guo, J., Mateen, F., Goebl, P., Wu, J., Liu, P., Li, H., Young, S.I., and Billot, B. (2023). Quantifying White Matter Hyperintensity and Brain Volumes in Heterogeneous Clinical and Low-Field Portable MRI. *Proceedings of 21st IEEE International Symposium on Biomedical Imaging (ISBI 2024)*.

[5] Varma, A., Shit, S., Prabhakar, C., Scholz, D., **Li, H.B.,** Rueckert, D., and Wiestler, B. (2024, February). VariViT: A Vision Transformer for Variable Image Sizes. *In International Conference on Medical Imaging with Deep Learning*.

[5] McGinnis, J., Shit, S., **Li, H.B.**, Sideri-Lampretsa, V., Graf, R., Dannecker, M., Pan, J., Stolt-Ansó, N., Mühlau, M., Kirschke, J.S., and Rueckert, D. (2023, October). Single-Subject Multi-Contrast MRI Super-Resolution via Implicit Neural Representations. *In International Conference on Medical Image Computing and Computer-Assisted Intervention* (pp. 173-183). Cham: Springer Nature Switzerland.

[6] Dima, A.F., Zimmer, V.A., Menten, M.J., **Li, H.B.**, Graf, M., Lemke, T., Raffler, P., Graf, R., Kirschke, J.S., Braren, R., and Rueckert, D. (2023, October). 3D Arterial Segmentation via Single 2D Projections and Depth Supervision in Contrast-Enhanced CT Images. *In International Conference on Medical Image Computing and Computer-Assisted Intervention* (pp. 141-151). Cham: Springer Nature Switzerland.

[7] Yang, J., **Li, H.B.**, and Wei, D. (2023). The Impact of ChatGPT and LLMs on Medical Imaging Stakeholders: Perspectives and Use Cases. *Meta-Radiology*, p.100007.

[8] Bhutto, D.F., Zhu, B., Liu, J.Z., Koonjoo, N., **Li, H.B.**, Rosen, B.R., and Rosen, M.S. (2024). Uncertainty Estimation and Out-of-Distribution Detection for Deep Learning-Based Image Reconstruction Using the Local Lipschitz. *IEEE Journal of Biomedical and Health Informatics*.

[9] Huang, W., **Li, H.B.**, Pan, J., Cruz, G., Rueckert, D., and Hammernik, K. (2023, June). Neural Implicit K-Space for Binning-Free Non-Cartesian Cardiac MR Imaging. *In International Conference on Information Processing in Medical Imaging* (pp. 548-560). Cham: Springer Nature Switzerland.

[10] Schlaeger, S., **Li, H.B.**, Baum, T., Zimmer, C., Moosbauer, J., Byas, S., Mühlau, M., Wiestler, B., and Finck, T. (2023). Longitudinal Assessment of Multiple Sclerosis Lesion Load with Synthetic Magnetic Resonance Imaging - A Multicenter Validation Study. *Investigative Radiology*, 58(5), pp.320-326.

[11] Neubauer, A., Menegaux, A., Wendt, J., **Li, H.B.**, Schmitz-Koep, B., Ruzok, T., Thalhammer, M., Schinz, D., Bartmann, P., Wolke, D., and Priller, J. (2023). Aberrant Claustrum Structure in Preterm-Born Neonates: An MRI Study. *NeuroImage: Clinical*, 37, p.103286.

[12] Kuang, K., Zhang, L., Li, J., **Li, H.**, Chen, J., Du, B., and Yang, J. (2022, September). What Makes for Automatic Reconstruction of Pulmonary Segments. *In International Conference on Medical Image Computing and Computer-Assisted Intervention* (pp. 495-505). Cham: Springer Nature Switzerland.

