

# Nadine Gaab, Ph.D.

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<http://www.childrenshospital.org/gaabl原因>

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## Current Academic Positions/Affiliations

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- 07/07 – present **Boston Children’s Hospital, Boston, MA**  
Division of Developmental Medicine: Laboratories of Cognitive Neuroscience
- 07/07-09/14 *Assistant Professor of Pediatrics*
- 10/14-present *Associate Professor of Pediatrics*
- 07/07 - present **Harvard Medical School, Boston, MA**  
07/07-09/14 *Assistant Professor of Pediatrics*  
10/14- present *Associate Professor of Pediatrics*
- 07/07 - present **Harvard Graduate School of Education, Cambridge, MA**  
*Member of the Faculty (teaching HT-126)*
- Spring 2018 **Faculty of Arts and Sciences, Harvard University**  
*Department of psychology*  
*Adjunct Faculty (teaching PSY1611)*
- 07/09 - present **Mind/Brain/Behavior Interfaculty Initiative at Harvard University**  
*Faculty Affiliate*
- 06/13 - present **Harvard Medical School, Boston, MA**  
Harvard-MIT Program in Speech and Hearing Bioscience and Technology  
*Member of the Faculty*
- 08/11 - present **Harvard Medical School, Boston, MA**  
Ph.D. Program in Neuroscience  
*Faculty Affiliate*
- 07/07 - present **Massachusetts Institute of Technology, Cambridge, MA**  
Department of Brain and Cognitive Sciences  
*Research Affiliate*
- 09/09 - present **Brandeis University, Waltham, MA**  
Department of Psychology  
*Adjunct Assistant Professor*

## Past Academic Affiliations

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- 09/09 - 01/10 **Emmanuel College, Boston, MA**  
Department of Psychology  
*Adjunct Faculty (Fall 09 Teaching: Quantitative Methods)*

## Education

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- 08/05 - 06/07 **Massachusetts Institute of Technology (MIT), Cambridge, MA**  
Department of Brain & Cognitive Sciences  
*Postdoctoral Associate*  
(Advisor: John D. E. Gabrieli, Ph.D.)
- 02/04 - 07/05 **Stanford University, Stanford, CA**  
Department of Psychology and Radiology  
*Postdoctoral Research Fellow*  
(Advisors: John D. E. Gabrieli, Ph.D. and Gary H. Glover, Ph.D.)
- 06/03 - 06/04 **University of Zürich, Switzerland**  
*Ph.D. in "Psychology/Neuropsychology"*  
(Advisor: Lutz Jäncke, Ph.D.)  
Ph.D. thesis title: "The Auditory cortex: perception, memory, plasticity and the influence of musicianship" (see publication list)
- 05/01 – 01/04 **Harvard Medical School, Boston, MA**  
Department of Neurology: Music and Neuroimaging Laboratory at Beth Israel Deaconess Medical Center; *Visiting Research Fellow* (Advisor: Gottfried Schlaug, M.D., Ph.D.)
- 05/01 - 06/03 **University of Magdeburg, Germany**  
*Ph.D. candidate "Cognitive Neuroscience"*  
(Advisor: Lutz Jäncke, Ph.D.)
- 10/95 - 04/01 **University of Trier, Germany**  
*Master of Science in Psychology (main focus: clinical and experimental psychology)*  
Master's thesis title: "Short-term plasticity in the human auditory cortex: an fMRI study"

## Awards

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- 2017 **Alice Garside Award** from the International Dyslexia Association, Massachusetts Branch (MABIDA)
- 2014 & 2015 **Boston Children's Hospital Postdoctoral Association Mentoring Award 2014 & 2015 Nominee**
- 01/14 **Division of Developmental Medicine Investigatorship**  
Division of Developmental Medicine  
Boston Children's Hospital
- 12/12 **T. Berry Brazelton Award for Innovation**  
Division of Developmental Medicine  
Boston Children's Hospital
- 09/09-09/12 **Division of Developmental Medicine Investigatorship**  
Division of Developmental Medicine  
Boston Children's Hospital

- 10/08 Selected by the Provost as the **Harvard University's 2008 Nominee** for the Dana Foundation's Program in Brain and Immuno-imaging-Track A.
- 07/08 **Harvard University Committee on the Biological Sciences 2008 Nominee** for the John Merck Fund (Cognitive Science).
- 02/07 **Educational Stipend** from the International Society for Magnetic Resonance in Medicine for attending the Joint Annual Meeting ISMRM-ESMRMB in Berlin, Germany.
- 04/05 **Travel Award** from the German Research Foundation (DFG) for attending “The Neurosciences and Music” conference in Leipzig, Germany.
- 04/04 **‘Summa cum laude’** Highest distinction for doctoral thesis from University of Zürich/Switzerland.
- 05/03 **Travel Award** for the Organization for Human Brain Mapping's Ninth Annual Meeting in New York.
- 07/02 - 02/04 **Graduate Fellowship** for Harvard Medical School from the German National Merit Foundation (Studienstiftung des deutschen Volkes; an institution supported largely by the German government that grants competitive scholarships to approximately 0.25 percent of the German university student population).
- 05/02 **‘fMRI Experience Travel Award’** from the Institute of Psychiatry, King’s College in London, UK to attend the “fMRI Experience Conference 2002” at NIH as a guest speaker.
- 06/01 - 06/02 **Graduate Fellowship** for the Harvard Medical School in Boston from the German Academic Exchange Service (DAAD).

### **Scientific Memberships**

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- 01/15 - present **Global Young Academy (GYA)**  
 12/13 - present **Society for Pediatric Research**  
 06/13 - present **Society for the Neurobiology of Language**  
 08/12 - present **Voting member: Society for the Scientific Study of Reading (SSSR)**  
 07/08 - present **International Society for Behavioral Neuroscience (ISBN)**  
 01/07 - present **International Dyslexia Association (IDA)**  
 09/05 - 09/10 **Association for Women in Science (AWIS)**  
 09/04 - 09/10 **Association for Psychological Science (APS)**  
 03/02 - present **Society for Neuroscience (SFN)**  
 01/02 - present **Organization for Human Brain Mapping (OHBM)**  
 08/01 - present **Cognitive Neuroscience Society (CNS)**

### **Committee memberships/Board memberships**

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- 2017 **Local Organization Committee for Neuromusic conference (June 2017 in Boston)**
- 2015-present

**Founding member of the Science, Practice, Research, Education, Awareness, Dyslexia Initiative (SPREAD) in collaboration with various researchers in the Greater Boston Area and the Landmark School.**

- 10/15 –present **Member of the Board of Trustees; Landmark School**
- 08/15-present **Scientific Advisory Board member: The Dyslexia Foundation**
- 2015-2016 **Organizer for 2016 conference “The Geschwind - Galaburda Hypothesis 30 years later” for The Dyslexia Foundation, June 2016 in St.Croix, Virgin Islands**
- 01/14 – present **Honors Thesis Tutor for the Undergraduate Board of Honors Tutors, Harvard College, Psychology Department**
- 01/14 – present **Member of the Division of Developmental Medicine Award Committee, Boston Children’s Hospital**
- Fall 2013 **Member of the Admission Committee for the Harvard Medical School-MIT Program in Speech and Hearing Bioscience and Technology**
- 06/13 **Opponent for Public Examination of Doctoral Dissertation  
Faculty of Behavioral Sciences, University of Helsinki, Finland.**
- 12/11 - present **President (Founder) of New England Research on Dyslexia (NERDY) Society**  
10/12 & 10/14 **Organizer of bi-annual conference**  
&10/17
- 2012 - present **Member of the Editorial Board: PLOS ONE, NeuroMapping and Therapeutics Collection**
- 2012 - present **Editorial review Board of Frontiers in Auditory Cognitive Neuroscience**
- 2011 - present **The Joint Committee on the status of Women, Harvard Medical School**
- 2011 **Clinical and Translational Research Coordinating Committee**
- 2011 **Task force on Clinical and Research Human Imaging, Boston Children’s Hospital**
- 2008 - 2012 **Member of the Poster committee for the Cognitive Neuroscience Society conference**
- 2007 - 2013 **MRI committee: Boston Children’s Hospital**
- 2007 - 2010 **Board member: German Academic Exchange Service Alumni Association (DAADAA)**

### **Current Funding**

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- 05/17-05/19 **Harvard University/Lemann Brazil Research Fund**  
**\$150,000 effort as needed**  
*Early Literacy Prediction and Reading Intervention for Preschoolers from Low-Income Families in Natal, Rio Grande do Norte, Brazil*

The major goal of this project aims to identify early cognitive and linguistic predictors of literacy development in young children from low-income families in Natal, Rio Grande do Norte; and further aims to examine the effects of classroom- and technology-based interventions on literacy development longitudinally for children from preschool to second grade.

- 09/16 - 07/21 **National Institute of Child Health and Human Development**  
**2R01HD065762-06**  
**2.28 calendar**  
**\$439,968**  
*Examining neural mechanisms of developmental dyslexia from infancy to school-age*  
The major goals of this project are to investigate what brain differences lead to dyslexia (i.e. are present in 5-year-old kindergartners at behavioral risk for dyslexia prior to reading instruction in the 1st grade) and whether brain measures significantly enhance our ability to predict which pre-reading children at risk for dyslexia in kindergarten actually go on to become dyslexic by second grade.
- 09/14-12/18 **Bill and Melinda Gates Foundation**  
**0.6 calendar**  
**\$3,878,953**  
*Brain Imaging as a Measure of Future Cognitive Outcomes*  
The major goal of this project is to shed light on the brain mechanisms that influence the course of development, and in doing so, identify new treatment strategies for intervening in the lives of such children. This is a collaborative project with investigators at the University of Virginia, University College London, and ICDDR,B in Bangladesh.
- 10/15 – 09/20 **National Institute on Alcohol Abuse and Alcoholism**  
**1UO1AA023503-01**  
**1.2 calendar**  
**\$52,762**  
*Behavioral Characteristics and Neural Correlates of Reading Impairment in FASD (PI with second PI Sandra Jacobson, Wayne State University)*  
The major goal of this project is to characterize reading impairments in children with fetal alcohol syndrome.
- 2015-2020 **Ruhr University Bochum Visiting Professor Grant (RUB VIP)**  
**Research School PLUS; University of Bochum**  
**12,000€**  
Germany funding to support doctoral researchers' international activities, including collaborations, courses, lectures and travel.
- FY2017 **Boston Children's Hospital Innovation and Digital Health Accelerator Grant**  
**\$25,000**  
*Early Developmental Dyslexia Screening Tool*  
Develop an Early Developmental Dyslexia Screening App can effectively screen for early behavioral signs of Developmental Dyslexia in as little as 30 minutes and provide a list of deficit specific resources.
- 04/17-04/19 **Boston Children's Hospital Trust /Milagros para Niños**

**\$50,000**

*Screening preschoolers in Latino families for early signs of reading disabilities*

We propose a longitudinal study in the Primary Care Settings of BCH.

