

Poortata Shirish Lalwani
Curriculum Vitae
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Contact Details

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Education

(2016-present) **Candidate PhD student**
Department of Psychology, University of Michigan
(Concentration – Cognition and Cognitive Neuroscience)

(2010-2015) **Master of Science with Distinction**
Indian Institute of Science Education and Research (IISER), Pune

(2010-2015) **Bachelor of Science with Distinction**
Indian Institute of Science Education and Research (IISER), Pune

Research Experience

(2016 – present) **PhD research** at Dept. of Psychology, University of Michigan
Advisors: Dr. Thad Polk and Dr. David Brang

(2015-2016) **Research Assistant** at Watve Lab, IISER, Pune
Project Title: BILD (Behavioral Intervention for Lifestyle Disorders)
Advisor: Dr. Milind Watve

(2014-2015) **Master's thesis** at the Centre for Brain Development and Repair,
Bangalore
Thesis Title: Cognitive abilities & resting-state brain connectivity in
healthy adults
Advisor: Dr. Archana Purushotham

(2014) **Semester Project.** Effects of preparation on song performance of
adult male zebra finches
Advisor: Dr. Raghav Rajan, IISER Pune

(2013) **Summer Project.** Motor connectivity in healthy human subjects
using fMRI
Advisor: Dr. Archana Purushotham

Publications

1. **Lalwani P**, Garrett D., Polk, T.A. (under review) Age-related decline in brain signal variability: Cause and Consequence.
2. Cassady, K., Gagnon, H., Freiburger, E., **Lalwani, P.**, Simmonite, M., Park, D.C., Peltier, S.J., Taylor, S.F., Weissman, D.H., Seidler, R.D. and Polk, T.A., 2020. Network segregation varies with neural distinctiveness in sensorimotor cortex. *NeuroImage*, p.116663.
3. **Lalwani, P.**, Gagnon, H., Cassady, K., Simmonite, M., Peltier, S., Seidler, R. D., Taylor, S. F., Weissman, D. H., & Polk, T. A. (2019). Neural distinctiveness declines with age in auditory cortex and is associated with auditory GABA levels. *NeuroImage*, 201, 116033.
4. **Lalwani P**, Brang D. 2019 Stochastic resonance model of synesthesia. *Phil. Trans. R. Soc. B*, 20190029.
5. Watve, M., Baig, U., Lokhande, L., **Lalwani, P.**, & Chawla, S. (2019). Foraging theory and the propensity to be obese: an alternative to thrift. *HOMO: Journal of Comparative Human Biology*. 193-216
6. Gagnon, H., Simmonite, M., Cassady, K., Chamberlain, J., Freiburger, E., **Lalwani, P.**, Kelley, S., Foerster, B., Park, D.C., Petrou, M., Seidler, R.D., Taylor, S.F., Weissman, D.H., and Polk, T.A., (2019). Michigan Neural Distinctiveness (MiND) study protocol: investigating the scope, causes, and consequences of age-related neural dedifferentiation. *BMC neurology*, 19(1), p.61.
7. Cassady, K., Gagnon, H., **Lalwani, P.**, Simmonite, M., Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D. & Polk, T. A. (2018). Sensorimotor network segregation declines with age and is linked to GABA and to sensorimotor performance. *NeuroImage*, 186:234–244.
8. Chamberlain, J. D., Gagnon, H., **Lalwani, P.**, Cassady, K. E., Simmonite, M., Foerster, B. R., Petrou, M., Seidler, R.D., Taylor, S.F., Weissman, D.H., Park, D. C. & Polk, T. A. (under review). GABA levels in ventral visual cortex decline with age and are associated with neural distinctiveness. *Preprint at bioRxiv*, 743674.
9. Patil, P., **Lalwani, P.**, Vidwans, H.B., Kulkarni, S.A., Bais, D., Diwekar-Joshi, M.M., Rasal, M., Bhasme, N., Naik, M., Batwal, S. & Watve, M., (under review). A multidimensional functional fitness score is a stronger predictor of type 2 diabetes than obesity parameters in cross sectional data. *Preprint at bioRxiv*, p.580860.

Academic Fellowships

<i>(2018-present)</i>	LIFE Fellow
<i>(2018)</i>	International Institute Student Fellowship
<i>(2018)</i>	Rackham International Student Fellowship
<i>(2010-2015)</i>	INSPIRE Fellowship
<i>(2013)</i>	Indian Academy of Sciences Summer Research Fellowship

Academic Scholarships, Awards and Grants

<i>(pending)</i>	National Institute of Health (NIH) F99/K00 Predoc to Postdoc Transition to Aging Research Award <i>(Received an Impact Score of 10 on first submission)</i>
<i>(2020)</i>	Barbara Perry Roberson Award
<i>(2019)</i>	Graduate Student Award by the Cognitive Neuroscience Society
<i>(2019)</i>	John Lustig & Irmgard Stahl Lustig Graduate Student Award
<i>(2018,2020)</i>	Rackham Graduate Student Research Grant
<i>(2018, 2019)</i>	Rackham Travel Grant
<i>(2008)</i>	Lokshahir Annabhau Sathe Scholarship
<i>(2010)</i>	Bharat Ratna Maulana Abul Kalam Azad Scholarship
<i>(2005, 2006)</i>	Maharashtra Talent Search Scholarship

Teaching Experience

<i>Fall 2019, Fall 2018</i>	Human Neuropsychology (Graduate Student Instructor)
<i>Fall & Winter 2017</i>	Introduction to Cognitive Psychology (Graduate Student Instructor)
<i>2011-2014</i>	Disha and Spread the Smile Initiative (Instructor with non-profit organization to improve school education for underprivileged children)