[13] Dong, X.*, Zhang, Y.*, **Li, H.***, Yan, Y., Li, J., Song, J., Wang, K., Jakobi, M., Yetisen, A.K., and Koch, A.W. (2022). Microscopic Image Deblurring by a Generative Adversarial Network for 2D Nanomaterials: Implications for Wafer-Scale Semiconductor Characterization. *ACS Applied Nano Materials,* 5(9), pp.12855-12864. **(co-first)**

[14] Dong, X., **Li, H.***, Yan, Y., Cheng, H., Zhang, H.X., Zhang, Y., Le, T.D., Wang, K., Dong, J., Jakobi, M., and Yetisen, A.K. (2022). Deep-Learning-Based Microscopic Imagery Classification, Segmentation, and Detection for the Identification of 2D Semiconductors. *Advanced Theory and Simulations*, 5(9), p.2200140. **(co-first)**

[15] Hu, Q.*, **Li, H.***, and Zhang, J. (2022, September). Domain-Adaptive 3D Medical Image Synthesis: An Efficient Unsupervised Approach. *In International Conference on Medical Image Computing and Computer-Assisted Intervention* (pp. 495-504). Cham: Springer Nature Switzerland. **(co-first)**

[16] Hedderich, D.M., Menegaux, A., **Li, H.**, Schmitz-Koep, B., Stämpfli, P., Bäuml, J.G., Berndt, M.T., Bäuerlein, F.J., Grothe, M.J., Dyrba, M. and Avram, M., 2021. Aberrant claustrum microstructure in humans after premature birth. *Cerebral Cortex*, 31(12), pp.5549-5559.

[17] Gaubert, M., Zimmermann, I., Lange, C., Dyrba, M., **Li, H.**, Duering, M., Ziegler, G., Teipel, S.J., Peters, O., Priller, J. and Schneider, A., 2020. Performance comparison of automated white matter lesion segmentation algorithms in the DELCODE Study: Neuroimaging/Optimal neuroimaging measures for early detection. *Alzheimer's & Dementia*, 16, p.e045367.

[18] Chen, J., Li, W., **Li, H.** and Zhang, J., 2020. Deep class-specific affinity-guided convolutional network for multimodal unpaired image segmentation. In *Medical Image Computing and Computer Assisted Intervention–MICCAI 2020*: 23rd International Conference, Lima, Peru, October 4–8, 2020, Proceedings, Part IV 23 (pp. 187-196). Springer International Publishing.

[19] Kuijf, Hugo J., J. Matthijs Biesbroek, Jeroen De Bresser, Rutger Heinen, Simon Andermatt, Mariana Bento, Matt Berseth et al. "Standardized assessment of automatic segmentation of white matter

hyperintensities and results of the WMH segmentation challenge." I*EEE transactions on medical imaging* 38, no. 11 (2019): 2556-2568.

Publications during my Ph.D.

[20] Amiranashvili, T., Lüdke, D., **Li, H.B.**, Zachow, S., and Menze, B.H. (2024). Learning Continuous Shape Priors from Sparse Data with Neural Implicit Functions. *Medical Image Analysis,* p.103099.

[21] He, H., Paetzold, J.C., Börner, N., Riedel, E., Gerl, S., Schneider, S., Fisher, C., Ezhov, I., Shit, S., **Li, H.,** and Rückert, D. (2024). Machine Learning Analysis of Human Skin by Optoacoustic Mesoscopy for Automated Extraction of Psoriasis and Aging Biomarkers. *IEEE Transactions on Medical Imaging.*

[22] Schmitz, D.A., Wechsler, T., **Li, H.B.**, Menze, B.H., and Kümmerli, R. (2024). A New Protocol for Multispecies Bacterial Infections in Zebrafish and Their Monitoring through Automated Image Analysis. *Plos One Lab Protocols* (accepted).

[23] Dong, X., **Li, H.**, Wang, K., Menze, B., Jakobi, M., Yetisen, A.K., and Koch, A.W. (2024). Multispectral Microscopic Multiplexed (3m) Imaging of Atomically-Thin Crystals Using Deep Learning. *Advanced Optical Materials,* 12(2), p.2300860.

[24] Prabhakar, C., **Li, H.B.**, Paetzold, J.C., Loehr, T., Niu, C., Mühlau, M., Rueckert, D., Wiestler, B., and Menze, B. (2023, October). Self-Pruning Graph Neural Network for Predicting Inflammatory Disease Activity in Multiple Sclerosis from Brain MR Images. *In International Conference on Medical Image Computing and Computer-Assisted Intervention (*pp. 226-236). Cham: Springer Nature Switzerland.