**Projects Submitted for Funding**

- 2018-2023      **National Institute of Health**  
**Grant Number: Pending**  
**\$19, 533**  
*Genetic and Environmental Influences on Infant Brain Development: Understanding the Developmental Origins of Mental Illness*  
Project goal: to develop therapeutic interventions which could normalize adverse neurodevelopmental trajectories in infancy and early childhood, thereby preventing the onset of psychiatric disorders or reducing their severity.
- 2018-2019      **National Institute of Health**  
**Grant Number: Pending**  
**\$2,000,000**  
*Acquisition of a Siemens 3T MRI for Research Imaging*  
Project goal: to provide a research dedicated Siemens 3T Prisma MRI scanner, which will have a substantial positive impact on the NIH funded research and the long range biomedical research goals of Boston Children's Hospital.

**Completed Funding**

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- 09/12-06/17      **National Institute of Health**  
**1R01MH100028-02**  
**1.2 calendar**  
**\$277,077**  
Multimodal Developmental Neurogenetics of Females with Autism Spectrum Disorder (Investigator; PI Kevin Pelphrey)
- 01/11 - 12/16      **National Institute of Health of Child Health and Human Development**  
**1R01HD067312-05**  
**4.8 calendar**  
**\$421,712**  
Using Cognitive Neuroscience to Predict Dyslexia Among Kindergarten Children (PI with second PI John Gabrieli)
- 04/14-12/16      **Abbott Fund**  
**0.3 calendar**  
**\$645,034**  
Developing Advanced MRI Methods for Detecting the Impact of Nutrients on Infant Brain Development (Investigator; PI Patricia E. Grant)
- 2014-2017      **Mind Brain Behavior Interest Group Exploration Award**  
**Harvard University Mind Brain Behavior Interfaculty Initiative**  
**\$1000.00**  
To form a Mind Brain Behavior interest group around the topic of music and medicine/science (with Lisa Wong and Christopher Hasty)

- 10/07 - 06/11 **Victory Foundation**  
**\$65,205.00**  
TUNEin™ to Reading Efficacy: a remediation study in children with developmental dyslexia (PI)
- 01/08-06/10 **William F. Milton Funds (Harvard University)**  
**\$34,500.00**  
Linking musical training, rapid auditory processing and language/reading skills in children with and without reading impairments (PI)
- 01/08-09/10 **Charles Hood Foundation**  
**\$150,000.00**  
Neural pre-markers of developmental dyslexia in children prior to reading onset (PI)
- 01/08 - 12/11 **Boston Children’s Hospital Pilot Grant**  
**\$25,000.00**  
Neural correlates of rapid auditory and phonological processing in pre-reading children with and without a family risk of developmental dyslexia –an fMRI pilot study (PI)
- 04/08 - 10/11 **GRAMMY Foundation**  
**\$39,588.00**  
Linking musical training, rapid auditory processing and language/reading skills: a behavioral and functional magnetic resonance imaging study (PI)
- 08/10 - 01/12 **NIH/Harvard Medical School (Catalyst; 5UL1RR025758)**  
**\$49,333.00**  
Neural Pre-markers of developmental dyslexia in infants with a history of developmental dyslexia (PI)
- 01/11 - 12/11 **Mind/Brain/Behavior Faculty Award**  
**\$32,500.00**  
The delayed development of implicatures: inferences from fMRI (PI)
- 07/11 - 06/13 **William Hearst Fund (Harvard University)**  
**FP0100682**  
**\$98,525.00**  
Neural markers of developmental dyslexia in infancy (PI)

## **Publications**

*\* indicates current or former trainees*

<b>Citation indices</b>	<b>All</b>	<b>Since 2011</b>
Citations	4126	2344
h-index	33	28
i10-index	49	47

*(computed by Google Scholar 3/15/18)*

## **Peer-reviewed journals**

1. Yu, X.\*, Zuk, J.\*, & **Gaab, N.** (In press). What factors facilitate resilience in developmental dyslexia? Examining protective and compensatory mechanisms across the neurodevelopmental trajectory. Child Development Perspectives.
2. Centanni, T.M., Norton, E., Park, A., Beach, S.D., Halverson, K., Ozernov-Palchik, O.\*, **Gaab, N.**, & Gabrieli, J. (In press). Early development of letter specialization in left fusiform is associated with better word reading and smaller fusiform face area. Developmental Science.
3. Yu, X.\*, Raney, T.\*, Perdue, M., Zuk, J.\*, Ozernov-Palchik, O.\*, Becker, B.L.C.\*, Raschle, N.\*, & **Gaab, N.** (In press). Emergence of the neural network underlying phonological processing from the prereading to the emergent reading stage: A longitudinal study. Human Brain Mapping.
4. Zuk, J.\*, Bishop-Lieber, P., Ozernov-Palchik, O.\*, Peysakovich, B.\*, Moore, E., Overy, K., Welch, G., & **Gaab, N.** (2017). Revisiting the 'enigma' of musicians with dyslexia: auditory sequencing and speech abilities. Journal of Experimental Psychology: General, 146(4):495-511.
5. Ozernov-Palchik, O.\* , Norton, E., Sideridis, S., Beach, S.D., Wolf, M, Gabrieli, J.D.E.& **Gaab, N.** (2017). Longitudinal stability of pre-reading skill profiles of kindergarten children: Implications for early screening and theories of reading. Developmental Science, 20(5): e12471.
6. Wang, Y.\*, Mauer, M.\*, Raney, T.\*, Peysakhovich, B.\*, Becker, B.\*, Sliva, D.\*, & **Gaab, N.** (2017). Development of tract-specific white matter pathways during early reading development in at-risk children and typical controls. Cerebral Cortex, 27(4):2469-2485.
7. Langer, N\*., Peysakhovich, B\*., Zuk, J\*., Drottar, M., Sliva, DD\*., Smith, S\*., Becker, B\*., Grant, E. & **Gaab, N.** (2017). White matter alterations in infants at risk for developmental dyslexia. Cerebral Cortex, 27(2): 1027-1036.
8. Raschle, N.M\*., Becker, B\*., Smith, S\*., Fehlbauer, L.V., Wang, Y\*., & **Gaab, N.** (2017). Investigating the influences of language delay and/or familial risk for dyslexia on brain structure in 5-year-olds. Cerebral Cortex, 27(1): 764-776.
9. Saygin, Z.M., Osher, D.E., Norton, E.S., Youssoufian, D.A., Beach, S.D., Feather, J., **Gaab, N.**, Gabrieli, J.D.E., & Kanwisher, N. (2016). Connectivity precedes function in the development of the visual word form area. Nature Neuroscience, 9(9):1250-1255.
10. Ozernov-Palchik, O.\*, Yu, X.\*, Wang, Y.\*, & **Gaab, N.** (2016). Lessons to be learned: How a comprehensive neurobiological framework of atypical reading development can inform educational practice and policy. Current Opinion in Behavioral Sciences, 10:45-58.
11. Powers, S.\*, Wang, Y.\*, Sideridis, G., & **Gaab, N.** (2016). Examining the relationship between home literacy environment and neural correlates of phonological processing in beginning readers with and without a familial risk for dyslexia: an fMRI study. Annals of Dyslexia, 66(3):337-360.
12. Ozernov-Palchik\*, O. & **Gaab, N.** (2016). Tackling the Dyslexia Paradox: Reading Brain and Behavior for Early Markers of Developmental Dyslexia. Wiley Interdiscip Rev Cogn Sci. 7(2):156-76.
13. Meng, X., You, H., Song, M., Desroches, A.S., Wang, Z., Wei, N., Tian, M., **Gaab, N.**, & Ding, G. (2016). Neural deficits in auditory phonological processing in Chinese children with English reading impairment. Bilingualism: Language Cognition, 9(2): 331-346.

14. Im, K., Raschle, N.M.\*, Smith, S.A.\*, Grant, P.E., & **Gaab, N.** (2015). Atypical sulcal pattern in children with developmental dyslexia and at-risk kindergarteners. Cerebral Cortex, 26(3):1138-48.
15. Paldino, M.J., Hedges, K., **Gaab, N.**, Galaburda, A.M. & Grant, P.E. (2015). Failure to Identify the Left Arcuate Fasciculus at Diffusion Tractography Is a Specific Marker of Language Dysfunction in Pediatric Patients with Polymicrogyria. Behavioural Neurology, 2015:351391.
16. Langer, N.\*, Benjamin, C.\*, Minas, J.\* & **Gaab, N.** (2015). The neural correlates of reading fluency deficits in children. Cerebral Cortex, 25(6): 1441-1453.
17. Raschle, N.M.\*, Smith, S.A.\*, Zuk, J.\*, Dauvermann, M.R.\*, Figuccio, M.J.\* & **Gaab, N.** (2014). Investigating the neural correlates of voice versus speech-sound directed information in pre-school children. PLoS, 9(12): e115549.
18. Shetreet, E.\*, Chierchia, G. & **Gaab, N.** (2014). Linguistic inability or poor performance: Dissociating scalar implicature generation and mismatch in the developing brain. Developmental Psychology, 50(9): 2264-2275.
19. Raschle, N.M.\*, Stering, P.L.\*, Meissner, S.\* & **Gaab, N.** (2014). Altered neuronal response during rapid auditory processing and its relation to phonological processing in pre-reading children at familial risk for dyslexia. Cerebral Cortex, 24 (9): 2489-2501.
20. Zuk, J.\*, Benjamin, C.\*, Kenyon, A.\* & **Gaab, N.** (2014). Behavioral and neural correlates of executive functioning in musicians and non-musicians. PLoS One, 9(6): e99868.
21. Shetreet, E.\*, Chierchia, G. & **Gaab, N.** (2014). When *three* is not *some*: On the pragmatics of numerals. Journal of Cognitive Neuroscience, 26(4): 854-863.
22. Shetreet, E.\*, Chierchia, G. & **Gaab, N.** (2014). When *some* is not *every*: Dissociating scalar implicature generation and mismatch. Human Brain Mapping, 35(4): 1503-1514.
23. Zuk, J.\*<sup>1</sup>, Ozernov-Palchik, O.\*<sup>1</sup>, Kim, H., Lakshminarayanan, K., Gabrieli, J.D.E., Tallal, P. & **Gaab, N.** (2013). Enhanced syllable discrimination thresholds in musicians. PLoS One, 8(12): e80546. (<sup>1</sup>authors contributed equally.)
24. Im, K., Pienaar, R., Paldino, M.J., **Gaab, N.**, Galaburda, A.M. & Grant, P.E. (2013). Quantification and discrimination of abnormal sulcal patterns in polymicrogyria. Cerebral Cortex, 23(12): 3007-3015.
25. Saygin, Z., Norton, E.\*, Osher, D., Beach, S., Cyr, A., Ozernov-Palchik, O.\*, Yendiki, A., Fischl, B., **Gaab, N.** & Gabrieli, J.D.E. (2013). Tracking the roots of reading ability: White matter volume and integrity correlate with phonological awareness in pre-reading and early-reading kindergarten children. Journal of Neuroscience, 33(33):13251-13258.
26. Zuk, J.\*, Andrade, P.E., Andrade, O.V.C.A., Gardiner, M.F. & **Gaab, N.** (2013). Musical, language and reading abilities in early Portuguese readers. Frontiers in Auditory Cognitive Neuroscience, 4:288.

