

Jared A Nielsen PhD

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ACADEMIC APPOINTMENT

2018 – present **Assistant Professor, Department of Psychology and Neuroscience Center**
Brigham Young University, Provo, UT

EDUCATION & TRAINING

2014 – 2018 **Postdoctoral Fellow, Departments of Psychiatry and Psychology**
Harvard University, Cambridge, MA
Massachusetts General Hospital, Boston, MA (Advisor: Dr. Randy Buckner)

2013 – 2014 **Postdoctoral Fellow, Department of Radiology**
University of Utah, Salt Lake City, UT (Advisor: Dr. Jeffrey Anderson)

2013 **PhD, Neuroscience (also completed Higher Education Teaching Specialist program)**
University of Utah, Salt Lake City, UT (Advisors: Drs. Janet Lainhart, Jeffrey Anderson)

2009 **BS, *Cum Laude*, Neuroscience (Psychology minor)**
Brigham Young University, Provo, UT

PUBLICATIONS (25 publications)

[Link to Google Scholar profile](#)

- Zugman, A., Harrewijn, A., Cardinale, E.M., Zwiebel, H., Freitag, G.F., ... **Nielsen, J.A.**, ... Winkler, A.M. (2020). Mega-analysis methods in ENIGMA: The experience of the generalized anxiety disorder working group. *Hum Brain Mapp.* doi:10.1002/hbm.25096
- Siless, V., Davidow, J.Y., **Nielsen, J.A.**, Fan, Q., Hedden, T., Hollinshead, M., Beam, E., Vidal Bustamante, C.M., Garrad, M.C., Santillana, R., Smith, E.E., Hamadeh, A., Snyder, J., Drews, M.K., Van Dijk, K.R.R., Sheridan, M., Somerville, L.H., Yendiki, A. (2020). Registration-free analysis of diffusion MRI tractography data across subjects through the human lifespan. *NeuroImage*, 214, 116703.
- Martin-Brevet, S.*, Rodriguez-Herreros, B.*, **Nielsen, J.A.***, Moreau, C., Modenato, C., Maillard, A. Pain, A., Richetin, S., Jønch, A.E., Qureshi, A.Y., Zurcher, N.R., 16p11.2 European Consortium, Simons Variation in Individuals Project Consortium, Chung, W.K., Sherr, E.H., Spiro, J.E., Beckmann, J.S., Hadjikhani, N., Raymond, A., Buckner, R.L., Draganski, B., Jacquemont, S. (2018). Quantifying the effects of 16p11.2 CNVs on brain structure: a multi-site ‘genetic-first’ MRI study. *Biol Psychiatry*, 84(4), 253-264.
* equal contribution by authors
- Ferguson, M.A., **Nielsen, J.A.**, King, J.B., Dai, L., Giangrasso, D.M., Holman, R., Korenberg, J.R., & Anderson, J.S. (2018). Reward, salience, and attentional networks are activated by religious experience in devout Mormons. *Soc Neurosci*, 13(1), 104-116.
- Travers, B.G., Tromp do, P.M., Adluru, N., Lange, N., Destiche, D., Ennis, C., **Nielsen, J.A.**, Froehlich, A.L., Prigge, M.B., Fletcher, P.T., Anderson, J.S., Zielinski, B.A., Bigler, E.D., Lainhart, J.E., & Alexander, A.L.

