

**Katharine N. Thakkar**  
Curriculum vitae

**CONTACT INFORMATION**

**Institutional mailing address** Michigan State University  
Department of Psychology  
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East Lansing, MI 48824

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**Telephone** +1 517 884 8489

**EDUCATION**

**2012** **Vanderbilt University**, Department of Psychology, Nashville, TN  
Ph.D. in Psychology  
Dissertation title: Inhibition and monitoring of saccadic eye movements in schizophrenia

**2004** **Boston University**, Boston, MA  
B.A. in Psychology  
B.A. in Mathematics

**PROFESSIONAL APPOINTMENTS**

**2021-present** **Michigan State University**  
Associate Professor of Psychology  
Secondary appointment in Psychiatry and Behavioral Medicine

**2015-2021** **Michigan State University**  
Assistant Professor of Psychology  
Secondary appointment in Psychiatry and Behavioral Medicine

**2012-2015** **Brain Center Rudolf Magnus, University Medical Center Utrecht**, Utrecht, Netherlands  
Post-doctoral fellow

**2011-2012** **University of California Los Angeles Semel Institute for Neuroscience**, Los Angeles, CA  
Pre-doctoral clinical intern  
Neuropsychology of exceptional abilities track

**PUBLICATIONS**

**Refereed Journal Articles** (\*indicates trainee author)

- 1) Migó, M., Guillory, S.B., McLaughlin, C.S., Isenstein, E.L., Grosman, H.E., **Thakkar, K.N.**, Castellanos, F.X., Foss-Feig, J.H. (in press) Investigating motor preparation in patients with ASD and ADHD. *Journal of Autism and Developmental Disorders*.
- 2) Lehet, M.\*, Tso, I.F., Neggers, S.F.W., Thompson, I.A., Yao, B.\*, Kahn, R.S., **Thakkar, K.N.** (2021) Altered effective connectivity within an oculomotor control network in individuals with schizophrenia. *Neuroimage: Clinical*, 31:102764.
- 3) Yao, B.\*, Rolfs, M., McLaughlin, C., Isenstein, E.L., Guillory, S.B., Grosman, H., Kashy, D.A., Foss-Feig, J.H., **Thakkar, K.N.** (2021) Corollary Discharge Signaling is related to Repetitive Behavior and Sensory Processing in Children with Autism Spectrum Disorder. *Journal of Vision*, 21: 9.
- 4) Dave, A.\*, Lehet, M.\*, Diwadkar, V.A., **Thakkar, K.N.** (2021) Ocular measures index efficiency in cognitive subprocesses of associative learning. *International Journal of Psychophysiology*, 166: 103-115.
- 5) Merritt, K., Aleman, A., Block, W., [et al, including **Thakkar, K.N.**] (2021) A mega-analysis of 1H-MRS brain glutamate levels in schizophrenia; investigating the effect of age, antipsychotic medication and symptom severity. *JAMA Psychiatry*, 78: 667-681.
- 6) Chopik, W. J., Oh, J., Nuttall, A. K., **Thakkar, K. N.**, Ingersoll, B. (2021). Age differences in Broader Autism Phenotype traits from young adulthood to older adulthood. *Autism Research*, 14: 1456-1471.