27. Raschle, N.M.\*, Zuk, J.\* & **Gaab, N.** (2012). Functional characteristics of developmental dyslexia in left-hemispheric posterior brain regions predate reading onset. Proceedings of the National Academy of Sciences, 109(6): 2156-2161.
28. Raschle, N.M.\*, Zuk, J.\*, Ortiz-Manilla, S., Sliva, D.D.\*, Franceschi, A., Grant, E., Benasich, A. & **Gaab, N.** (2012). Pediatric Neuroimaging in Early Childhood and Infancy: Challenges and Practical Guidelines. Annals of the New York Academy of Sciences, 1252: 43-50.
29. Benjamin, C.F.\* & **Gaab, N.** (2012). What's the story? The tale of reading fluency told at speed. Human Brain Mapping, 33(11): 2572-2585.
30. Kovelman, I., Norton, E. S.\*, Christodoulou, J. A., **Gaab, N.**, Triantafyllou, C., Lieberman, D. A., Lymberis, J., Wolf, M., Whitfield-Gabrieli, S. & Gabrieli, J. D. E. (2012). Brain Basis of Phonological Awareness for Spoken Language in Children and Its disruption in dyslexia. Cerebral Cortex, 22(4): 754-764.
31. Raschle, N.M., Chang, M., & **Gaab, N.** (2011). Structural brain alterations associated with dyslexia predate reading onset. Neuroimage, 57(3): 742-749.
32. You, H., **Gaab, N.**, Wei, N., Cheng-Lai, A., Wang, Z., Jian, J., Song, M., Meng, X. & Ding, G. (2011). Neural deficits in second language reading: fMRI evidence from Chinese children with English reading impairment. Neuroimage, 57(3): 760-770.
33. Benjamin, C.\*, Lieberman, D.A., Chang, M.\*, Ofen, N., Gabrieli, J.D.E. & **Gaab, N.** (2010). The influence of rest period instructions on the default mode network. Frontiers in Human Neuroscience, 4:218.
34. Ghosh, S.S., Kakunoori, S., Augustinack, J., Nieto-Castanon, A., Kovelman, I, **Gaab, N.**, Christodoulou, J.A., Triantafyllou, C., Gabrieli, J.D.E. & Fischl, B. (2010). Evaluating the Validity of Volume-Based and Surface-Based Brain Image Registration for Developmental Cognitive Neuroscience Studies in Children 4-to-11 Years of Age. Neuroimage, 53(1): 85-93.
35. Raschle, N.M.\*, Lee, M.\*, Buechler, R.\*, Christodoulou, J.A., Chang, M.\*, Vakil, M.\*, Stering, P.L.\* & **Gaab, N.** (2009). Making MR imaging child's play- pediatric neuroimaging protocol, guidelines and procedures. Journal of Visualized Experiments, 29: 1309.
36. Schulze, K., **Gaab, N.** & Schlaug, G. (2009). Perceiving pitch absolutely: comparing absolute and relative pitch possessors in a pitch memory task. BMC Neuroscience, 10: 106-118.
37. Christodoulou, C. & **Gaab, N.** (2009). Using and Misusing Neuroscience in Education-Related Research. Cortex, 45(4): 555-557.
38. **Gaab, N.**, Gabrieli, J. & Glover, G. (2008). Resting in peace or noise: Scanner background noise suppresses default-mode network. Human Brain Mapping, 29(7): 858-867.
39. **Gaab, N.**, Gabrieli, J.D.E., Deutsch, G., Tallal, P. & Temple, E. (2007). Neural correlates of rapid auditory processing are disrupted in children with developmental dyslexia and ameliorated with training: An fMRI study. Restorative Neuroscience and Neurology, 25(3-4): 295-310.

40. **Gaab, N.**, Gabrieli, J. & Glover, G. (2007). Assessing the influence of scanner background noise on auditory processing- II: an fMRI study comparing auditory processing in the absence and presence of recorded scanner noise using a sparse design. Human Brain Mapping, 28(8): 721-732.
41. **Gaab, N.**, Gabrieli, J. & Glover, G. (2007). Assessing the influence of scanner background noise on auditory processing- I: an fMRI study comparing three experimental designs with varying degrees of scanner noise. Human Brain Mapping, 28(8): 703-720.
42. **Gaab, N.**, Schulze, K., Ozdemir, E. & Schlaug, G. (2006). Neural correlates of absolute pitch differ between blind and sighted musicians. Neuroreport, 17(18): 1853-1857.
43. Tallal, P. & **Gaab, N.** (2006). Dynamic Auditory Processing, Musical Experience and Language Development. Trends in Neurosciences, 29(7): 382-390.
44. Bermpohl, F., Pascual-Leone, A., Amedi, A., Merabet, L., Fregni, F., **Gaab, N.**, Alsop, D., Schlaug, G. & Northoff, G. (2006). Attentional modulation of emotional stimulus processing: an fMRI study using emotional expectancy. Human Brain Mapping, 27(8): 662-677.
45. **Gaab, N.**, Gaser, C. & Schlaug, G (2006). Improvement-related functional plasticity following pitch memory training. Neuroimage, 31(1): 255-263.
46. Bermpohl, F., Pascual-Leone, A., Amedi, A., Merabet, L., Fregni, F., **Gaab, N.**, Alsop, D., Schlaug, G. & Northoff, G. (2006). Dissociable networks for the expectancy and perception of emotional stimuli in the human brain. Neuroimage, 30(2): 588-600.
47. **Gaab, N.**, Tallal, P., Kim, H., Lakshminarayanan, K., Glover, G.H. & Gabrieli, J.D.E. (2005). Neural correlates of rapid spectro-temporal processing in musicians and nonmusicians. Annals of the New York Academy of Sciences, 1060: 82-88.
48. Walker, M.P., Stickgold, R., Alsop, D., **Gaab, N.** & Schlaug, G. (2005). Sleep dependent motor memory plasticity in the human brain. Neuroscience, 133(4): 911-917.
49. Overy, K. Norton, A.C., Cronin, K.T., **Gaab, N.**, Alsop, D.C., Winner, E. & Schlaug, G. (2004). Imaging melody and rhythm processing in young children. Neuroreport, 15(11): 1723-1726.
50. **Gaab, N.**, Paetzold, M., Walker, M.P. & Schlaug, G. (2004). The influence of sleep on auditory learning: a behavioral study. Neuroreport, 15(4): 731-734.
51. **Gaab, N.** & Schlaug, G. (2003). Musicians differ from nonmusicians in brain activation despite performance matching. Annals of the New York Academy of Sciences, 999: 385-388.
52. **Gaab, N.**, Gaser, C., Zaehle, T., Jaencke, L. & Schlaug, G. (2003). Functional anatomy of pitch memory- an fMRI study with sparse temporal sampling. Neuroimage, 19(4): 1417-1426.
53. **Gaab, N.**, Keenan, J. & Schlaug, G. (2003). The effects of gender on the neural substrates of pitch memory. Journal of Cognitive Neuroscience, 15(6): 810-820.
54. **Gaab, N.** & Schlaug, G. (2003). The effect of musicianship on pitch memory in performance matched groups. Neuroreport, 14(18): 2291-2295.

55. Hutchinson, S., Lee, L.H., **Gaab, N.** & Schlaug, G. (2003). Cerebellar volume of musicians. Cerebral Cortex, 13(9): 943-949.
56. Jäncke, L., **Gaab, N.**, Wüstenberg, T., Scheich, H. & Heinze, H.J.(2001). Short-term functional plasticity in the human auditory cortex: an fMRI study. Cognitive Brain Research, 12(3): 479-485.
57. Ihl, R., Grass-Kapanke, B., Lahrem, P., Brinkmeyer, J., Fischer, S., **Gaab, N.** & Kaupmannsennecke, C. (2000). Entwicklung und Validierung eines Tests zur Früherkennung der Demenz mit Depressionsabgrenzung (TFDD). Fortschritte der Neurologie-Psychiatrie, 68: 413-422.

### **Other publications (practice-oriented)**

1. Zuk, J.\* & **Gaab, N.** (in press). Is there a link between music and math? Scientific American MIND: Ask the Brains.
2. **Gaab, N.** (2017). It's a myth that young children cannot be screened for dyslexia. Examiner (International Dyslexia Association).
3. Ozernov-Palchik, O.\* & **Gaab, N.** (2016, Winter). Tackling the Early Identification of Dyslexia with the Help of Neuroimaging. Perspectives on Language and Literacy, 42(1).

### **Ph.D. thesis**

**Gaab, N.** (2004). The auditory cortex: perception, memory, plasticity and the influence of musicianship. Online publication (# 3391) at the University main library Zürich/ Switzerland  
<http://www.dissertationen.unizh.ch/index2004.html>

### **Edited books**

1. Galaburda, A., **Gaab, N.**, & F. Hoeft (2018). Dyslexia and Neuroscience: The Geschwind-Galaburda Hypothesis, 30 Years Later. Baltimore, MD: Paul H. Brookes Publishing Co., Inc.

### **Book chapters**

1. Leon Guerrero, S., Ozernov-Palchik, O.\*, Gonzalez, M.\*, Zuk, J.\*, & **Gaab, N.** (2018). Using tablet technology to screen for reading difficulty risk in preschool and early kindergarten. In N. Kucirkova, J. Roswell, & G. Falloon (Eds.), The Routledge International Handbook of Playing and Learning with Technology in Early Childhood. Milton Park: Routledge.
2. **Gaab, N.** & Ozernov-Palchik, O. (2018). Early atypical brain development in developmental dyslexia. In: A. Galaburda, N. Gaab, & F. Hoeft (Eds.), Dyslexia and Neuroscience: The Geschwind-Galaburda Hypothesis, 30 Years Later. Baltimore, MD: Brookes Publishing Co.
3. **Gaab, N.** (2015). The Future of Reading Research—New Concepts and Tools and the Need for Detailed Genetic and Neurobiological Contexts. In: P. McCardle & C.M. Connor (Eds.), Reading Intervention: Research to Practice to Research ( The Extraordinary Brain Series, XIV). Baltimore, MD: Brookes Publishing Co.
4. Raschle, N.M.\*, Chang, M.Y.H.\*, Sterling, P.L.\*, Zuk, J.\* & **Gaab, N.** (2012). Neural correlates of reading related processes examined with fMRI before reading onset and after language/reading remediation. In A.A. Benasich & R.H. Fitch (Eds.), Developmental dyslexia: Early precursors, neurobehavioral markers and biological substrates (The Extraordinary Brain Series). (pp.275-294).