- (2015). Atypical development of white matter microstructure of the corpus callosum in males with autism: a longitudinal investigation. *Mol Autism*, 6, 15.
- Anderson, J.S., Treiman, S.M., Ferguson, M.A., **Nielsen, J.A.**, Edgin, J.O., Dai, L., Gerig, G., & Korenberg, J.R. (2015). Violence: heightened brain attentional network response is selectively muted in Down syndrome. *J Neurodev Disord*, 7(1), 15.
- Lange, N., Travers, B.G., Bigler, E.D., Prigge, M.B., Froehlich, A.L., **Nielsen, J.A.**, Cariello, A.N., Zielinski, B.A., Anderson, J.S., Fletcher, P.T., Alexander, A.A., & Lainhart, J.E. (2015). Longitudinal volumetric brain changes in autism spectrum disorder ages 6-35 years. *Autism Res*, 8(1), 82-93.
- Nielsen, J.A.**, Zielinski, B.A., Fletcher, P.T., Alexander, A.L., Lange, N., Bigler, E.D., Lainhart, J.E., & Anderson, J.S. (2014). Abnormal lateralization of functional connectivity between language and default mode regions in autism. *Mol Autism*, 5(1), 8.
- Zielinski, B.A., Prigge, M.B., **Nielsen, J.A.**, Froehlich, A.L., Abildskov, T.J., Anderson, J.S., Fletcher, P.T., Zygmunt, K.M., Travers, B.G., Lange, N., Alexander, A.L., Bigler, E.D., & Lainhart, J.E. (2014). Longitudinal changes in cortical thickness in autism and typical development. *Brain*, 137(Pt 6), 1799-1812.
- Travers, B.G., Bigler, E.D., Tromp do, P.M., Adluru, N., Froehlich, A.L., Ennis, C., Lange, N., **Nielsen, J.A.**, Prigge, M.B., Alexander, A.L., & Lainhart, J.E. (2014). Longitudinal processing speed impairments in males with autism and the effects of white matter microstructure. *Neuropsychologia*, 53, 137-145.
- Anderson, J.S., Zielinski, B.A., **Nielsen, J.A.**, & Ferguson, M.A. (2014). Complexity of low-frequency blood oxygen level-dependent fluctuations covaries with local connectivity. *Hum Brain Mapp*, 35(4), 1273-1283.
- Ferguson, M.A., **Nielsen, J.A.**, & Anderson, J.S. (2014). Altered resting functional connectivity of expressive language regions after speed reading training. *J Clin Exp Neuropsychol*, 36(5), 482-493.
- Zuo, X.-N., Anderson, J.S., Bellec, P., Birn, R.M., Biswal, B.B., ... **Nielsen, J.A.**, ... Milham, M.P. (2014). An open science resource for establishing reliability and reproducibility in functional connectomics. *Scientific Data*, 1.
- Nielsen, J.A.**, Zielinski, B.A., Fletcher, P.T., Alexander, A.L., Lange, N., Bigler, E.D., Lainhart, J.E., & Anderson, J.S. (2013). Multisite functional connectivity MRI classification of autism: ABIDE results. *Front Hum Neurosci*, 7, 599.
- Prigge, M.D., Bigler, E.D., Fletcher, P.T., Zielinski, B.A., Ravichandran, C., Anderson, J., Froehlich, A., Abildskov, T., Papadopolous, E., Maasberg, K., **Nielsen, J.A.**, Alexander, A.L., Lange, N., & Lainhart, J. (2013). Longitudinal Heschl's gyrus growth during childhood and adolescence in typical development and autism. *Autism Res*, 6(2), 78-90.
- Duffield, T.C., Trontel, H.G., Bigler, E.D., Froehlich, A., Prigge, M.B., Travers, B., Green, R.R., Cariello, A.N., Cooperrider, J., **Nielsen, J.A.**, Alexander, A., Anderson, J., Fletcher, P.T., Lange, N., Zielinski, B., & Lainhart, J. (2013). Neuropsychological investigation of motor impairments in autism. *J Clin Exp Neuropsychol*, 35(8), 867-881.
- Webb, J.T., Ferguson, M.A., **Nielsen, J.A.**, & Anderson, J.S. (2013). BOLD Granger causality reflects vascular anatomy. *PLoS ONE*, 8(12), e84279.
- Trontel, H.G., Duffield, T.C., Bigler, E.D., Froehlich, A., Prigge, M.B., **Nielsen, J.A.**, Cooperrider, J.R., Cariello, A.N., Travers, B.G., Anderson, J.S., Zielinski, B.A., Alexander, A., Lange, N., & Lainhart, J.E. (2013). Fusiform correlates of facial memory in autism. *Behav Sci (Basel)*, 3(3), 348-371.