- 7) **Thakkar, K.N.**, Mathalon, D.H., Ford, J.M. (2021) Reconciling competing mechanisms posited to underlie auditory verbal hallucinations. *Philosophical Transactions of the Royal Society B*, 376:20190702.
- 8) **Thakkar, K.N.**, Ghermezi, L.\*, Slate, R.\*, Yao, B.\*, Silverstein, S.M., Achtyes, E.D., Brascamp, J.W. (2021) Stronger tilt aftereffects in persons with schizophrenia. *Journal of Abnormal Psychology*, 130(2):186-197.
- 9) Tso, I.F., Lasagna, C.A., Fitzgerald, K.D., Colombi, C. Sripada, C.S., Peltier, S., Johnson, T.D., **Thakkar, K.N.** (2020) Disrupted eye gaze perception as a biobehavioral marker of social dysfunction: An RDoC investigation. *Journal of Psychiatry and Brain Science*, 5: e200021.
- 10) Yao, B.\*, Neggers, S.F.W., Kahn, R.S., **Thakkar, K.N.** (2020) Altered thalamocortical structural connectivity in persons with schizophrenia and unaffected siblings. *Neuroimage: Clinical*, 28: 102370.
- 11) Robison, A.J., **Thakkar, K.N.**, Diwadkar, V. (2020) Cognition and reward circuits in schizophrenia: synergistic, not separate. *Biological Psychiatry*, 87, 204-214.
- 12) **Thakkar, K.N.**, Antinori, A., Carter, O., Brascamp, J.W. (2019) Altered short-term synaptic plasticity related to schizotypal traits: evidence from visual adaptation. *Schizophrenia Research*, 207: 48-57.
- 13) **Thakkar, K.N.**, Rolfs, M. (2019) Disrupted corollary discharge in schizophrenia: evidence from the oculomotor system. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4, 773-781.
- 14) Nuttall, A.K., **Thakkar, K.N.**, Luo, X.\*, Mueser, K.T., Glynn, S.M., Achtyes, E.D., Kane, J.M. (2019) Longitudinal associations of family burden and patient quality of life in the context of first-episode schizophrenia in the RAISE-ETP study. *Psychiatry Research*, 276: 60-68.
- 15) **Thakkar, K.N.**, Silverstein, S.M., Brascamp, J.W. (2019) A review of visual aftereffects in schizophrenia. *Neuroscience and Biobehavioral Reviews*, 101: 68-77.
- 16) Verbruggen, F., Aron, A. R., Band, G., [et al, including **Thakkar, K.N.**] (2019) Capturing the ability to inhibit actions and impulsive behaviors: A consensus guide to the stop-signal task. *eLife*:8:e46323.
- 17) Yao, B.\*, Neggers, S.F.W., Rolfs, M., Rösler, L., Thompson, I.A., Hopman, H.J., Ghermezi, L., Kahn, R.S., **Thakkar, K.N.** (2019) Structural thalamo-frontal hypoconnectivity is related to oculomotor corollary discharge in schizophrenia. *Journal of Neuroscience*, 39: 2102: 2113.
- 18) **Thakkar, K.N.**, Brascamp, J.W., Ghermezi, L.\*, Fifer, K.\*, Schall, J.D., Park, S. (2018) Reduced pupil dilation during action preparation in schizophrenia. *International Journal of Psychophysiology*, 128: 111-118.
- 19) Yao, B.\*, Mueller, S., Grove, T., McLaughlin, M., **Thakkar, K.N.**, Ringold, V., McInnis, M., Taylor, S., Deldin, P., Tso, I. (2018) Eye Gaze Perception in Bipolar Disorder: Self-referential Bias but Intact Perceptual Sensitivity. *Bipolar Disorders*, 20: 60-69.
- 20) **Thakkar, K.N.**, Diwadkar, V., Rolfs, M. (2017) Oculomotor prediction: a window into the psychotic mind. *Trends in Cognitive Sciences*, 21:344-356.
- 21) **Thakkar, K.N.**, Rösler, L.\*, Wijnen, J.P., Boer, V.O., Klomp, D.W.J., Cahn, W., Kahn, R.S., Neggers, S.F.W. (2017) 7T proton magnetic resonance spectroscopy of GABA, glutamate, and glutamine in schizophrenia reveals altered metabolite concentrations in patients and unaffected relatives. *Biological Psychiatry*, 81:525-535.
- 22) \*Zerr, P., **Thakkar, K.N.**, Uzunbajakau, S., Van der Stigchel, S. (2016) Error compensation in random vector double step saccades with and without global adaptation. *Vision Research*, 127:141-151.
- 23) **Thakkar, K.N.**, \*van den Heiligenberg, F.M.Z., Kahn, R.S., Neggers, S.F.W. (2016) Cortico-striatal white matter structure predicts latencies of saccade execution and redirection. *Human Brain Mapping*, 37: 2811-2822.
- 24) \*Asscheman, S.J., **Thakkar, K.N.**, Neggers, S.F.W. (2016) Changes in effective connectivity of the superior parietal lobe during inhibition and redirection of eye movements. *Journal of Experimental Neuroscience*, 9(Suppl 1): 27-40.
- 25) **Thakkar, K.N.**, Schall, J.D., Heckers, S., Park, S. (2015) Disrupted saccadic corollary discharge in schizophrenia. *Journal of Neuroscience*, 35(27): 9935-9945.
- 26) \*Rösler, L., Rolfs, M., van der Stigchel, S., Neggers, S.F.W., Cahn, W., Kahn, R.S, **Thakkar, K.N.** (2015) Failure to use corollary discharge to remap visual target locations is associated with psychotic symptom severity in schizophrenia. *Journal of Neurophysiology*, 114: 1129-1136.
- 27) **Thakkar, K.N.**, Schall, J.D., Logan, G.D., Park, S. (2015) Response inhibition and response monitoring in a saccadic double-step task in schizophrenia. *Brain and Cognition*, 95: 90-98.
- 28) **Thakkar, K.N.**, Schall, J.D., Logan, G.D., Park, S. (2015) Cognitive control of gaze in bipolar disorder and schizophrenia. *Psychiatry Research*, 225: 254-262.
- 29) **Thakkar, K.N.**, \*van den Heiligenberg, F. Kahn, R.S., Neggers, S.F.W. (2014) Fronto-striatal contributions to reactive control of gaze. *Journal of Neuroscience*, 34(26): 8918-8929.
- 30) **Thakkar, K.N.**, Peterman, J.S., Park, S. (2014) Altered brain activation during action imitation and observation in schizophrenia: a translational approach for studying social dysfunction. *American Journal of Psychiatry*, 171(5): 539-548.
- 31) **Thakkar, K.N.**, Congdon, E., Poldrack, R.A., Sabb, F.W., London, E.D., Cannon, T.D., Bilder, R.M. (2014) Women are more sensitive than men to prior trial events on the stop signal task. *British Journal of Psychology*, 105(2):254-72.
- 32) Matthews, N., Collins, K., **Thakkar, K.N.**, Park, S. (2014) Visuospatial imagery and working memory in

schizophrenia. *Cognitive Neuropsychiatry*, 19(1): 17-35.