Baltimore, MD: Brookes Publishing Co.

5. Schlaug, G. & **Gaab, N.** (2003). Das musizierende Gehirn: Strukturelle und funktionelle Unterschiede zwischen Musikern und Nicht-Musikern. In H.G. Bastian & G. Kreutz (Eds.), Musik und Humanität: Interdisziplinäre Grundlagen für (musikalische) Erziehung und Bildung. (pp. 120-134). Mainz, Germany: Schott Musik International.

**Selected conference papers, abstracts and posters (since start of faculty position 07/2007)**

1. Yu, X.\*, Dunstan, J.\*, Figuccio, M.\*, Zuk, J.\*, Carruthers, C.\*, Sanfilippo, J.\*, Grant, E., **Gaab, N.** (2018, upcoming). The impact of maternal reading history on the brain lateralization in infants: a longitudinal study. Organization for Human Brain Mapping Annual Meeting. Singapore.
2. Chung, A.W., Carquex, C., Yi, F., Boyd, E., Mannix, R., **Gaab, N.**, Zollei, L., Grant, E., Rathi, Y. (2018, upcoming). dMRIQC-Tool: a semi-automated, quality control tool for diffusion-weighted MRI datasets. Organization for Human Brain Mapping Annual Meeting. Singapore.
3. Ozernov-Palchik, O.\*, Norton, E.S., Wang, Y.\*, Beach, S.D., Zuk, J.\*, Wolf, M., Gabrieli, J., **Gaab, N.** (2018, upcoming). The relationships among SES, white matter, and reading development: a longitudinal investigation from kindergarten to 2nd grade. Society for the Scientific Study of Reading Annual Meeting. Brighton, UK.
4. Sarang-Sieminski, A., Frackleton, M., Lichter, C., Zuehsow, L., **Gaab, N.** (2018). Designing Modular Pediatric fMRI Devices. ACM/IEEE International Conference on Human Robot Interaction Student Design Competition. Chicago, IL.
5. McWeeny, S., Manning, B., Harriott, E.M., Beach, S.D., Ozernov-Palchik, O.\*, Gabrieli, J.D.E., **Gaab, N.**, Norton, E.S. (2018). Reliability of the Mismatch Negativity in a Kindergarten Population Oversampled for Dyslexia Risk. Cognitive Neuroscience Society. Boston, MA.
6. Dunstan, J. \*, Yu, X. \*, Zuk, J. \*, Carruthers, C. \*, Sanfilippo, J. \*, Grant, E. & **Gaab, N.** (2018). The development of print sensitivity in the visual word form system in beginning readers is influenced by orthographic experience and familial risk of dyslexia. Cognitive Neuroscience Society. Boston, MA.
7. Zuk, J.\*, Figuccio, M.\*, Yu, X.\*, Sanfilippo, J.\*, Dunstan, J.\*, Carruthers, C.\*, Langer, N.\*, Grant, E., **Gaab, N.** (2017). Examining early indicators of dyslexia: tracking brain and behavioral correlates of language and literacy development from infancy to school age. Poster presentation at the Neurodevelopmental Disorders Symposium. Boston, MA.
8. Ozernov-Palchik, O. \*, Brown, M., Norton, E.S. \*, Georgan, W., Perrachione, T., Beach, S., Wolf, M., Kuperberg, G., **Gaab, N.**, Gabrieli, J. (2017). Investigating Lexical and Perceptual Learning Effects on Phonetic Processing in Young Children with Dyslexia. Society for the Scientific Study of Reading. Nova Scotia. Canada.
9. Ozernov-Palchik, O. \*, Norton, E.S. \*, Wang, Y. \*, Beach, S.D., Wolf, M., Gabrieli, J.D.E., Patel, A.D., **Gaab, N.** (2017). White matter integrity in kindergarten predicts rhythm performance in 2nd grade. NeuroMusic. Boston.

10. Ozernov-Palchik, O. \*, Norton, E.S. \*, Wang, Y. \*, Beach, S., Zuk, J. \*, Gabrieli, J.D.E., **Gaab**, N. (2017). The effects of socioeconomic status on white matter development and longitudinal reading outcomes in kindergarten children. Flux Congress. Portland.
11. Yu, X. \*, Raney, T., Becker, B., Norton, E. \*, Ozernov-Palchik, O. \*, Beach, S., Gabrieli, J., & **Gaab**, N. (2017). Neural protective and compensatory mechanisms in prereaders with a family history of dyslexia who subsequently develop typical reading skills. Poster presentation at the Neurodevelopmental Disorders Inaugural Symposium, Boston, MA, Oct. 30, 2017.
12. Yu, X. \*, Raney, T., Perdue, M., Zuk, J. \*, Ozernov-Palchik, O. \*, Becker, B., Raschle, N. & **Gaab**, N. (2017). Emergence of the neural network underlying phonological processing from the pre-reading to the emergent reading stage: a longitudinal study. Poster presentation at the 5th Annual Flux Congress, Portland, Oregon
13. Zuk, J. \*, Figuccio, M. \*, Yu, X. \*, Sanfilippo, J. \*, Dunstan, J. \*, Carruthers, C. \*, Langer, N. \*, Grant, E., & **Gaab**, N. (2017). White matter in infancy predicts language and pre-literacy skills in preschool. Poster presented at New England Research on Dyslexia Society conference, Storrs, CT.
14. Dunstan, J. \*, Yu, X. \*, Zuk, J. \*, Carruthers, C. \*, Sanfilippo, J. \*, & **Gaab**, N. (2017). The influence of orthographic experience and genetics on activation in the visual word-form system (VWFS) in children prior to reading onset. Poster presented at New England Research on Dyslexia Society conference, Storrs, CT.
15. Carruthers, C. \*, Yu, X. \*, Zuk, J. \*, Dunstan, J. \*, Sanfilippo, J. \*, & **Gaab**, N. (2017). Right lateralization of white matter tracts important for reading abilities in infants with a familial risk of developmental dyslexia. Poster presented at New England Research on Dyslexia Society conference, Storrs, CT.
16. Ozernov-Palchik, O.\*, Norton, E.\*, Wang, Y.\*, Beach, S., Wolf, M., Gabrieli, J., Patel, A., & **Gaab**, N. (2017). White matter integrity in kindergarten predicts rhythm performance in 2nd grade. Poster accepted for Neurosciences & Music VI, Boston, June 2017.
17. Zuk, J.\*, Becker, B., Raschle, N.R., Wang, Y.\*, Chang, M., & **Gaab**, N. (2017). Neural correlates of phonological processing: disrupted in children with reading disorders and enhanced in children with musical training. Poster accepted for Neurosciences & Music VI, Boston, June 2017.
18. Zuk, J.\*, Dunstan, J., Norton, E.\*, Ozernov-Palchik, O.\*, Wang, Y.\*, Gabrieli, J., & **Gaab**, N. (2017). Investigating protective and compensatory mechanisms in kindergarteners at risk for reading impairment who subsequently develop typical reading skills. Poster accepted for the Association for Psychological Science Annual Convention, Boston, May 2017.
19. Figuccio, M.J.\*, Wang, Y.\*, Liederman, J., & **Gaab**, N. (2017). White Matter Connectivity of the Corpus Callosum Assessed in Preschoolers Predicts Reading Fluency in School-Age Children. Abstract accepted for Society for Research in Child Development, Austin, April, 2017.
20. Zuk, J.\*, Figuccio, M.\*, Sanfilippo, J., Dunstan, J., Carruthers, C., Langer, N.\*, Raschle, N., Grant, P.E., & **Gaab**, N. (2017). Tracking brain and behavioral correlates of language and literacy development from infancy to school-age. Poster presented at the Annual Meeting of the Harvard Program in Speech and Hearing Biosciences and Technology (SHBT), January 2017.
21. Norton, E.S.\*, Harriott, E., Brown, S., Isaacs, S., Kaufer, C., Selph, L., **Gaab**, N., Gabrieli, J.D.E

- (2016). How response time variability during a rapid automatized naming task relates to pre-reading skills and future reading ability. Abstract submitted for Psychonomics Society, Boston, November, 2016.
22. Ozernov-Palchik, O.\*, Zuk, J.\*, Raschle, N., Wang, Y.\*, Yu, X.\*, Figuccio, M.\*, Langer, N.\*, Im, K., & **Gaab, N.** (2016). Atypical Early Brain Development in Developmental Dyslexia: How a Comprehensive Biological Framework of Atypical Reading Development Can Inform Educational Practice. Poster presented at the Annual Conference of the International Dyslexia Association, Orlando, FL, October, 2016.
  23. Ozernov-Palchik, O.\*, Mauer, M.\*, Norton, E.\*, Beach, S., Wolf, M., Gabrieli, J.D.E. & **Gaab, N.** (2016). Distinct Neural Alterations of Heterogeneous Dyslexia Risk Profiles. The bi-annual meeting of the Dyslexia Foundation, St. Croix, U.S.
  24. Wang, Y.\*, Raney, T.\*, Mauer, M.V.\*, Powers, S.\*, Sliva, D. D.\*, Becker, B. L. C.\*, Raschle, N.\*, & **Gaab, N.** (2016). Neural substrates of the executive attention network in children at-risk for dyslexia and typical controls. The bi-annual meeting of the Dyslexia Foundation, St. Croix, U.S.
  25. Ozernov-Palchik, O.\*, Norton, E.S., Beach, S.D., Park, A., Wolf, M., Gabrieli, J.D.E., **Gaab, N.**, Patel, A.D. (2016). Cognitive Links Between Rhythm Perception and Language: A Behavioral and Neuroimaging Investigation. Abstract submitted for International Conference on Music Perception and Cognition, San Francisco, July 2016.
  26. Wang, Y.\*, Mauer, M.\*, Raney, T.\*, Peysakhovich, B.\*, Becker, B.\*, Sliva, D.\*, & **Gaab, N.** (2016). Development of tract-specific white matter pathways during early reading development in at-risk children and typical controls. Poster presented at the Cognitive Neuroscience Society Annual Meeting, New York, April 2016.
  27. Figuccio, M. J.\*, Yu, X.\*, Wang, Y.\*, & **Gaab, N.** (2016). Activation during phonological processing is associated with white matter microstructure in preschoolers with and without a familial risk of developmental dyslexia. Poster presented at the 24th Annual Cognitive Neuroscience Society Meeting, New York, April 2016.
  28. Mauer, M.\*, Zuk, J.\*, Becker, B.\*, Raschle, N.\*, Wang, Y.\*, Chang, M.\*, & **Gaab, N.** (2016). Neural correlates of phonological processing: Disrupted in children with reading disorders and enhanced in children with musical training. Poster presented at the Cognitive Neuroscience Society Annual Meeting, New York, April 2016.
  29. Ozernov-Palchik, O.\*, Mauer, M.\*, Norton, E., Beach, S., Wolf, M., Gabrieli, J.D.E. & **Gaab, N.** (2016). Distinct Neural Alterations of Heterogeneous Dyslexia Risk Profiles. Poster presented at the Cognitive Neuroscience Society Annual Meeting, New York, April, 2016.
  30. Zuk, J.\*, Becker, B.\*, Norton, E.\*, Ozernov-Palchik, O.\*, Mauer, M.\*, Beach, S., Hogan, T., Gabrieli, J., & **Gaab, N.** (2016). Structural brain alterations in kindergarteners with speech sound disorders . Poster presented at the Cognitive Neuroscience Society Annual Meeting. New York, NY: April, 2016.
  31. Yu, Xi\*, Raney, T.\*, Becker, B.\* & **Gaab, N.** (2016). Examining compensatory mechanisms and protective factors in typical readers with a family history of dyslexia. Poster presented at the 24th Annual Cognitive Neuroscience Society Meeting, New York, April 2016.

