

Alphin J Thottupattu

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Education

- 2016 – present 📖 **Ph.D., Medical Image Processing**
International Institute of Information Technology, India
Thesis title: **Analysis of Brain Aging in Indian Population**
CGPA:9.17
- 2014 – 2016 📖 **M.Tech. Communication Engineering and Signal Processing**,
Amrita Vishwa Vidyapeetham, India.
CGPA:9.17
- 2010 – 2014 📖 **B.Tech. Electronics and Communications**,
Rajiv Gandhi Institute Of Technology, Government college, Kerala
CGPA:7.7

Research Publications

Journal Articles

- 1 Thottupattu, A., Sivaswamy, J., & Krishnan, V. (2022). A diffeomorphic aging model for adult human brain from cross-sectional data. *Nature Scientific Reports*, 12, 12638. 🔗 doi:10.1038/s41598-022-16531-6
- 2 Sivaswamy, J., Thottupattu, A. J., V. M., Mehta, R., Sheelakumari, R., & Kesavadas, C. (2021b). Sub-cortical structure segmentation database for young population. *Under Review*.
🔗 doi:10.48550/ARXIV.2111.01561
- 3 Sivaswamy, J., Thottupattu, A. J., Mehta, R., Sheelakumari, R., & Kesavadas, C. (2019). Construction of indian human brain atlas. *Neurol India*, 67, 229–34.

Conference Proceedings

- 1 Thottupattu, A. J., Sivaswamy, J., & Krishnan, V. P. (2022). A method for large diffeomorphic registration via broken geodesics.
- 2 V. M., Thottupattu, A. J., R J, N. A., & Sivaswamy, J. (2022). A method to remove size bias in sub-cortical structure segmentation. In *2022 IEEE 19th International Symposium on Biomedical Imaging (ISBI)* (pp. 1–4).
🔗 doi:10.1109/ISBI52829.2022.9761673
- 3 Thottupattu, A. J., & Sivaswamy, J. (2020). A fast method for shape template generation. In *2020 IEEE International Conference on Image Processing (ICIP)* (pp. 66–70). 🔗 doi:10.1109/ICIP40778.2020.9190801
- 4 Thottupattu, A. J., Yadav, S., & Sharma, A. (2018). Non-rigid registration using spectral graph wavelet features. In *Proceedings of the 11th Indian Conference on Computer Vision, Graphics and Image Processing*.
🔗 doi:10.1145/3293353.3293389
- 5 K George, K., Kumar, C., K.T., S., Das, K., Thottupattu, A., Kumar, M., & K I, R. (2015). Amrita sre database: A database for evaluating speaker recognition systems with mimicked speech.

Skills

Languages 📖 Good reading, writing and speaking competencies for English, Malayalam, Hindi

Skills (continued)

Coding	■	Shell script, MATLAB, L ^A T _E X, HTML, Python, ...
Toolboxes	■	FSL, Freesurfer, ANTs, Brainsuits, ITK, MRtrix3, DRAMMS, ...
Databases	■	OASIS, ADNI, MICCAI-2012, Neurodev, BRAINS, ...

Miscellaneous Experience

Conferences Attended

2018	■	11th Indian Conference on Computer Vision, Graphics and Image Processing.
2020,22	■	9th and 10th International Workshop on Biomedical Image Registration.
2022	■	International Symposium on Biomedical Imaging.

Grants Received

- MICCAI Society Main Conference Participation Grant (In Person) 2022

Teaching Assistance

- Network Signals and Systems
- Medical Image Processing
- Signals and Systems

Database Development Contributions

- Sub-cortical Segmentation Dataset for brain MRI : Data
- Brain Atlas for Young Population : Atlas
- Indian Brain Aging Database for 10-70 years age range (Under Development)
- Amrita SRE Database

References

Prof.Jayanthi Sivaswamy (Ph.D. Advisor)

Institute: International Institute of Information Technology
Hyderabad, India

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Prof. Venkateswaran P. Krishnan

Institute: TIFR Centre for Applicable Mathematics,
Bangalore 560065, India

Email: venkyp.krishnan@gmail.com