[21] Payette, K., **Li, H.B.**, de Dumast, P., Licandro, R., Ji, H., Siddiquee, M.M.R., Xu, D., Myronenko, A., Liu, H., Pei, Y., and Wang, L. (2023). Fetal Brain Tissue Annotation and Segmentation Challenge Results. *Medical Image Analysis,* 88, p.102833.

[22] Prabhakar, C., Shit, S., Paetzold, J.C., Ezhov, I., Koner, R., **Li, H.**, Kofler, F.S., and Menze, B. (2024, January). Vesselformer: Towards Complete 3D Vessel Graph Generation from Images. *In International Conference on Medical Imaging with Deep Learning* (pp. 320-331). PMLR.

[23] Prabhakar, C.*, **Li, H.***, Yang, J., Shit, S., Wiestler, B., and Menze, B. (2024, January). ViT-AE++: Improving Vision Transformer Autoencoder for Self-Supervised Medical Image Representations. *In International Conference on Medical Imaging with Deep Learning* (pp. 666-679). PMLR. (**co-first**)

[24] Eisenmann, M., Reinke, A., Weru, V., Tizabi, M.D., Isensee, F., Adler, T.J., Ali, S., Andrearczyk, V., Aubreville, M., Baid, U., and Bakas, S. (2023). Why Is the Winner the Best? *In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (pp. 19955-19966).

[25] Amiranashvili, T., Lüdke, D., Li, H.B., Menze, B., and Zachow, S. (2022, December). Learning Shape Reconstruction from Sparse Measurements with Neural Implicit Functions. *In International Conference on Medical Imaging with Deep Learning* (pp. 22-34). PMLR.

[26] Prabhakar, C., Sekuboyina, A., **Li, H.B.**, Paetzold, J.C., Shit, S., Amiranashvili, T., Kleesiek, J., and Menze, B. (2022, November). Structured Knowledge Graphs for Classifying Unseen Patterns in Radiographs. *In Geometric Deep Learning in Medical Image Analysis* (pp. 45-60). PMLR.

[27] Bilic, P.*, Christ, P.*, **Li, H.B.***, Vorontsov, E., Ben-Cohen, A., Kaissis, G., Szeskin, A., Jacobs, C., Mamani, G.E.H., Chartrand, G., and Lohöfer, F. et al. (2023). The Liver Tumor Segmentation Benchmark (LITS). *Medical Image Analysis*, 84, p.102680. (**co-first, corresponding author, cited 1000+ times**)

[28] Zhuang, X., Xu, J., Luo, X., Chen, C., Ouyang, C., Rueckert, D., Campello, V.M., Lekadir, K., Vesal, S., RaviKumar, N., and Liu, Y. et al. (2022). Cardiac Segmentation on Late Gadolinium Enhancement MRI: A Benchmark Study from Multi-Sequence Cardiac MR Segmentation Challenge. *Medical Image Analysis*, 81, p.102528.

[29] Al Boustani, G., Weiß, L.J.K., **Li, H.**, Meyer, S.M., Hiendlmeier, L., Rinklin, P., Menze, B., Hemmert, W., and Wolfrum, B. (2022). Influence of Auditory Cues on the Neuronal Response to Naturalistic Visual Stimuli in a Virtual Reality Setting. *Frontiers in Human Neuroscience*, 16, p.809293.

[30] Kofler, F., Shit, S., Ezhov, I., Fidon, L., Horvath, I., Al-Maskari, R., **Li, H.B.**, Bhatia, H., Loehr, T., Piraud, M., and Erturk, A. (2023, June). Blob Loss: Instance Imbalance Aware Loss Functions for Semantic Segmentation. *In International Conference on Information Processing in Medical Imaging* (pp. 755-767). Cham: Springer Nature Switzerland.

[31] Pati, S., Baid, U., Edwards, B., Sheller, M., Wang, S.H., Reina, G.A., and Poisson, L. et al. (2022). Federated Learning Enables Big Data for Rare Cancer Boundary Detection. *Nature Communications*, 13(1), p.7346.