- 33) **Thakkar, K.N.**, Park, S. (2012) Impaired passive maintenance and spared manipulation of internal representations in patients with schizophrenia. *Schizophrenia Bulletin*, 38(4): 787-795.
- 34) **Thakkar, K.N.**, Nichols, H.S., McIntosh, L.G., Park, S. (2011) Disturbances in body ownership in patients with schizophrenia: evidence from the rubber hand illusion and case study of a spontaneous out-of-body experience. *PLoS ONE*, 6(10): e27089.
- 35) Roffman, J.L., Brohawn, D.G., Friedman, J.S., Dyckman, K.A., **Thakkar, K.N.**, Agam, Y., Vangel, M.G., Goff, D.C., Manoach, D.S. (2011) MTHFR 677C>T effects on anterior cingulate structure and function during response monitoring in schizophrenia: a preliminary study. *Brain Imaging and Behavior*, 5(1): 65-75.
- 36) **Thakkar, K.N.**, Schall, J.D., Boucher, L., Logan, G.D., Park, S. (2011) Response inhibition and response monitoring in a saccadic countermanding task in schizophrenia. *Biological Psychiatry*, 69: 55-62.
- 37) **Thakkar, K.N.**, & Park, S. (2010) Empathy, schizotypy, and spatial transformations. *Cognitive Neuropsychiatry*, 15: 477-500.
- 38) Manoach, D.S., **Thakkar, K.N.**, Stroynowski, E., Ely, A., McKinley, S.K., Djonlagic, I., Vangel, M.G., Goff, D.C., Stickgold, R.S. (2010). Reduced overnight consolidation of procedural learning in chronic medicated schizophrenia is related to specific sleep stages. *Journal of Psychiatric Research*, 44: 112-120.
- 39) **Thakkar, K.N.**, Brugger, P., Park, S. (2009). Exploring empathic space: correlates of perspective transformation ability and biases in spatial attention. *PLoS ONE*, 4(6):e5864.
- 40) **Thakkar, K.N.**, Polli, F.E., Joseph, R.M., Tuch, D.S., Hadjikhani, N., Barton, J.J.S., Manoach, D.S. (2008) Abnormal response monitoring, repetitive behavior, and decreased microstructural integrity of white matter underlying anterior cingulate cortex in autism spectrum disorders. *Brain*, 131: 2464-78.
- 41) Polli, F.E., Barton, J.J.S., Thakkar, K.N., Cain, M.S., Goff, D.C., Rauch, S.L., Manoach, D.S. (2008) Reduced error-related activation in two anterior cingulate circuits is related to impaired performance in schizophrenia. *Brain*, 131(4): 971-86.
- 42) Barton, J.J.S., Pandita, M., **Thakkar, K.N.**, Goff, D.C., Manoach, D.S. (2008) The relation between antisaccade errors, fixation stability and prosaccade errors in schizophrenia. *Experimental Brain Research*, 186(2):273-82.
- 43) Manoach, D.S., Ketwaroo, G.A., Polli, F.E., **Thakkar, K.N.**, Barton, J.J.S., Goff, D.C., Vangel, M., Tuch, D.S. (2007). The association of reduced microstructural integrity of the anterior cingulum bundle is associated with increased saccadic latency in schizophrenia. *Neuroimage*, 37(2):599-610.
- 44) Manoach, D.S., **Thakkar, K.N.**, Cain, M.S., Polli, F.E., Edelman, J., Barton, J.J.S. (2007). Neural activity is modulated by trial history: An fMRI study of the effects of a prior antisaccade. *Journal of Neuroscience*, 27(7): 1791-1798.
- 45) Polli, F.E., Barton, J.J.S., Cain, M.S., **Thakkar, K.N.**, Rauch, S.L., Manoach, D.S (2005). Rostral and dorsal anterior cingulate cortex make dissociable contributions during antisaccade error commission. *Proceedings of the National Academy of Sciences*, 102(43): 15700-5.

## Commentaries

- 1) Park, S. & **Thakkar, K.N.** (2010) "Splitting of the mind" revisited: recent neuroimaging evidence for functional dysconnection in schizophrenia. *American Journal of Psychiatry*, 167: 366-368.
- 2) **Thakkar, K.N.**, Matthews, N., Park, S. (2008) A complete theory of psychosis and autism as diametric disorders of the social brain must consider full range of clinical syndromes. *Behavioral and Brain Sciences*, 31(3): 277-278.

## HONORS AND AWARDS

2021	<b>Rising Star Award</b> Schizophrenia International Research Society
2020	<b>Rising Star Award</b> Michigan State University College of Social Science
2018	<b>Face of the Future</b> Society for Research in Psychopathology
2013	<b>Young Investigator Award</b> International Congress on Schizophrenia Research
2012	<b>Short-stay Fellowship</b> Utrecht University <i>Awarded to conduct research at Utrecht University</i>
2012	<b>Jum Nunnally Dissertation Award</b>

- 2010 Vanderbilt University  
**Department of Psychology Scientific Development Award**  
Vanderbilt University  
*\$5000 award for achievement in graduate research*
- 2010 Vanderbilt University  
**Pat Burns Memorial Graduate Student Research Award**  
Vanderbilt University  
*\$500 award for achievement in graduate research*
- 2008 Vanderbilt University  
**Kennedy Center Travel Award**
- 2008 National Institute of Health and Vanderbilt University (T32 MH018921-21A1)  
**Developmental Psychopathology Pre-doctoral Trainee**
- 2008 National Science Foundation  
**Honorable Mention, Graduate Research Fellowship**
- 2007 Vanderbilt University  
**Runner Up, Law and Neuroscience Research Prize**  
*For research proposal investigating issues at the intersection of law and neuroscience*
- 2007 Embassy of Switzerland, Office of Science, Technology and Higher Education  
**ThinkSwiss Pre-doctoral Research Scholarship**  
*Awarded to conduct research at a Swiss University*
- 2006 Vanderbilt University  
**University Fellowship**  
*Awarded to students in the incoming Vanderbilt University Ph.D. class.*
- 2000 Boston University  
**University Scholarship**  
*Half-tuition scholarship to incoming undergraduate students at Boston University*

## GRANTS

### Submitted

NIMH, R01: "Hormonal Mechanisms of Perimenopausal Risk for Psychosis in Women"; MPI.