- Prigge, M.B., Lange, N., Bigler, E.D., Merkle, T.L., Neeley, E.S., Abildskov, T.J., Froehlich, A.L., **Nielsen, J.A.**, Cooperrider, J.R., Cariello, A.N., Ravichandran, C., Alexander, A.L., & Lainhart, J.E. (2013). Corpus Callosum Area in Children and Adults with Autism. *Res Autism Spectr Disord*, 7(2), 221-234.
- Nielsen, J.A.**, Zielinski, B.A., Ferguson, M.A., Lainhart, J.E., & Anderson, J.S. (2013). An evaluation of the left-brain vs. right-brain hypothesis with resting state functional connectivity magnetic resonance imaging. *PLoS ONE*, 8(8), e71275.
- Anderson, J.S., **Nielsen, J.A.**, Ferguson, M.A., Burbach, M.C., Cox, E.T., Dai, L., Gerig, G., Edgin, J.O., & Korenberg, J.R. (2013). Abnormal brain synchrony in Down Syndrome. *Neuroimage Clin*, 2, 703-715.
- Froehlich, A.L., Anderson, J.S., Bigler, E.D., Miller, J.S., Lange, N.T., Dubray, M.B., Cooperrider, J.R., Cariello, A., **Nielsen, J.A.**, & Lainhart, J.E. (2012). Intact Prototype Formation but Impaired Generalization in Autism. *Res Autism Spectr Disord*, 6(2), 921-930.
- Zielinski, B.A., Anderson, J.S., Froehlich, A.L., Prigge, M.B., **Nielsen, J.A.**, Cooperrider, J.R., Cariello, A.N., Fletcher, P.T., Alexander, A.L., Lange, N., Bigler, E.D., & Lainhart, J.E. (2012). scMRI reveals large-scale brain network abnormalities in autism. *PLoS ONE*, 7(11), e49172.
- Anderson, J.S., Druzgal, T.J., Froehlich, A., DuBray, M.B., Lange, N., Alexander, A.L., Abildskov, T., **Nielsen, J.A.**, Cariello, A.N., Cooperrider, J.R., Bigler, E.D., & Lainhart, J.E. (2011). Decreased interhemispheric functional connectivity in autism. *Cereb Cortex*, 21(5), 1134-1146.
- Anderson, J.S., **Nielsen, J.A.**, Froehlich, A.L., DuBray, M.B., Druzgal, T.J., Cariello, A.N., Cooperrider, J.R., Zielinski, B.A., Ravichandran, C., Fletcher, P.T., Alexander, A.L., Bigler, E.D., Lange, N., & Lainhart, J.E. (2011). Functional connectivity magnetic resonance imaging classification of autism. *Brain*, 134(Pt 12), 3742-3754.

MANUSCRIPTS SUBMITTED FOR REVIEW OR IN PREPARATION

- Jacoby, R.J., Cassano, P., Hellberg, S.N., Bui, E., **Nielsen, J.A.**, Holmes, A.J., Buckner, R.L., Smoller, J.W., & Simon, N.M. The Transdiagnostic Role of Rumination and Cognitive Control Across Anxiety and Depression. *Manuscript under review*.
- Nielsen, J.A.**, Mair, R.W., Baker, J.T., & Buckner, R.L. Precision Brain Morphometry: Feasibility and Opportunities of Extreme Rapid Scans. *Manuscript under review*.
- Nielsen, J.A.***, Qureshi, A.Y.*, Mukherjee, P., Berman, J.I., Roberts, T.P.L., Nagarajan, S.S., Spiro, J.E., Chung, W.K., Sherr, E.H., & Buckner, R.L. Topographic Shifts in Functional Connectivity & Reduced Lateralization in 16p11.2 Deletion Carriers: A Genetics-first approach to ASD. *Manuscript under review*.
* equal contribution by authors