Talks and Poster Presentations

1. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2020). Age-related declines in neural distinctiveness and variability: Cause and Consequences. (*Poster and Data Blitz at the Cognitive Neuroscience Meeting, Virtual*)
2. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2019) “Role of GABA in modulation of variability.” (*LIFE Academy, Zurich*)
3. Yadav A., **Lalwani P.**, Suri H., Jejurikar R., & Purushotham, A. (2019) “Nodes of DMN involved in general intelligence.” (*Annual Meeting of Society for Neuroscience, Chicago, IL*)
4. **Lalwani P** (2019). Age-related declines in neural distinctiveness and variability: Cause and Consequences. (*Cognition and Cognitive Neuroscience Forum, University of Michigan, Ann Arbor, MI*)
5. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2019) “Role of GABA in age-related decline in brain signal variability.” (*Neuroimaging Initiative, University of Michigan, Ann Arbor, MI*)
6. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2019) “The role of GABA in age-related decline in brain signal variability.” (*University of Michigan Neuroscience Conference, Ann Arbor, MI*)
7. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2019) “The role of GABA in modulating brain signal variability” (*Graduate Student Award to present at Cognitive Neuroscience Society Meeting, San Francisco, CA*)
8. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2019) “Older adults who modulate BOLD-signal variability more, have higher GABA levels and better fluid processing abilities.” (*Dallas Aging and Cognition Conference, Dallas, TX*)
9. Cassady K.E., Gagnon H., **Lalwani P.**, Simmonite M., Foerster B., Park D.C., Peltier S.J., Petrou M., Taylor S.F., Weissman D.H., Seidler R.D., and Polk T.A. (2019) “Sensorimotor network segregation declines with age, is linked to GABA, and predicts sensorimotor performance.” (*Dallas Aging and Cognition Conference, Dallas, TX*)
10. Chamberlain J.D., Gagnon H., **Lalwani P.**, Cassady K., Simmonite M., Foerster B., Petrou M., Seidler R.D., Weissman D.H., Park D.C., and Polk T.A. (2019) “GABA levels in ventral visual cortex decline with age and predict neural distinctiveness.” (*Dallas Aging and Cognition Conference, Dallas, TX*)

11. Cassady, K., Gagnon, H., **Lalwani, P.**, Chamberlain, J., Simmonite, M., Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D., & Polk, T. A. (2018) "Sensorimotor network segregation declines with age, is linked to neural distinctiveness, and predicts sensorimotor performance." (*Annual Meeting of the Society for Neuroscience, San Diego, CA*)
12. Simmonite, M., Cassady, K., Gagnon, H., **Lalwani, P.**, Taylor, S., Weissman, D. H., Seidler R. D., & Polk, T.A. (2018) "Age-related neural dedifferentiation extends beyond visual cortex and is driven by less reliable neural activation." (*Annual Meeting of the Society for Neuroscience, San Diego, CA*)
13. **Lalwani, P.**, Garrett, D., & Polk, T.A. (2018) "Role of GABA in modulation of variability." (*Neuroimaging Initiative, University of Michigan, Ann Arbor, MI*)
14. **Lalwani, P.**, Gagnon, H., Cassady, K., Simmonite, M., Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D., & Polk, T. A. (2018) "Age-related declines in GABA levels in auditory cortex are associated with neural distinctiveness and auditory perception." (*Cognitive Neuroscience Society Meeting, Boston, MA*)
15. Cassady, K., Gagnon, H., **Lalwani, P.**, Simmonite, Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D., & Polk, T. A (2018). Aging in the sensorimotor system: Lower GABA levels are associated with decreased network segregation and impaired behavior. (*Cognitive Neuroscience Society, Boston, MA*)
16. Yadav A., **Lalwani P.**, Suri H., Jejurikar R., & Purushotham A (2018). "The grey matter of G: The structural neural correlates of general intelligence." (*Organization of Human Brain Mapping (OHBM) Annual Meeting, Singapore*)
17. **Lalwani, P.**, Gagnon, H., Cassady, K., Simmonite, M., Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D., & Polk, T. A. (2017) "Age-related declines in neural distinctiveness and GABA concentrations in auditory cortex". (*Annual Meeting of the Society for Neuroscience, Washington D.C.*)
18. Cassady, K., Gagnon, H., **Lalwani, P.**, Simmonite, Foerster, B., Park, D., Peltier, S.J., D. C., Petrou, Taylor, S. F., Weissman, D. H., Seidler, R. D., & Polk, T. A (2017) "Aging in the somatosensory system: Neural distinctiveness, GABA concentration and tactile function". (*Annual Meeting of the Society for Neuroscience, Washington D.C*)
19. Simmonite, M., Lövdén, M., **Lalwani, P.**, Chamberlain, J. D., & Polk, T.A. (2017) "Independent components of neural activation before and after 100 days of cognitive training." (*Annual Meeting of the Society for Neuroscience, Washington D.C*)

Co-curricular Activities

- 2019-2020* **Co-president** of Graduate Rackham International (**GRIN**),
University of Michigan.
- 2018-2019* **Co-chair** of Professional Development (**GRIN**),
University of Michigan.
- 2017-2018* **Co-chair** of Diversity, Equity and Inclusion **GRIN**,
University of Michigan.
- 2017-2018* **Co-president** of the Society for the Promotion of Indian Classical
Music and Culture Amongst Youth (**SPICMACAY**), University of
Michigan chapter
- 2017-2018* **Mentor** in GRIN mentorship program, University of Michigan
- 2016- 2018* **Mentor** for the Michigan Association of Psychological Scholars
(**MAPS**) program