### Current

NIMH, R01: "Visual perception as a window into prediction anomalies in schizophrenia"; PI; \$2,266,377 (total costs); 4/1/2021-1/31/2026.

NIMH, R01: "Disrupted eye gaze perception as a biobehavioral marker of social dysfunction: An RDoC investigation"; Co-I (PI: Tso); 5/1/2020-3/31/2025.

NIMH, R01: "Uncovering pathophysiological mechanisms of psychosis using the oculomotor system"; PI; \$1,542,887 (total costs); 9/1/2017-8/31/2021.

### Past

NIMH, R21: "Sensory consequences of action in children with autism spectrum disorders"; Co-PI (with Jennifer Foss-Feig); \$471,529 (total costs); 9/14/2017-7/31/2020

Brain and Behavior Foundation, NARSAD Young Investigator Award: "Corollary discharge disturbances in schizophrenia: investigating the role of the thalamus"; PI; \$70,000; 1/15/2016-1/15/2018.

Michigan State University College of Social Sciences, Provost Undergraduate Research Initiative (PURI) Award: "Predicting the future: understanding attention abnormalities in schizophrenia"; Mentor (Recipient: Han Wang); \$2,000; 9/15/2017-5/15/2018.

Michigan State University College of Social Sciences, Provost Undergraduate Research Initiative (PURI) Award: "Associative learning: evaluating the role of eye movements"; Mentor (Recipient: Aakash Dave); \$1,500; 5/15/2017-8/15/2017.

Michigan State University College of Social Sciences, Faculty Initiatives Fund award: "Assessing prediction failures in the visual system of individuals with schizophrenia"; co-PI (with Jan Brascamp); \$7,000; 8/31/2016-8/30/2017.

Netherlands Organisation for Scientific Research, Rubicon Grant: "Fronto-striatal contributions to the control of action in schizophrenia"; PI; €118,000; 11/1/2012-10/13/2014.

NIMH, Pre-doctoral NRSA: "Control of action in schizophrenia: countermanding saccades and ERPs"; PI; \$77,619; 1/1/2009-6/30/2012.

## INVITED TALKS

- Nov 2020** **EPICENTER Psychosis Speaker Series**  
How expectations and experience shape visual perception in the schizophrenia spectrum
- July 2019** **Gordon Research Conference on Eye Movements, Lewiston, ME**  
Eye Movements in Psychiatry and Neurology, *Discussion leader*
- April 2018** **Rutgers-Princeton Center for Computational Cognitive Neuro-Psychiatry**  
Visuomotor Prediction Abnormalities in the Schizophrenia Spectrum
- January 2018** **Purdue University, Department of Psychology**  
Prediction failures in schizophrenia: evidence from the oculomotor system
- May 2017** **Mount Sinai, Icahn School of Medicine**  
Experimental evidence for self-disturbances in the schizophrenia spectrum
- January 2017** **Wayne State University, School of Medicine**  
Prediction failures in schizophrenia: evidence from the oculomotor system
- Sept. 2015** **University of Michigan, Department of Psychology**  
Understanding agency abnormalities in schizophrenia: what can eye movements tell us?
- March 2014** **Erwin L. Hahn Spectroscopy Workshop 2014, Essen, Germany**  
Striatal levels of GABA and glutamate in schizophrenia patients and their healthy relatives
- April 2014** **Neural Control of Movement, Amsterdam, the Netherlands**  
Cortico-striatal contributions to saccade inhibition and reprogramming
- June 2013** **Gordon Research Conference on Eye Movements, Stonehill, MA**  
Cortico-striatal contributions to saccade inhibition and reprogramming
- July 2010** **University Medical Center Utrecht, Utrecht, Netherlands**  
Response inhibition and response monitoring of saccades in a countermanding task in Schizophrenia

## SERVICE AND PROFESSIONAL ACTIVITIES

### Professional Credentials

Licensed Psychologist, State of Michigan, 2020 - present

### Professional Service: Editorial Work

2017-present Review Editor, Frontiers in Psychiatry, Neuroimaging and Neurostimulation Section