32. Zuk, J.\*, Becker, B.\*, Norton, E.\*, Ozranov-Palchik, O.\*, Beach, S., Mauer, M.\*, Hogan, T., Gabrieli, J., & **Gaab, N.** (2016). Disentangling behavioral and neural links between speech production deficits and dyslexia from kindergarten. The Speech and Hearing Bioscience and Technology Midwinter Forum. Cambridge, MA; January 2016.
33. Ozernov-Palchik, O.\*, Norton, E.S.\*, Beach, S.D., Park, A., Wolf, M., Gabrieli, J.D.E., **Gaab, N.**, Patel, A.D. (2016). Cognitive Links Between Early Literacy and Rhythm Perception. Northeastern Music Cognition Group annual meeting, Boston, January, 2016.
34. Zuk, J.\*, Becker, B.\*, Norton, E.\*, Ozernov-Palchik, O.\*, Beach, S., Mauer, M.\*, Hogan, T., Gabrieli, J., & **Gaab, N.**, Patel, A.D. (2016). Disentangling behavioral and neural links between speech production deficits and dyslexia from kindergarten. Poster presented at the Northeastern Music Cognition Group annual meeting, Boston, January, 2016.
35. Wang, Y.\*, Mauer, M.\*, Raney, T.\*, Peysakhovich, B.\*, Becker, B.\*, Sliva, D.\*, & **Gaab, N.** (2015). White matter development in children at risk for dyslexia. Poster abstract submitted to the Neurodevelopmental Disorders Symposium, Boston, October 2015.
36. Yu, Xi\*, Raney, T.\*, Becker, B.\* & **Gaab, N.** (2015). Examining compensatory mechanisms and protective factors in typical readers with a family history of dyslexia. Poster abstract submitted to the Neurodevelopmental Disorders Symposium, Boston, October 2015.
37. Ozernov-Palchik, O.\*, Mauer, M.\*, Norton, E.\*, Beach, S., Wolf, M., Gabrieli, J.D.E. & **Gaab, N.** (2015). Distinct Neural Alterations of Heterogeneous Dyslexia Risk Profiles. Poster abstract submitted to the Neurodevelopmental Disorders Symposium, Boston, October 2015.
38. Zuk, J.\*, Bishop-Lieber, P., Ozernov-Palchik, O.\*, Peysakhovich, B.\*, Moore, E., Overy, K., Welch, G., & **Gaab, N.** (2015). Characterizing auditory and speech processing abilities in musicians with dyslexia. Abstract for the Society for Music Perception and Cognition conference, Nashville, August 2015.
39. Pienaar, R., Sliva, D.\*, **Gaab, N.** & Grant, PE. Distributions of Brain Surface Curvature and Gray Matter Thickness. Poster accepted to the 21st Annual Meeting of the Organization for Human Brain Mapping, June 2015.
40. Figuccio, M.\*, Andrade, P., Andrade, O.\* & **Gaab, N.** (2015). Music Perceptual Abilities Predict Reading and Writing Skills in Young Readers: A Longitudinal Study. Poster accepted to the Massachusetts Neuropsychological Society's Annual Science Symposium, May 2015.
41. Zuk, J., Bishop-Lieber, P., Ozernov-Palchik, O., Peysakhovich, B., Moore, E., Overy, K., Welch, G., & **Gaab, N.** Characterizing auditory and speech processing abilities in musicians with dyslexia. Presentation accepted for the Northeast Cognition Music Group annual meeting, Connecticut, April 2015.
42. Zuk, J.\*, Becker, B.\*, Norton, E., Ozranov-Palchik, O.\*, Beach, S., Mauer, M.\*, Hogan, T., Gabrieli, J., & **Gaab, N.** (2015). Structural Brain Alterations in Young Children with Speech Sound Disorders: a Preliminary Investigation. Poster abstract accepted to the Speech and Hearing Bioscience and Technology Midwinter Forum, Cambridge, January 2015.

43. Norton, E.S.\*, Beach, S., Ozernov-Palchick, O.\*, **Gaab, N.**, & Gabrieli, J. (2015). Brain structure differences associated with risk for dyslexia: Patterns of phonological awareness and RAN deficit subtypes. Abstract presented at the 22<sup>nd</sup> Annual Meeting of the Society for the Scientific Study of Reading, Hawaii, July 2015.
44. Figuccio, M.J.\*, Wang, Y.\*, Langer, N.\*, Peysakhovich, B.\*, Becker, B.\*, Sliva, D.\*, & **Gaab, N.** (2015). Examining atypical structural connectivity in infants at risk for dyslexia and its relationship to language skills in infancy and preschool. Poster abstract accepted to the 22<sup>nd</sup> Annual Meeting of the Society for the Scientific Study of Reading, Hawaii, July 2015.
45. Figuccio, M.J.\*, Andrade, P.E., Andrade, O.V.C.A. & **Gaab, N.** (2014). Music abilities predict language outcomes in Portuguese readers. Poster presented at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
46. Wang, Y.\*, Raschle, N.M.\*, Sliva, D.\*, Mauer, M.\*, Powers, S.\*, Becker, B.\*, Peysakhovich, B.\*, & **Gaab, N.** (2014). Atypical development of executive function in pre-readers at familial risk for dyslexia: A longitudinal fMRI study. Poster presented at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
47. Raschle, N.M.\*, Becker, B.\*, Smith, S.\*, & **Gaab, N.** (2014). Investigating the influences of early language delay and familial risk for dyslexia on brain structure in pre-school/kindergarteners. Poster presented at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
48. Sliva, D.\*, Peysakhovich, B.\*, Wang, Y.\*, Grant, P.E., **Gaab, N.**, & Dehaes, M. (2014). Resting state auditory network strength is related to age, brain structure and familial risk for developmental dyslexia in infants. Poster presented at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
49. Norton E.S.\*, Beach S.D., Saygin, Z., Ozernov-Palchik, O.\*, Cyr, A.B., Halverson, K.K., **Gaab, N.** & Gabrieli, J.D.E (2014). Predicting 1<sup>st</sup> grade reading from kindergarten ERP, MRI and behavior: Toward accurate early identification of dyslexia. Oral presentation at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
50. Sliva, D.D.\*, Peysakhovich, B.\*, Wang, Y.\*, Grant, P.E., **Gaab, N.** & Dehaes, M. (2014). Resting state auditory network strength is related to age, brain structure and familial risk for developmental dyslexia in infants. Poster accepted to the 4<sup>th</sup> Biennial Conference on Resting State/Brain Connectivity, Cambridge, September 2014.
51. Figuccio, M.J.\*, Andrade, P.E., Andrade, O.V.C.A. & **Gaab, N.** (2014). Music abilities predict language outcomes in Portuguese readers. Poster accepted to the 21<sup>st</sup> Annual Meeting of the Society for the Scientific Study of Reading, Sante Fe, July 2014.
52. Langer, N.\*, Peysakhovich, B.\*, Zuk, J.\*, Drottar, M., Sliva, D.D.\*, Smith, S.\*, Becker, B.\*, Grant, P.E. & **Gaab, N.** (2014). Reduced white matter integrity in infants at risk for developmental dyslexia. Abstract accepted to the 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Hamburg, Germany, June 2014.
53. Zuk, J.\*, Wang, Y.\*, Raschle, N.M.\*, Becker, B.\*, Chang, M., & **Gaab, N.** (2014). Examining the neural correlates of rapid auditory processing and phonological processing in children with musical training. Poster abstract accepted to the 5<sup>th</sup> Annual Meeting of The Neurosciences and Music, Dijon,

France, May 2014.