BOOKS AND BOOK CHAPTERS

- Nielsen, J.A.**, & Hutchison, R.M. (2018). Resting-State Functional Connectivity MRI (fcMRI). In J.S. Kreutzer, J. DeLuca & B. Caplan (Eds.), *Encyclopedia of Clinical Neuropsychology, 2nd Edition*: Springer-Verlag New York.
- Anderson, J.S., Shah, L.M., & **Nielsen, J.A.** (2013). *Specialty Imaging: Functional MRI*. Altona, Canada: Amirsys Publishing, Inc.
- Anderson, J.S., Ferguson, M.A., & **Nielsen, J.A.** (2013). Functional MRI in Autism. In M. F. Casanova, A. S. El-Baz & J. S. Suri (Eds.), *Imaging the brain in autism* (pp. 289-323). New York: Springer.
- Zielinski, B.A., Prigge, M.D., **Nielsen, J.A.**, & Lainhart, J.E. (2013). Structural Imaging in Autism. In M.F. Casanova, A.S. El-Baz & J.S. Suri (Eds.), *Imaging the brain in autism* (pp. 135-177). New York: Springer.

CONFERENCE PRESENTATIONS (PAST YEAR)

Trainee co-author

Borden, W.#, Numa, M.A.#, Frezzia, R.#, Christiansen, M.#, James, M.#, Tandiman P.#, Ward J.#, & **Nielsen, J.A.** (2020). Comparison between the Superior Temporal Asymmetrical Pit of Typically Developing and Autistic Individuals. *Society of Biological Psychiatry* (New York City, NY).

Frezzia, R.#, Numa, M.A.#, Borden, W.#, Ward J.#, Macy, C.#, Rogers, K.#, Christiansen, M.#, & **Nielsen, J.A.** (2020). Reduced Asymmetry of the Superior Temporal Asymmetrical Pit in 16p11.2 Deletion Carriers. *Society of Biological Psychiatry* (New York City, NY).

INVITED TALKS

- 2018 Frontotemporal Dementia Unit, MGH, Charlestown, Massachusetts
- 2017 Imaging Elevated Symposium, University of Utah, Salt Lake City, Utah
Center for Anxiety and Traumatic Stress Disorders, MGH, Boston, Massachusetts
- 2016 LDS Life Science Symposium, Thanksgiving Point, Lehi, Utah
- 2015 Depression and Bipolar Support Alliance, McLean Hospital, Belmont, Massachusetts
- 2014 MRI Research Seminar, Brigham Young University, Provo, Utah
Department of Psychology, Harvard University, Cambridge, Massachusetts

GRANTS

- 2020 *Development of Brain Asymmetries in Autism Spectrum Disorder and Typical Development Over the Lifespan*
Role: Principal Investigator
Source: BYU Office of Creative and Research Activities Faculty Mentoring Environment Grant (MEG) & BYU College of Family Home and Social Sciences Research Grant
Award: \$16,500
- 2019 *From Big Data to Big Impact: Improving Risk Prediction for Suicidal Thoughts and Behaviors in College-Age Young Adults*
Role: Co-Investigator
Source: BYU Interdisciplinary Grant
Award: \$120,000
- 2018 *Structural and Functional Brain Asymmetries in Autism*
Role: Principal Investigator
Source: BYU donor
Award: \$3,700

MENTORING

Brigham Young University PhD Dissertation Committee Chair (1 student)

2019 – present Madeline Peterson, Psychology

Brigham Young University PhD Dissertation Committee Service (7 students)

2019 – present Lindsay Regehr, Counseling Psychology, (Chair: Terisa Gabrielsen)
2019 – present Holly Paxton-Winiarski, Clinical Psychology, (Chair: Derin Cobia)
2019 – present Rachael Slate, Clinical Psychology, (Chair: Derin Cobia)
2019 – 2020 Benjamin Carter, Neuroscience, (Chair: Steven Luke)

2018 – present Ariana Hedges-Muncy, Psychology, (Chair: Brock Kirwan)
 2018 – present Jolynn Jones, Psychology, (Chair: Daniel Kay)
 2018 – 2020 Nathan Muncy, Psychology, (Chair: Brock Kirwan)

Brigham Young University Master’s Thesis Committee Chair (1 student)