### Professional Service: Grant Review

2017 Medical Research Council (ad hoc)

### Professional Service: Ad-hoc Reviewing

Acta Neurobiologiae Experimentalis, Acta Psychologica, American Journal of Psychiatry, Annals of the New York Academy of Sciences, Archives of General Psychiatry, Biological Psychiatry, Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, Biological Psychology, Brain and Cognition, Brain Imaging and Behavior, Cerebral Cortex, Cognitive Neuropsychiatry, Cognitive Science, Comprehensive Psychiatry, Developmental Cognitive Neuroscience, Experimental Brain Research, Frontiers in Psychiatry, JAMA Psychiatry, Journal of Abnormal Psychology, Journal of Cognitive Neuroscience, Journal of Neurophysiology, Journal of Neuroscience, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of the International Neuropsychological Society, Neuropsychologia, Neuropsychology, Neuropsychopharmacology, NPJ Schizophrenia, PLoS ONE, Progress in Neuropharmacology and Biological Psychiatry, Psychiatry Research, Psychological Medicine, Psychoneuroendocrinology, Psychopharmacology, Psychophysiology, Schizophrenia Bulletin, Schizophrenia Research, Trends in Cognitive Sciences, Vision Research

Katharine N. Thakkar-page 5 of 10

August 20, 2021

### Professional Service: Other

- 2019 Society for Research in Psychopathology, Program Committee
- 2019 Society for Research in Psychopathology, Smadar Levin Award Committee
- 2020 Society for Research in Psychopathology, Diversity Committee

### Department and University Service

- 2021-current Advisory Committee, Michigan State University, Dept. of Psychology
- 2015-2020 Clinical Science Forum Committee, Michigan State University, Dept. of Psychology, Clinical Area Group
- 2018-2019 Graduate Admissions Committee, Michigan State University, Dept. of Psychology, Clinical Area Group
- 2018-2020 Website Committee, Michigan State University, Dept. of Psychology, Clinical Area Group
- 2019-2021 Graduate Admissions Committee, Neuroscience Program
- 2019 Colloquium Committee, Michigan State University, Dept. of Psychology

### MENTORSHIP

#### Graduate Students

- 2016-2018 Livon Ghermezi
- 2016-current Beier Yao
- 2019-current Dominic Roberts

#### Post-doctoral Fellows

- 2019-current Matthew Lehet

### CONFERENCE PRESENTATIONS (\*indicates trainee author)

- 1) Lehet, M.\*, Tso, I.F., Neggers, S.F.W., Thompson, I.A.\*, Yao, B.\*, Kahn, R.S., Thakkar, K.N. (2021, April) Altered effective connectivity within an oculomotor control network in individuals with schizophrenia. Poster presented at the annual meeting of the Schizophrenia International Research Society, Virtual Conference.
- 2) Yao, B.\*, Rolfs, M., Slate, R.\*, Fragoso, D., Achtyes, E. D., Tso, I. F., Diwadkar, V. A., Kashy, D. A., & Thakkar, K. N. (2021, April). Oculomotor corollary discharge abnormalities: a trans-diagnostic marker of psychosis? Poster presented at the 2021 Congress of the Schizophrenia International Research Society (SIRS), online.
- 3) Fattal, J.\*, Slate, R.\*, Achtyes, E.D. Lehet, M.\*, Brascamp, J.W. & Thakkar, K.N. (2021, April) Abnormal pupil light reflex relates to negative symptom severity and working memory in schizophrenia. Poster presented at the annual meeting of the Schizophrenia International Research Society, Virtual.
- 4) Achtyes, E.D., Kempema, K., Luo, Thakkar, K.N., Adams, C., D'Mello, D., Stilwell, K., Tran, D., Marcy, P., Mueser, K., Schooler, N.R., Robinson, D.G., Kane, J.M. (2020, November) Implementation of NAVIGATE Coordinated Specialty Care for First Episode Psychosis: the Michigan Experience. Poster presented at the Neuroscience Education Institute Congress, Virtual Conference.
- 5) Thakkar, K.N., Ghermezi, L.\*, Slate, R.\*, Silverstein, S.M., Brascamp, J.W. (2020, April) Visual aftereffects in schizophrenia. Symposium talk at the annual meeting of the Society for Biological Psychiatry, New York, NY, USA. (Conference canceled)
- 6) Lehet, M.\*, Yao, B.\*, Tso, I.F., Kahn, R.S., Neggers, S.F.W., Thakkar, K.N. (2020, April) Compromised neural circuit dynamics underlying impaired control of eye movements in schizophrenia. Poster presentation at the annual meeting of the Society for Biological Psychiatry, New York, NY, USA. (Conference canceled)
- 7) Fattal, J.\*, Brascamp, J.W., Slate, R.\*, Lehet, M.\*, Achtyes, E., Thakkar, K.N. (2020, April) Abnormal pupil light reflex relates to negative symptom severity in schizophrenia. Poster presentation at the annual meeting of the Society for Biological Psychiatry, New York, NY, USA. (Conference canceled)
- 8) Yao, B.\*, McLaughlin, C., Isenstein, E. L., Guillory, S. B., Grosman, H., Rolfs, M., Foss-Feig, J. H., & Thakkar, K. N. (2020, April). Corollary discharge signaling and repetitive behavior in children with autism spectrum disorder. Talk presented online at the annual meeting of the Society for Biological Psychiatry, New York, NY, USA.
- 9) Roberts, D.\*, Rösler, L.\*, Wijnen, J.P., Boer, V.O., Klomp, D.W.J., Cahn, W., Kahn, R.S., Neggers, S.F.W., Thakkar, K.N. (2020, April) Exploring the Relationship between N-Acetylaspartate and White Matter Integrity in Individuals with Schizophrenia and Unaffected relatives: A Combined 1H MRS-DTI Approach.
- 10) Thakkar, K.N., Ghermezi, L.\*, Slate, R.\*, Brascamp, J.W. (2019, September) Visual aftereffects in schizophrenia. Talk presented at the annual meeting of the Society for Research in Psychopathology, Buffalo, NY, USA.