54. Raschle, N.M.\*, Sliva, D.\*, Becker, B.\*, Smith, S.\*, Peysakhovich, B.\*, Ozranov-Palchik, P.\*, Zuk, J.\*, Figuccio, M.\*, Chang, M.\* & **Gaab, N.** (2014). The development of neuronal and behavioral pre-markers of developmental dyslexia from pre-reading to beginning reading stage in children with and without a risk for dyslexia. Poster abstract presented at the 1<sup>st</sup> Annual Meeting of Zurich Computational Psychiatry, Zurich, Switzerland, May 2014.
55. Wang, Y.\*, Raschle, N.M.\*, Sliva, D.\*, Dauvermann, M.R.\*, Becker, B.\*, Ozranov-Palchik, O.\*, Peysakhovich, B.\*, Smith, S.A.\*, Figuccio, M.\*, Zuk, J.\* & **Gaab, N.** (2014). The development of phonological processing from the pre-reading to the beginning-reading stage in children with and without a familial risk for developmental dyslexia. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
56. Im, K., Raschle, N.M., Smith, S.A., Grant, P.E. & **Gaab, N.** (2014). Bilateral atypical parietal sulcal pattern in developmental dyslexia. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
57. Ozernov-Palchik, O.\*, Raschle, N.M.\*, Norton, E.S.\*, Beach, S.D., Becker, B.\*, Cyr, A.B., Wolf, M., Gabrieli, J.D.E. & **Gaab, N.** (2014). Distinct neuroanatomical regions of early reading abilities: Longitudinal voxel-based morphometry study. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
58. Norton, E. S. \*, Beach, S. D., Cyr, A. B., Ozernov-Palchik, O. \*, Halverson, K. K., **Gaab, N.** & Gabrieli, J. D. E. (2014). Kindergarten pre-reading skills and ERP mismatch negativity measures predict 1st grade connected text reading fluency. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
59. Peysakhovich, B.\*, Langer, N.\*, Zuk, J.\*, Drottar, M., Sliva, D.D.\*, Smith, S.\*, Becker, B.\*, Grant, P.E. & **Gaab, N.** (2014). Reduced white matter integrity in infants at risk for developmental dyslexia. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
60. Raschle, N.M.\*, Becker, B.\*, Smith, S.\* & **Gaab, N.** (2014). Investigating the influences of early language delay and familial risk for dyslexia on brain structure in preschoolers/kindergarteners. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
61. Sliva, D.D.\*, Raschle, N.M.\*, Zuk, J.\*, Smith, S.A.\*, Becker, B.\*, Peysakhovich, B.\*, Grant, P.E., **Gaab, N.** & Pienaar, R. (2014). Brain surface curvature-based biomarkers for developmental dyslexia. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
62. Smith, S.A.\*, Raschle, N.M.\*, Zuk, J.\*, Dauvermann, M.R.\*, Figuccio, M.J.\* & **Gaab, N.** (2014). Investigating the neural correlates of voice or content directed information within human speech in pre-school children. Poster presented at the 21<sup>st</sup> Annual Cognitive Neuroscience Society Meeting, Boston, April 2014.
63. Langer, N.\*, Benjamin, C.\*, Minas, J.\* & **Gaab, N.** (2013). The effects of different speed rates in reading fluency on dyslexic children. Poster presented at the 19<sup>th</sup> Annual Meeting of the Organization of Human Brain Mapping, Seattle, June 2013.
64. Ozernov-Palchik, O.\*, Norton, E.\*, Beach, S.\*, Langer, N.\*, Cyr, A.B., Gabrieli, J.D.E., & **Gaab, N.**

- (2013). Sub-Components of Early Reading Correlate with Cortical Thickness in Distinct Brain Regions of the Reading Network. Poster presented at the 19<sup>th</sup> Annual Meeting of the Organization of Human Brain Mapping, Seattle, June 2013.
65. Pienaar, R., Im, K., Dehaes, M., Smith, S. \*, Peysakhovich, B. \*, Becker, B. \*, Raschle, N. \*, Grant, P.E. & **Gaab, N.** (2013). Curvature-based biomarkers for dyslexia: T1-image based surface analysis shows statistical separable dyslexic features. Poster presented at the International Society for Magnetic Resonance Imaging in Medicine Meeting, Salt Lake City, April 2013.
  66. Im, K., Raschle, N.M. \*, Ozernov-Palchik, O. \*, **Gaab, N.** & Grant, P.E. (2013). Atypical sulcal patterns in pre- readers and beginning readers with a familial risk for developmental dyslexia. Poster presented at the International Society for Magnetic Resonance Imaging in Medicine Meeting, Salt Lake City, April 2013.
  67. Dehaes, M., Raschle, N.M. \*, Sliva, D.D. \*, Zuk, J. \*, Drottar, M., Chang, M. \*, Peysakhovich, B. \*, Becker, B. \*, Smith, S. \*, Pienaar, R., **Gaab, N.** & Grant, P.E. (2013). Potential of resting state connectivity and passive fMRI to detect precursors of learning disabilities in infants: preliminary results with infants at familial risk for developmental dyslexia. Poster presented at the International Society for Magnetic Resonance Imaging in Medicine Meeting, Salt Lake City, April 2013.
  68. Norton, E.S., Beach, S.D., Ozernov-Palchik, O. \*, Cyr, A.B., **Gaab, N.** & Gabrieli, J.D.E. (2013). Rapid automatized naming skill is associated with brain activation for visual letter processing in kindergarten children. Poster presented at the 20<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, San Francisco, April 2013.
  69. Beach, S.D., Norton, E.S. \*, Ozernov-Palchik, O. \*, Coulter, C.M., Cyr, A.B., **Gaab, N.** & Gabrieli, J.D.E. (2013). Home literacy exposure mitigates the effect of genetic risk for dyslexia reflected in the EEG mismatch negativity response. Poster presented at the 20<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, San Francisco, April 2013.
  70. Shetreet, E. \*, Chierchia, G. & **Gaab, N.** (2012). Rethinking the delayed acquisition of scalar implicatures. Poster presented at the 5<sup>th</sup> Generative Approaches to Language Acquisition-North America Conference, University of Kansas, October 2012.
  71. Saygin, Z.S., Norton, E.S. \*, Osher, D.E., Beach, S.E., Cyr, A.B., Ozernov-Palchik, O. \*, **Gaab, N.** & Gabrieli, J.D.E. (2012). Structural connectivity predicts risk for dyslexia in kindergarteners. Poster presented at the Society for Neuroscience 42<sup>nd</sup> Annual meeting, New Orleans, October 2012.
  72. Lee, M. \*, Raschle, N. \* & **Gaab, N.** (2012). Examining functional brain differences in pre-readers at risk for dyslexia during a classical Eriksen Flanker task. Poster presented at the Society for the Scientific Study of Reading Conference, Montreal, July 2012.
  73. Minas, J. \*, Benjamin, C. \* & **Gaab, N.** (2012). Examining neural correlates of reading fluency in children with and without developmental dyslexia. Poster presented at the Society for the Scientific Study of Reading Conference, Montreal, July 2012.
  74. **Gaab, N.**, Figuccio, M. \*, Meissner, S. \* & Raschle, N.M. \* (2012). Brain structure in preschool is associated with later reading ability. Poster presented at the 19<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Chicago, March 2012.
  75. Zuk, J. \*, Benjamin, C. \*, Kenyon, A. \* & **Gaab, N.** (2012). Enhanced executive functioning skills in

children and adults with musical training. Poster presented at the 19<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Chicago, March 2012.

76. Ozernov-Palchik, O.\*, Norton, E.S.\*, Cyr, A.B., Beach, S.D., Garel, K.A., Gabrieli, J.D.E. & **Gaab, N.** (2012). Examining at-risk classification for future reading difficulty in kindergartners. Poster presented at the 19<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Chicago, March 2012.
77. Shetreet, E.\*, Chierchia, G. & **Gaab, N.** (2012). What can the brain tell us about some? Poster presented at the 25<sup>th</sup> Annual CUNY Conference on Human Sentence Processing, New York, March 2012.
78. Zuk, J.\*, Benjamin, C.\*, Kenyon, B.\* & **Gaab, N.** (2011). Examining the relationship between musical training and executive functioning skills: behavioral and fMRI studies in children and adults. Poster presented at the Music and Neuroscience Conference, Edinburgh, UK, June 2011.
79. Zuk, J.\*, Andrade, P., Andrade, O.V., Gardiner, M. & **Gaab, N.** (2011). Music and language: relations between perception of musical sequences, phonological processing, and literacy acquisition. Poster presented at the Music, Science & Medicine: Frontiers in Biomedical Research & Clinical Applications, The New York Academy of Sciences, New York City, March 2011.
80. Andrade, P.E., Zuk, J.\*, Andrade O.V.C.A., Gardiner, M. & **Gaab, N.** (2011). A música como ferramenta diagnóstica na identificação precoce de escolares com risco de dislexia. Poster presented at the 3<sup>th</sup> Congresso Internacional de Dislexia, Belo Horizonte, Brazil, March 2011.
81. Benjamin, C.\* & **Gaab, N.** (2010). From letter strings to connected text: Using fMRI to investigate reading fluency. Poster presented at the 2<sup>nd</sup> Neurobiology of Language Conference, San Diego, October 2010.
82. Benjamin, C.\* & **Gaab, N.** (2010). Examining fluent reading networks in adults: Implications for developmental dyslexia? Poster presented at the The Annual Meeting of the Society for Developmental and Behavioral Pediatrics, Boston, September 2010.
83. Raschle, N.M.\*, Zuk, J.\* & **Gaab, N.** (2010). Neural correlates of phonological processing are disrupted in pre-readers at risk for developmental dyslexia. Poster presented at the Annual Meeting of the Society for Developmental and Behavioral Pediatrics, Boston, September 2010.
84. Raschle, N.\*, Zuk, J.\* & **Gaab, N.** (2010). Disrupted neural response to phonological processing in pre-reading children at risk for developmental dyslexia: an fMRI study. Abstract presented at the Society for Research in Child Development Biennial Meeting, Montreal, Canada, April 2010.
85. Raschle, N.\*, Chang, M.\*, Lee, M.\*, Buechler, R.\* & **Gaab, N.** (2009). Examining Behavioral and Neural Pre-Markers of Developmental Dyslexia in Children Prior to Reading Onset. Abstract presented at the 15<sup>th</sup> International Conference on Functional Mapping of the Human Brain (OHBM), San Francisco, June 2009.
86. Christodoulou, J.A., Kovelman, I., Norton, E.S., King, L., DelTufo, S., **Gaab, N.**, Triantafyllou, C., Lieberman, D.A., Lymberis, J., O'Loughlin, P., Whitefield-Gabrieli, S., Wolf, M. & Gabrieli, J.D.E. (2009). Developmental dissociation between brain regions for phonological awareness. Abstract presented at the Society for the Scientific Study of Reading, Boston, June 2009.
87. Norton, E., Kovelman, I., **Gaab, N.**, Christodoulou, J., Lieberman, D.A., Lymberis, J., Whitfield-Gabrieli, S., Wolf, M. & Gabrieli, J.D.E (2009). Evidence for different neural processing of auditory

language phonological awareness in children with developmental dyslexia. Abstract presented at the Society for the Scientific Study of Reading, Boston, June 2009.