[32] Pirkl, C.M., Cencini, M., Kurzawski, J.W., Waldmannstetter, D., **Li, H.**, Sekuboyina, A., Endt, S., Peretti, L., Donatelli, G., Pasquariello, R., and Costagli, M. (2022). Learning Residual Motion Correction for Fast and Robust 3D Multiparametric MRI. *Medical Image Analysis*, 77, p.102387.

[33] Shit, S., Koner, R., Wittmann, B., Paetzold, J., Ezhov, I., **Li, H.**, Pan, J., Sharifzadeh, S., Kaissis, G., Tresp, V., and Menze, B. (2022, October). Relationformer: A Unified Framework for Image-to-Graph Generation. *In European Conference on Computer Vision* (pp. 422-439). Cham: Springer Nature Switzerland.

[34] Thomas, M.F., Kofler, F., Grundl, L., Finck, T., **Li, H.**, Zimmer, C., Menze, B., and Wiestler, B. (2022). Improving Automated Glioma Segmentation in Routine Clinical Use through Artificial Intelligence-Based Replacement of Missing Sequences with Synthetic Magnetic Resonance Imaging Scans. *Investigative Radiology,* 57(3), pp.187-193.

[35] Neubauer*, A., **Li, H.B.***, Wendt, J., Schmitz-Koep, B., Menegaux, A., Schinz, D., Menze, B., Zimmer, C., Sorg, C., and Hedderich, D.M. (2022). Efficient Claustrum Segmentation in T2-Weighted Neonatal Brain MRI Using Transfer Learning from Adult Scans. *Clinical Neuroradiology*, 32(3), pp.665-676. (**co-first)**

[36] Finck, T., **Li, H.***, Schlaeger, S., Grundl, L., Sollmann, N., Bender, B., Bürkle, E., Zimmer, C., Kirschke, J., Menze, B., and Mühlau, M. (2022). Uncertainty-Aware and Lesion-Specific Image Synthesis in Multiple

Sclerosis Magnetic Resonance Imaging: A Multicentric Validation Study. *Frontiers in Neuroscience*, 16, p.889808. (**co-first)**

[37] Horvath, I., Paetzold, J., Schoppe, O., Al-Maskari, R., Ezhov, I., Shit, S., **Li, H.**, Ertürk, A., and Menze, B. (2022). MetGAN: Generative Tumour Inpainting and Modality Synthesis in Light Sheet Microscopy. *In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* (pp. 227-237).

[38] Ezhov, I., Mot, T., Shit, S., Lipkova, J., Paetzold, J.C., Kofler, F., Pellegrini, C., Kollovieh, M., Navarro, F., **Li, H.**, and Metz, M. (2021). Geometry-Aware Neural Solver for Fast Bayesian Calibration of Brain Tumor Models. *IEEE Transactions on Medical Imaging*, 41(5), pp.1269-1278.

[39] **Li, H.**, Menegaux, A., Schmitz-Koep, B., Neubauer, A., Bäuerlein, F.J., Shit, S., Sorg, C., Menze, B., and Hedderich, D. (2021). Automated Claustrum Segmentation in Human Brain MRI Using Deep Learning. *Human Brain Mapping*, 42(18), pp.5862-5872.

[40] Sekuboyina, A., Husseini, M.E., Bayat, A., Löffler, M., Liebl, H., **Li, H.**, Tetteh, G., Kukačka, J., Payer, C., Štern, D., and Urschler, M. (2021). VerSe: A Vertebrae Labelling and Segmentation Benchmark for Multi-Detector CT Images. *Medical Image Analysis*, 73, p.102166.

[41] **Li, H.**, Gopal, S., Sekuboyina, A., Zhang, J., Niu, C., Pirkl, C., Kirschke, J., Wiestler, B., and Menze, B. (2021). Unpaired MR Image Homogenisation by Disentangled Representations and Its Uncertainty. *In Uncertainty for Safe Utilization of Machine Learning in Medical Imaging, and Perinatal Imaging, Placental and Preterm Image Analysis: 3rd International Workshop*, UNSURE 2021, and 6th International Workshop, PIPPI 2021, Held in Conjunction with MICCAI 2021, Strasbourg, France, October 1, 2021, Proceedings 3 (pp. 44-53). Springer International Publishing.