- 11) Yao, B. \*, McLaughlin, C., Isenstein, E. L., Grosman, H., Guillory, S. B., Layton, C. F., Falade, I., Rolfs, M., Foss-Feig, J. H., & Thakkar, K. N. (2019, May). Clinical correlates of corollary discharge signaling in children with autism spectrum disorder. Poster presented at the 2019 International Society for Autism Research Annual Meeting, Montreal, Canada.
- 12) Yao, B. \*, Rolfs, M., Slate, R., Achtyes, E.A., Tso, I., Diwadkar, V.A., Kashy, D., Thakkar, K.N. (2019, September) Altered saccadic corollary discharge: specific to schizophrenia or a transdiagnostic deficit? Poster presented at the annual meeting of the Society for Research in Psychopathology, Buffalo, NY, USA.
- 13) Yao, B. \*, Neggers, S.F.W., Kahn, R.S., Thakkar, K.N. (2018, September) Thalamo-cortical structural connectivity in schizophrenia patients and healthy siblings. Poster presented at the annual meeting of the Society for Research in Psychopathology, Indianapolis, IN, USA.
- 14) Slate, R.O.\*, Ghermezi, L.\*, Thakkar, K.N. (2018, September) The pupil light reflex as a function of schizotypal traits. Poster presented at the annual meeting of the Society for Research in Psychopathology, Indianapolis, IN, USA.
- 15) Thakkar, K.N. Yao, B.\* (2018, September) Predicting the sensory consequences of action in schizophrenia: a role for thalamo-cortical connections. Symposium talk presented at the annual meeting of the Society for Research in Psychopathology (role: speaker), Indianapolis, IN, USA.
- 16) Thakkar, K.N., Rolfs, M., Brascamp, J.W., Rösler, L.\*, Schall, J.D., Park, S. (2017, September) Visuomotor prediction abnormalities in the schizophrenia spectrum. Symposium talk presented at the annual meeting of the Society for Research in Psychopathology (role: Chair), Denver, CO, USA.
- 17) Ghermezi, L.\*, Neggers, S.F.W., Kahn, R.S., Cahn, W., Van der Stigchel, S., Hopman, H.J., Thompson, I.A., Thakkar, K.N. (2017, September) The role of ventral attention network integrity on reactive inhibition in schizophrenia. Poster presented at the annual meeting of the Society for Research in Psychopathology, Denver, CO, USA.
- 18) Yao, B. \*, Rösler, L., Rolfs, M., Neggers, S.F.W., Thakkar, K.N. (2017, September) Neural underpinning of altered corollary discharge in schizophrenia. Poster presented at the annual meeting of the Society for Research in Psychopathology, Denver, CO, USA.
- 19) Thakkar, K.N. (2017, March) Prediction failures in the oculomotor system of schizophrenia patients. Talk presented at the annual meeting of the International Congress on Schizophrenia Research, San Diego, CA, USA.
- 20) Chopik, W.J., Nuttall, A.K., Thakkar, K.N. (2017, May) Age Differences in the Broader Autism Phenotype. Poster presented at the American Psychological Society Annual Convention, Boston, MA, USA.
- 21) Thakkar, K.N., \*Rösler, L., Wijnen, J.P., Boer, V.O., Klomp, D.W.J., Cahn, W., Kahn, R.S., Neggers, S.F.W. (2015, October) 7T proton magnetic resonance spectroscopy of GABA, glutamate, and glutamine in schizophrenia reveals altered metabolite concentrations in patients and unaffected siblings. Talk presented at the annual meeting of the Society for Neuroscience, Chicago, Illinois, USA.
- 22) Thakkar, K.N., Peterman, J.S., Park, S. (2015, October) Schizotypy in the flesh: self-disturbances in the schizophrenia spectrum. Talk presented at the annual meeting of the Society for Research in Psychopathology, New Orleans, Louisiana, USA.
- 23) Thakkar, K.N., \*Thompson, I.A., \*Hopman, H.J., Van der Stigchel, S., Cahn, W., Kahn, R.S., Neggers, S.F.W. (2015, October) Behavioral and neural correlates of reactive inhibition of gaze in schizophrenia patients and first-degree relatives. Poster presented at the annual meeting of the Society for Research in Psychopathology, New Orleans, Louisiana, USA.
- 24) \*Zerr, P., Thakkar, K.N., van der Stigchel, S. (2015, August) Perceptual memory can bias subsequent saccades after natural but not induced systematic endpoint errors. Poster presented at the European Conference on Eye Movements, Vienna, Austria.
- 25) Thakkar, K.N., \*Rösler, L., Wijnen, J., Klomp, D.W.J, Boer, V.O., Cahn, W., Kahn, R.S., Neggers, S.F.W. (2015, March) Glutamine, glutamate, and GABA concentrations in the striatum and visual cortex of schizophrenia patients and healthy first-degree relatives: a <sup>1</sup>H-MRS study at 7T. Poster presented at the annual meeting of the International Congress on Schizophrenia Research, Colorado Springs, CO.
- 26) Thakkar, K.N., Park, S. (2015, March) Flexible representation of the body in schizophrenia. Workshop talk presented at the annual meeting of the International Congress on Schizophrenia Research, Colorado Springs, CO.
- 27) \*van den Heiligenberg, F.M.Z., Thakkar, K.N., Kahn, R.S., Neggers, S.F.W. (2014, June) Cortico-striatal white matter structure predicts latencies of saccade execution and redirection. Poster presented at the annual meeting of the Organization of Human Brain Mapping.
- 28) Thakkar, K.N., \*van den Heiligenberg, F. Kahn, R.S., Neggers, S.F.W. (2014, June). Fronto-striatal contributions to reactive control of gaze. Poster presented at the annual meeting of the Organization for Human Brain Mapping, Hamburg, Germany.
- 29) Haarsma, J., Wijnen, J.P., Thakkar, K.N., Klomp, D.W.J, Neggers, S.F.W. (2014, May). Ultra high-field MR spectroscopy of the striatum in the human brain: On the relation between striatal metabolites and performance on