88. Christodoulou, J.A., Kovelman, I., Norton, E.S., Triantafyllou, C., Lieberman, D.A., Lymberis, J., Whitfield-Gabrieli, S., Wolf, M., **Gaab, N.** & Gabrieli, J.D.E (2009). Auditory and visual phonological processing between children with and without developmental dyslexia. Abstract presented at the International Mind, Brain, and Education Society, Philadelphia, May 2009.
89. Raschle, N.M.\*, Chang, M.\*, Lee, M.\*, Buechler, R.\* & **Gaab, N.** (2009). Examining behavioral and neural pre-markers of developmental dyslexia in children prior to reading onset. Abstract presented at the Dr. M. Judah Folkman Research Day at Boston Children's Hospital, Boston, May 2009.
90. Chang, M.\*, Lieberman, D., Ofen, N. & **Gaab, N.** (2009). The influence of rest period instructions on the default mode of brain function. Abstract presented at the Dr. M. Judah Folkman Research Day at Boston Children's Hospital, Boston, May 2009.
91. Dabek, R.\*, Vakil, M.\*, Benjamin, C.\*, Chang, M.\*, Lee, M.\* & **Gaab, N.** (2009). Learning to Read by Learning to Sing. Abstract presented at the Boston Undergraduate Research Symposium, Cambridge, April 2009.
92. North, K.\*, Chang, M.\*, Vakil, M.\*, Lee, M.\*, Raschle, N.\* & **Gaab, N.** (2009). Assessing the Influence of Musical Training on Reading Measurements and General Cognitive Abilities. Abstract presented at the Boston Undergraduate Research Symposium, Cambridge, April 2009.
93. Norton, E., Kovelman, I., **Gaab, N.** Christodoulou, J., Lieberman, D.A., Lymberis, J., Whitfield-Gabrieli, S. & Gabrieli, J.D.E. (2009). Neural correlates of auditory phonological processing in typical reading development and dyslexia. Poster presented at the 16<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, San Francisco, April 2009.
94. Lieberman, D.A., Kim, H., Lakshminarayanan, K., Glover, G.H., Tallal, P., Gabrieli, J.D.E. & **Gaab, N.** (2008). Specificity within auditory cortices for nonlinguistic auditory timing patterns related to speech processing. Poster presented at the 15<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, San Francisco, April 2008.
95. **Gaab, N.**, Ofen, N., Gabrieli, J.D.E. & Glover, G.H. (2007). Resting in peace, noise or with instructions: the influence of scanner background noise on the default mode of brain functions. Poster presented at the meeting of the International Society for Magnetic Resonance Imaging in Medicine, Berlin, Germany, May 2007.
96. **Gaab, N.**, Ofen, N. & Gabrieli, J.D.E. (2007). Resting with instructions: Actively ignoring or attending to scanner background noise during rest periods can alter default mode of brain functions. Poster presented at the 14<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, New York City, May 2007.

### **Selected invited oral presentations/conference talks (since start of faculty position 7/2007)**

1. **Gaab, N.** (2018). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Northeastern University, Boston, MA, January 2018.

2. **Gaab, N.** (2018). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. LEND Program, Boston Children's Hospital, Boston, MA, January 2018.
3. **Gaab, N.** (2018). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. University of California, San Diego, San Diego, CA, January 2018.
4. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Dyslexia Society of Connecticut Conference, Westbrook, CT, October 2017.
5. **Gaab, N.** (2017). Tackling the dyslexia paradox: How a neurobiological framework of reading development can inform clinical practice. Martha Eliot Health Center, Boston Children's Hospital, Jamaica Plain, MA, October 2017.
6. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice. Presentation at the Brazilian Dyslexia Association, Sao Paulo, Brazil, September 2017.
7. **Gaab, N.** (2017). Linking music, language and dyslexia: theoretical and experimental contributions. Presentation at the 4th Brazilian Meeting on Brain and Cognition. São Bernardo do Campo, Brazil, September 2017.
8. **Gaab, N.** (2017). Dyslexia Legislation Hearing, Massachusetts State House, Boston, MA; Organizer and member of a team of researchers, parents, clinicians and patients who testified in favor of the Dyslexia bills, July 2017.
9. **Gaab, N.** (2017). Briefing for Dyslexia Legislation, Speaker's Lounge, Massachusetts State House, Boston, MA; June 2017.
10. **Gaab, N.** (2017). Can white matter integrity in infancy predict musical aptitude in preschool? Neuromusic conference, Boston, MA, June 2017.
11. **Gaab, N.** (2017). The typical and atypical reading brain: how a neurobiological model of reading can inform clinical and educational practice. Invited speaker at the Department of Psychiatry, New York Medical College, Valhalla, NY, May 2017.
12. **Gaab, N.** (2017). Atypical brain development in Bangladeshi infants exposed to profound early adversity. Oral presentation at the Society for Research in Child Development Biennial Meeting, Austin, TX, April 2017.
13. **Gaab, N.** (2017). Neural Compensatory Mechanisms in Prereaders with a Family History of Dyslexia Who Subsequently Develop Typical Reading Skills. Oral presentation at the Society for Research in Child Development Biennial Meeting, Austin, TX April 2017.
14. **Gaab, N.** (2017). Neuroimaging of Factors that Influence Reading Development. Invited speaker at the Society for Research in Child Development Biennial Meeting, Austin, TX April 2017.

15. **Gaab, N.** (2017). Multi-method neuroimaging study of the impact of global adversity on the brain development in Bangladeshi children. Invited speaker at the Society for Research in Child Development Biennial Meeting, Austin, TX April 2017.
16. **Gaab, N.** (2017). Invited panelist at the Equity, Democracy, and Justice in Early Childhood panel. “Week of the Young Child,” Harvard Graduate School of Education, Cambridge, MA April 2017.
17. **Gaab, N.** (2017). Colored blobs on pretty brains and the neurobiology of dyslexia. Presentation at Pediatric Fellows Educational Seminar, Boston Children’s Hospital, Boston, MA April 2017.
18. **Gaab, N.** (2017). Invited presenter at Innovators’ Showcase, Innovation and Digital Health Accelerator, Boston Children’s Hospital, Boston, MA April 2017.
19. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice. Invited speaker for the DMC Fellows at Boston Children’s Hospital, Boston, MA, April 2017.
20. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Keynote at the annual conference of the Learning Disabilities Association of America, Baltimore, MD February 2017.
21. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Grand Rounds, The Dyslexia Center at UCSF, San Francisco, CA February 2017.
22. **Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Invited presentation at ‘From Neurons to the Classroom’. Conference organized by ‘The Dyslexia Foundation,’ San Francisco, CA; February 2017.
23. **Gaab, N. & Jerdee, K.** (2017). Developing a Dyslexia Screening App: successes, road blocks and a naming challenge. Presentation at the Laboratory of Cognitive Neuroscience monthly meeting, Boston Children’s Hospital, Boston, MA January 2017.
24. **Gaab, N.** (2016). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Invited presentation at the Developmental Science Colloquium, University of Massachusetts, Amherst, MA, November, 2016.
25. **Gaab, N.** (2016). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Invited presentation at the LEND program, Boston Children’s Hospital, Boston, MA, November 2016.
26. **Gaab, N.** (2016). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Invited presentation at the DMC Center meeting, Boston Children’s Hospital, Boston, MA, November 2016.
27. **Gaab, N.** (2016). Early screening for dyslexia and reading disabilities: The WHY, the WHEN, and the HOW. Invited presentation at the Early Literacy Expert Panel, Executive Office of Education, Boston, MA, October.

28. **Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Invited presentation at ‘Dyslexia and Literacy: Early identification in educational programming’. Conference organized by ‘The Dyslexia Foundation’, Boston, MA; October.
29. **Gaab, N.** (2016). Examining the developing brain from infancy to adolescence: how developmental cognitive neuroscience can shed new light on contemporary questions in psychology and education. Heckhausen-Kolloquium speaker; University of Bochum, Germany
30. Figuccio, M. J.\*, Wang, Y.\*, & **Gaab, N.** (2016). Infant white matter microstructure predicts preschool pre-reading skills in children with and without a familial risk of developmental dyslexia. In M. Vandermosten (Chair), Neurobiology of dyslexia: cause or consequence? Symposium conducted at the 23rd Society for the Scientific Study of Reading Meeting, Porto July 2016.
31. Yu, X.\*, Raney, T.\*, Becker, B. \*, & **Gaab, N.** (2016). Compensatory mechanisms in typical readers with a family history of dyslexia. Oral presentation in M. Vandermosten (Chair), Neurobiology of dyslexia: cause or consequence? Symposium conducted at the 23rd Society for the Scientific Study of Reading Meeting, Porto July 2016.
32. **Gaab, N.** (2016). Brain development and dyslexia across early life. Invited presentation at the bi-annual meeting of The Dyslexia Foundation, St. Croix, U.S.
33. **Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Columbia University Medical Center’s Division of Child and Adolescent Psychiatry’s DeHirsch Robinson-PROMISE Grand Rounds. New York, May, 2016.
34. **Gaab, N.** (2016). Tackling the dyslexia paradox: Examining neural pre-markers of developmental dyslexia in infancy and early childhood. Division of Genetics Boston Children’s Hospital Seminar Series. Boston, May, 2016.
35. **Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Massachusetts Advocates for Children. Boston, March 2016.
36. **Gaab, N.** (2016). Dyslexia. Decoding Dyslexia Day on the Hill. Massachusetts State House. Boston, February 2016.
37. **Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Harvard Graduate School of Education. Cambridge, MA, February 2016.
38. **Gaab, N.** (2015). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Vanderbilt University. Nashville, December, 2015.
39. **Gaab, N.** (2015). Tackling the dyslexia paradox: Examining neural pre-markers of developmental dyslexia in infancy and early childhood. Neurodevelopmental Disorders Symposium; Harvard Medical School; October, 2015.
40. **Gaab, N.** (2015). Tackling the dyslexia paradox: Examining neural pre-markers of developmental dyslexia in infancy and early childhood. Tufts University; October, 2015.

41. Zuk, J.\*, Becker, B.\*, Norton, E.\*, Ozernov-Palchik, O.\*, Beach, S., Mauer, M.\*, Hogan, T.P., Gabrieli, J., **Gaab, N.** (2015). Structural brain alterations in young children at behavioral risk for dyslexia and the impact of speech sound disorders. Presentation for the Society for the Scientific Study of Reading at the 7<sup>th</sup> International Summer School, Egmond an Zee, Netherlands, August 2015.
42. Yu, X.\*, Raney, T.\*, Becker, B.\*, & **Gaab, N.** (2015). Compensatory mechanisms in typical readers with a family history of dyslexia. Oral presentation at the 7<sup>th</sup> European Graduate Scholl on Literacy Acquisition, The Netherlands, September 2014.
43. Figuccio, M.J.\*, Wang, Y.\*, Langer, N.\*, Peysakhovich, B., Becker, B.\*, Sliva, D.\*, & **Gaab, N.** (2015). White matter connectivity in infancy predicts preschool pre-reading skills in infants with a familial risk of developmental dyslexia. Talk presented at the 7<sup>th</sup> International Summer School on Literacy Research, Egmond aan Zee, August 2015.
44. Jack, A., Keifer, C., Gulliford, D., Torgerson, C., Aylward, E., Bookheimer, S., Dapretto, M., **Gaab, N.**, Van Horn, J., Pelphrey, K., & the GENDAAR working group (2015). Sex differences in biological motion perception among youth with ASD: an fMRI investigation. Abstract presented at the International meeting for autism research (IMFAR), Salt Lake City, Utah, May 2015.
45. **Gaab, N.** (2015). The typical and atypical reading brain: Examining neurobiological precursors, developmental trajectories and mediating factors. Grand Rounds, Boston Children's Hospital, Boston, 2015.
46. **Gaab, N.** (2015). Linking music, language and executive functioning: Implications for developmental disorders. Talk presented at Harvard Medical School "Mini-Med School," Boston, April, 2015.
47. **Gaab, N.** (2015). The typical and atypical reading brain. Talk presented at the Developmental Medicine Center, Boston Children's Hospital, Philanthropic Council Meeting, Boston, March 2015.
48. **Gaab, N.** (2015). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. University of Zurich, Switzerland, March 2015.
49. **Gaab, N.** (2015). The typical and atypical reading brain: examining neurobiological precursors, developmental trajectories and mediating factors. Talk presented at the Department of Communication Sciences and Disorders, Northeastern University, Boston, March 2015.
50. Peysakhovich, B.\*, Langer, N.\*, Zuk, J.\*, Drottar, M., Sliva, D.D.\*, Smith, S.\*, Becker, B.\*, Grant, P.E. & **Gaab, N.** (2014). White matter alterations characteristic of children/adults with developmental dyslexia already evident in at-risk infants. Talk presented at the 2<sup>nd</sup> Annual Meeting of the New England Research on Dyslexia (NERDY) Society, Boston, October 2014.
51. **Gaab, N.** (2014). The typical and atypical reading brain. Learning and the Brain Conference: Focused, Organized Minds: Using Brain Science to Engage Attention in a Distracted World. Invited Oral presentation, Boston, November 2014.
52. **Gaab, N.** (2014). Music as a diagnostic tool for language-based learning disabilities? Invited panel presentation at the International Dyslexia Association's 65<sup>th</sup> Annual Reading, Literacy and Learning Conference, San Diego, November 2014.