[42] Timmins, K.M., van der Schaaf, I.C., Bennink, E., Ruigrok, Y.M., An, X., Baumgartner, M., Kuijf, H.J., **Li, H.** et al. (2021). Comparing Methods of Detecting and Segmenting Unruptured Intracranial Aneurysms on TOF-MRAS: The ADAM Challenge. Neuroimage, 238, p.118216.

[43] Hu, X., Yan, Y., Ren, W., **Li, H.**, Bayat, A., Zhao, Y., and Menze, B. (2021, August). Feedback Graph Attention Convolutional Network for MR Images Enhancement by Exploring Self-Similarity Features. In Medical Imaging with Deep Learning (pp. 327-337). PMLR.

[44] Niu, C., Wang, Y., Cohen, A.D., Liu, X., **Li, H.**, Lin, P., Chen, Z., Min, Z., Li, W., Ling, X., and Wen, X. (2021). Machine Learning May Predict Individual Hand Motor Activation from Resting-State fMRI in Patients with Brain Tumors in Perirolandic Cortex. European Radiology, 31, pp.5253-5262.

[45] Campello, V.M., Gkontra, P., Izquierdo, C., Martin-Isla, C., Sojoudi, A., Full, P.M., Maier-Hein, K., Zhang, Y., He, Z., Ma, J., and Parreno, M. (2021). Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Segmentation: The M&Ms Challenge. IEEE Transactions on Medical Imaging, 40(12), pp.3543-3554.

[46] Kofler, F., Ezhov, I., Isensee, F., Balsiger, F., Berger, C., Koerner, M., Demiray, B., Rackerseder, J., Paetzold, J., **Li, H.**, and Shit, S. (2023). Are We Using Appropriate Segmentation Metrics? Identifying Correlates of Human Expert Perception for CNN Training Beyond Rolling the DICE Coefficient. *Journal of Machine Learning for Biomedical Imaging,* 2(May 2023 issue), pp.27-71.

[47] **Li, H.**, Xue, F.F., Chaitanya, K., Luo, S., Ezhov, I., Wiestler, B., Zhang, J., and Menze, B. (2021). Imbalance-Aware Self-Supervised Learning for 3D Radiomic Representations. *In Medical Image Computing and Computer Assisted Intervention–MICCAI 2021*: 24th International Conference, Strasbourg, France, September 27–October 1, 2021, Proceedings, Part II 24 (pp. 36-46). Springer International Publishing.

[48] Pirkl, C., Cencini, M., Kurzawski, J.W., Waldmannstetter, D., **Li, H.**, Sekuboyina, A., Endt, S., Peretti, L., Donatelli, G., Pasquariello, R., and Tosetti, M. (2021, February). *Residual Learning for 3D Motion Corrected Quantitative MRI: Robust Clinical T1, T2, and Proton Density Mapping*. *In International conference on Medical Imaging with Deep Learning*.

[49] Dong, X., **Li, H.*,** Jiang, Z., Grünleitner, T., Güler, I., Dong, J., Wang, K., Köhler, M.H., Jakobi, M., Menze, B.H., and Yetisen, A.K. (2021). 3D Deep Learning Enables Accurate Layer Mapping of 2D Materials. ACS Nano, 15(2), pp.3139-3151. **(co-first)**

[50] Schoppe, O., Pan, C., Coronel, J., Mai, H., Rong, Z., Todorov, M.I., Müskes, A., Navarro, F., Li, H., Ertürk, A., and Menze, B.H. (2020). Deep Learning-Enabled Multi-Organ Segmentation in Whole-Body Mouse Scans. *Nature Communications*, 11(1), p.5626.

[51] **Li, H.**, Prasad, R.G., Sekuboyina, A., Niu, C., Bai, S., Hemmert, W., and Menze, B. (2021, April). Micro-CT Synthesis and Inner Ear Super Resolution via Generative Adversarial Networks and Bayesian Inference. *In 2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI)* (pp. 1500-1504). IEEE.

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