a search-step task. Poster presented at the annual meeting of the International Society for Magnetic Resonance in Medicine, Milano, Italy.

- 30) Thakkar, K.N., Schall, J.D., Logan, G.D., Park, S. (2013, April). Inhibition and monitoring of saccades in a double-step task in schizophrenia. Talk presented at the annual meeting of the International Congress on Schizophrenia Research, Orlando, FL.
- 31) Thakkar, K.N., Schall, J.D., Heckers, S., Park, S. (2013, April). Altered corollary discharge in the saccadic eye movement system of patients with schizophrenia. Poster presented at the annual meeting of the International Congress on Schizophrenia Research, Orlando, FL.
- 32) Thakkar, K.N., Nichols, H.S., McIntosh, L.G., Cochran, C., Park, S. (2011, April). Disturbed sense of body ownership in schizophrenia. Poster presented at the annual meeting of the International Congress on Schizophrenia Research, Colorado Springs, CO.
- 33) Thakkar, K.N., Peterman, J.S., Nichols, H.S., Matthews, N., Park, S. (2010, October). Abnormal cortical activation during action imitation in schizophrenia. Poster presented at the annual meeting of the Society for Research in Psychopathology, Seattle, WA.
- 34) Peterman, J.S., Thakkar, K.N., Nichols, H.S., Park, S. (2010, October). Gender differences in cortical activity during action imitation in healthy individuals. Poster presented at the annual meeting of the Society for Research in Psychopathology, Seattle, WA.
- 35) Thakkar, K.N., Schall, J.D., Boucher, L., Logan, G., Park, S. (April 2009) Response inhibition and response monitoring of saccades in a stop signal task in schizophrenia and bipolar disorder. International Congress on Schizophrenia Research, San Diego, CA.
- 36) Thakkar, K.N., Schall, J.D., Boucher, L., Logan, G., Park, S. (November 2008) Response inhibition and response monitoring of saccades in a stop signal task in schizophrenia. Society for Neuroscience, Washington, DC.
- 37) Thakkar, K.N., Park, S. (2008) Evidence for intact manipulation of internal representations during mental rotation in schizophrenia. Schizophrenia International Research Society Conference, Venice.
- 38) Thakkar KN, Brugger P, Park S. (2007) The relationship between visuospatial perspective-taking and empathy: implications for schizophrenia and autism. Vanderbilt Kennedy Center Science Day, Nashville, TN.
- 39) Ono, K., Thakkar, K. N., Stroynowski, E., Djonlajic, I., Vangel, M.G., Goff, D.C., Stickgold, R., Manoach, D.S. (2007) Deficient sleep- and time- dependent consolidation of motor learning in chronic, medicated schizophrenia. Harvard Psychiatry Day, Boston.
- 40) Roffman, J.L., Weiss, A.P., Purcell, S., Freudenreich, O., Henderson, D.C., Wong, D.H., Thakkar, K.N., Halstead, C.H., Manoach, D.S., Goff, D.C. (2006) Interactive effects of methylenetetrahydrofolate reductase polymorphisms and serum folate status on negative symptoms of schizophrenia. Society for Biological Psychiatry, Toronto.
- 41) Thakkar, K.N., Polli, F.E., Barton, J.J.S., Cain, M.S., Joseph, R.M., Hadjikhani, N., & Manoach, D.S. (2005) Abnormal anterior cingulate activity during error processing in autism spectrum disorder. Society for Neuroscience, Washington, DC.
- 42) Manoach, D.S., Cain, M.S., Thakkar, K.N., Polli, F.E., Barton, J.J.S. (2005) An fMRI study of the inter-trial effects of antisaccades. Society for Neuroscience, Washington, DC.
- 43) Polli, F.E., Cain, M.S., Thakkar, K.N., Barton, J.J.S., Manoach, D.S. (2005) Intact task-induced deactivation but decreased performance evaluation during antisaccade errors in schizophrenia. Society for Neuroscience, Washington, DC.
- 44) Tuch, D.S., Ketwaroo, G.A., Cain, M.S., Sauder, C.L., Thakkar, K.N., Polli, F.E., Barton, J.J.S., D.S. (2005) Mapping the neural circuitry of antisaccade performance using DTI. ISMRM, Miami Beach, FL.
- 45) Polli, F.E., Barton, J.J.S., Cain, M.S., Thakkar, K.N., Rauch, S.L., Manoach, D.S. (2005) Failure to deactivate the 'default mode' network during error commission: A neural model for affective inference of cognition? Massachusetts General Hospital Clinical Research Day, Boston, MA.
- 46) Polli, F.E., Cain, M.S., Thakkar, K.N., Gallagher, G., Sauder, C., Hamalainen, M.S., Barton, J.J.S., Manoach, D.S. (2005) Magnetoencephalography (MEG) complements functional magnetic resonance imaging (fMRI) to elucidate the role of anterior cingulate cortex in error detection. Massachusetts Neuropsychological Society, Boston, MA.