2020 – present Alyssa Kozlowski, Neuroscience

Undergraduate Student & Post-Baccalaureate Mentoring (53 students)

BYU Psychology (16) Benson Bunker (2019 – 2020), Kiana Bunnell (2019 – present), Maddalena Cigolini (2019), Julia Critchfield (2020 – present), Oromia Eshete (2019 – 2020), Summer Frandsen (2018 – present), Rebecca Frezzia (2019 – present), Mary Hunt (2018 – 2019), Marissa James (2018 – 2019), David Johnson (2019 – 2020), Cameron Macy (2019 – present), Jeremy Rodgers (2018 – present), Hunter Schow (2019 – 2020), Rachel Shellman (2019), Greg Sorenson (2019 – 2020), John Ward (2019 – present)

BYU Neuroscience (27) Eli Baughan (2019 – present), Braeden Black (2018 – present), Wes Borden (2019 – present), Sam Brown (2019 – present), Rikki Choi (2019 – 2020), Mikayla Christiansen (2019 – 2020), Anne Clark (2020 – present), Johanna Dobler (2018 – 2019), Devin Downing (2019 – 2020), Daniel Gifford (2018 – present), Devon Jacob (2019), Danny Kutz (2019 – present), Josh Matthews (2019), Dave Melanson (2019 – present), Megan Merkley (2019), Jarom Morris (2018 – present), Matt Nitz (2019 – present), Miguel Numa (2018 – present), Josh Olivier (2018 – present), Lauren Parker (2019 – present), Kelsie Rogers (2019 – present), Hazel Skousen (2018 – 2020), Ashton Tanner (2019 – 2020), Nikki Tanner (2019), Matt Viveiros (2019 – present), Jayson Wild (2019 – present), Kody Wilde (2019)

BYU Other (3) Tanner Littleton (Biological Science Education, 2019), Justin Hunt (Bioinformatics, 2018 – 2019), Leia Pappenfuss (School of Family Life, 2018)

BYU-Hawaii (1) Patricia Tandiman (Psychology, 2019)

Harvard (6) Ellie Beam (Psychology, 2014 – 2016), Jacob Goldberg (Psychology, 2015 – 2016), Aya Hamadeh (Psychiatry, 2014 – 2016), Julia Lord (Neurobiology, 2015), Melinda Wang (Neurobiology, 2015 – 2016), Arpi Youssoufian (Psychology, 2018)

HONORS AND AWARDS

2017 **Outstanding Emerging Investigator**
 Recognized by the University of Utah’s Department of Radiology and Imaging Sciences
 University of Utah, Salt Lake City, UT

2009 – 2011 **NIH T32 Training Grant Fellowship**
 Two-time recipient of fellowship that covers stipend, tuition, insurance, research travel,
 and research materials
 University of Utah, Salt Lake City, UT

PROFESSIONAL AFFILIATIONS

International Society for Autism Research
 Organization for Human Brain Mapping
 Society for Neuroscience

COURSES TAUGHT

F 2020 (1) PSYCH 370: Sensation & Perception (Brigham Young University)

W 2019 – F 2020 (3) PSYCH 111: Introduction to Psychological Science (Brigham Young University)

- F 2018 – Sp 2020 (4) PSYCH 375: Cognition (Brigham Young University)
- W 2017 (1) PSY 1202: Modern Neuroanatomy (Harvard University)
Co-instructor: Dr. Randy Buckner
- W 2013 (1) PSYCH 6951/BIOEN 6900: Introduction to fMRI (University of Utah)
Co-instructors: Dr. Jeff Anderson and Michael Ferguson

PROFESSIONAL SERVICE AND ACTIVITIES

- 2019 – present **Recruitment Committee Member**
Brigham Young University, Provo, UT
- 2018 – present **Social Committee Member**
Brigham Young University, Provo, UT

AD HOC REVIEWER

American Journal of Psychiatry
Frontiers in Human Neuroscience
Frontiers in Systems Neuroscience
Human Brain Mapping
Molecular Autism
Neurobiology of Aging
PLOS ONE