## DEPARTMENTAL TALKS

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|-------------|--|
| <b>2017</b> | <b>Michigan State University Cognition and Cognitive Neuroscience Seminar</b><br>Prediction failures in schizophrenia: evidence from the oculomotor system               |
| <b>2016</b> | <b>Michigan State University Neuroscience Program Seminar</b> , East Lansing, MI<br>Understanding agency abnormalities in schizophrenia: what can eye movements tell us? |
| <b>2015</b> | <b>Michigan State University Clinical Seminar</b> , East Lansing, MI<br>Understanding agency abnormalities in schizophrenia: what can eye movements tell us?             |
| <b>2010</b> | <b>Vanderbilt University Clinical Seminar</b> , Nashville, TN<br>Disturbance in body ownership in schizophrenia: evidence from the rubber hand illusion                  |

- 2010**            **Vanderbilt University Psychiatric Neuroimaging Seminar**, Nashville, TN  
Imitation impairment in schizophrenia: evidence from behavioral and fMRI studies and implication for social dysfunction
- 2008**            **Vanderbilt University Clinical Seminar**, Nashville, TN  
Indices of response inhibition and response monitoring in schizophrenia from countermanding saccades

## CLINICAL EXPERIENCE

- 2021-**            **Comprehensive Psychological Services**, East Lansing, MI  
Neuropsychologist
- 2017-2019**      **Michigan State University Psychological Clinic**, East Lansing, MI  
Post-doctoral clinician (Supervisor: Keith Ostien, Ph.D.)
- 2011-2012**      **UCLA Medical Psychological Assessment Center**, Los Angeles, CA  
Pre-doctoral intern (multiple supervisors)  
*Inpatient and outpatient neuropsychological and psychological assessment*
- 2011-2012**      **UCLA Aftercare Program**, Los Angeles, CA  
Pre-doctoral intern (Supervisor: Keith Nuechterlein, Ph.D.)  
*Outpatient individual and group therapy for first-episode schizophrenia patients*
- 2010-2011**      **Vanderbilt University Department of Neurology and Neurosurgery**, Nashville, TN  
Neuropsychology practicum student (Supervisor: Bradley Folley, Ph.D.)
- 2009-2010**      **Behavioral Health and Intellectual Disabilities Clinic at Vanderbilt**, Nashville, TN  
Psychotherapy practicum student (Supervisor: Bruce Davis, Ph.D.)
- 2008-2009**      **Private practice**, Nashville, TN  
Neuropsychology practicum student (Supervisor: Mark Phillips, Ph.D.)
- 2003**            **Northgate Clinic**, London, UK  
Undergraduate Psychotherapy Intern (Supervisor: Freddy Gainza, Ph.D.)

## COURSES TAUGHT

- Fall 2019**            Social, Cognitive, and Affective Neuroscience, Michigan State University
- Fall 2015, 2017, 2021**    Cognitive and Neuropsychological Assessment, Michigan State University
- Spring 2016,2017**      Research Design and Measurement in Psychological Research, Michigan State University

## RESEARCH AND TRAINING EXPERIENCE

- 2007**            **UCLA Advanced Neuroimaging Summer School**, Los Angeles, CA
- 2007**            **University Hospital Zurich**, Zurich, Switzerland  
Visiting pre-doctoral researcher (Supervisor: Peter Brugger, Ph.D.)
- 2004-2006**      **Massachusetts General Hospital, Harvard Medical School**, Boston, MA  
Research Assistant (Supervisor: Dara Manoach, Ph.D.)
- 2003-2004**      **Danielsen Institute, Boston University**, Boston, MA  
Research Assistant (Supervisor: Brian McCorkle, Ph.D.)
- 2004**            **Center for Anxiety and Related Disorders at Boston University**, Boston, MA  
Research Volunteer

## OTHER TEACHING EXPERIENCE

- 2013**            **Guest lecturer, University of Utrecht**  
Response Selection (Master's level course)
- 2012**            **Guest lecturer, Vanderbilt University**  
Schizophrenia (Bachelor's level course)
- 2008**            **Teaching assistant, Vanderbilt University**  
Personality Psychology (Bachelor's level course)
- 2007**            **Teaching assistant, Vanderbilt University**

**MEDIA COVERAGE OF RESEARCH**

- 1) "MSU scientists open window into psychosis." *MSU Today* (online), January 2018.
- 2) "Study uncovers clue to deciphering schizophrenia." *MSU Today* (online), June 2016.
- 3) "Brain's Indiana Joneses search for empathy." *Pacific Standard* (online), August 2009.
- 4) "Man with schizophrenia has out-of-body experience in lab, gains knowledge, controls his psychosis." *Discover Magazine Blogs* (online), October 2011.
- 5) "Gummihand-Illusion: Schizophrene nehmen Körper schwächer wahr." *Spiegel Online*, November 2011.