53. **Gaab, N.** (2014). Infants, toddlers and preschoolers in the scanner: Practical tips on how to succeed. Invited Oral Presentation at the 2<sup>nd</sup> Annual Flux Congress, Hollywood, September 2014.
54. Langer, N.\*, Gorgolewski, C., Benjamin, C.\*, Becker, B.\* & **Gaab, N.** (2014). Examining the comorbid reading brain using multivariate pattern analysis. Abstract accepted for an oral symposium at the 21<sup>st</sup> Annual Meeting of the Society for the Scientific Study of Reading, Sante Fe, July 2014.
55. Norton, E.S.\*, Beach, S.D., Saygin, Z.M., Ozernov-Plachik, O.\*, Cyr, A.B., Halverson, K.K., Hudson, M., Leon Guerrero, S., **Gaab, N.** & Gabrieli, J.D.E. (2014). Linking brain structure and function with reading abilities: Relations among left arcuate fasciculus structure, the ERP mismatch negativity response, and reading-related skills in kindergarten and 1<sup>st</sup> grade. Abstract accepted for an oral symposium at the 21<sup>st</sup> Annual Meeting of the Society for the Scientific Study of Reading, Sante Fe, July 2014.
56. Peysakhovich, B.\*, Langer, N.\*, Zuk, J.\*, Drottar, M., Sliva, D.D.\*, Smith, S.\*, Becker, B.\*, Grant, P.E. & **Gaab, N.** (2014). White matter alterations characteristic of children/adults with developmental dyslexia already evident in at-risk infants. Abstract accepted for an oral symposium at the 21<sup>st</sup> Annual Meeting of the Society for the Scientific Study of Reading, Sante Fe, July 2014.
57. **Gaab, N.** (2014). Neurobiological precursors of reading. Invited Oral Presentation at the German Dyslexia Association's Symposium entitled *Dyslexia and Dyscalculia – Genetics, Neurobiology and Intervention*, Erfurt, Germany, May 2014.
58. **Gaab, N.** (2014). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners. Invited Oral Presentation at the Annual Meeting of the Maternal Child Health Bureau, Boston, March 2014.
59. **Gaab, N.** (2014). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners. Invited Oral Presentation for the Department of Psychology at Carnegie Mellon University, Pittsburgh, February 2014.
60. **Gaab, N.** (2014). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners. Invited Oral Presentation for the Department of Psychology at Temple University, Philadelphia, February 2014.
61. **Gaab, N.** (2013). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners/Invited Oral Presentation at Yale University, New Haven, December 2013.
62. **Gaab, N.** (2013). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners. Invited Oral Presentation at the International Dyslexia Association's Annual Reading, Literacy and Learning Conference, New Orleans, November 2013.
63. **Gaab, N.** (2013). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Invited Oral Presentation at the Biology Colloquium, Northeastern University, Boston, October 2013.
64. **Gaab, N.** (2013). Examining the typical and atypical reading brain: Developmental evidence and mediating factors. Invited Oral Presentation at the Department of Speech-Language Pathology & Audiology, Northeastern University, Boston, October 2013.

65. Shetreet E.\*, Reading J.\*, **Gaab N.** & Chierchia G. (2013). NOT EVERY sentence is more complex than SOME. Invited oral presentation at the Workshop on the Acquisition of Quantification, Amherst, October 2013.
66. **Gaab, N.** (2013). Examining the typical and atypical reading brain prior to reading onset: Developmental evidence from infants, preschoolers and kindergarteners. Pediatrics Grand Rounds/Distinguished Lecturer at the Oklahoma Center for Neuroscience Symposium: The Developing Brain, Oklahoma City, September 2013.
67. **Gaab, N.** (2013). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Special Education Conference: Challenges and Innovations from Infancy to 12<sup>th</sup> Grade, Seattle, March 2013.
68. **Gaab, N.** (2013). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Psychiatric & Neurodevelopmental Genetics Unit, Massachusetts General Hospital, Boston, February 2013.
69. **Gaab, N.** (2013). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Cognitive Science Colloquium, Tufts University, Medford, January 2013.
70. **Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Max Planck Institute for Human Cognition and Brain Sciences, Leipzig, Germany, December 2012.
71. **Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at Developmental Colloquium, Boston College, Chestnut Hill, November 2012.
72. Shetreet E.\*, Reading J.\*, **Gaab, N.** & Chierchia G. (2012). SOME and NOT EVERY: Comparing direct and indirect scalar implicatures. Talk presented at the 37<sup>th</sup> Boston University Conference on Language Development (BUCLD), Boston, November 2012.
73. Norton, E.\*, Beach, S., Cyr, A., Ozranov-Palchik, O.\*, Garel, K., Perrachione, T., Wolf, M., Gabrieli, J. & **Gaab, N.** (2012). Brain differences in kindergarten children with and without behavioral risk for dyslexia: Toward finding fMRI and ERP predictors of reading difficulties. Invited oral presentation at the Society for the Scientific Study of Reading, Montreal, Canada, July 2012.
74. Beach, S., Norton, E.\*, Ozranov-Palchik, O.\*, Cyr, A., Cardenas, C., Eddy, M., Gabrieli, J. & **Gaab, N.** (2012). ERP mismatch negativity differentiates subtypes of kindergartners at risk for dyslexia. Invited oral presentation at the Society for the Scientific Study of Reading, Montreal, Canada, July 2012.
75. **Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Laboratories of Cognitive Neuroscience, Boston Children's Hospital, Boston, May 2012.
76. **Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at Psychology Department, Boston College, Chestnut Hill, April 2012.

77. **Gaab, N.** (2012). Research in the Gaab laboratory. Invited oral presentation at the Council for the Division of Developmental Medicine, Boston, March 2012.
78. **Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at Wayne State University, Child Development Colloquium, Detroit, February 2012.
79. Raschle, N.M.\*, Zuk, J.\* & **Gaab, N.** (2012). The development of phonological processing skills in poor and good readers: a study from preschool to kindergarten. Slide presentation at the 19<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Chicago, March 2012.
80. **Gaab, N.** (2011). The typical and atypical reading brain: Developmental Evidence from Infants, Preschoolers and School-age children. Presentation for clinical fellows from several disciplines/departments at Boston Children's Hospital, December 2011.
81. **Gaab, N.** (2011). Understanding the Reading Brain II: Neuroscience & Early Intervention. Invited oral presentation at the Learning Difference Awareness Conference at the Highlander Dunn Institute, Providence, October 2011.
82. **Gaab, N.** (2011). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited presentation at the Haskins Training Institute, Haskins Laboratories, New Haven, October 2011.
83. **Gaab, N.** (2011). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Invited oral presentation at the Department of Psychology, University of Michigan, Ann Arbor, October 2011.
84. **Gaab, N.** (2011). Developmental Dyslexia. Grand Rounds, Boston Children's Hospital, Boston, September 2011.
85. **Gaab, N.** (2011). The typical and atypical reading Brain. Invited oral presentation for the Sharing Knowledge to Enable Effective Parenting: Messages and Mechanisms from Research and Practice. A Research-to-Practice Conference. Co-Convened by the Achievement Gap Initiative at Harvard University and the Children's Defense Fund, Boston, July 2011.
86. **Gaab, N.** (2011). Structural and functional correlates of reading and reading related processes examined before reading onset and after language/reading remediation. Invited oral presentation for International Society for Mind, Brain and Education, San Diego, June 2011.
87. **Gaab, N.** (2011). Current fMRI methods with children. Invited oral presentation for the Music and Neuroscience Conference, Edinburgh, UK, June 2011.
88. **Gaab, N.** (2011). Music and Dyslexia. Keynote speaker for the Conference: Music, Science & Medicine: Frontiers in Biomedical Research & Clinical Applications. Pre-conference workshop at Rutgers University, Newark, March 2011.
89. **Gaab, N.** (2011). Invited oral presentation for Harvard Mind, Brain, and Behavior Student-Faculty Tea. Harvard University, Cambridge, April 2011.

90. **Gaab, N.** (2011). Influences of musical training on language processing and executive functioning in typical and atypical developing children. Invited oral presentation for the Crossing the Corpus Callosum II Neuroscience, Healing & Music: A symposium hosted by Longwood Symphony Orchestra and The Lab at Harvard University, Boston, January 2011.
91. **Gaab, N.** (2011). Neuroeducation: Does neuroimaging in infancy and young childhood add to the predictive value of psychometric tests? Invited oral presentation at the Harvard University MBB Chalk Talk Series, Cambridge, February 2011.
92. **Gaab, N.** (2010). Research in the Gaab laboratory. Invited oral presentation for the Scientific Advisory Council for the Division of Developmental Medicine, Boston, November 2010.
93. **Gaab, N.** (2010). Update from the Gaab Lab: Neural pre-markers of developmental dyslexia before reading onset? Invited oral presentation at the Developmental Medicine Center Meeting, Boston, November 2010.
94. Benjamin, C., Lee, M., Steinhorn, R. & **Gaab, N.** (2010). What's the story? An fMRI investigation of fluent reading. Invited oral presentation for the Society for Neuroscience 40<sup>th</sup> Annual meeting, San Diego, November 2010.
95. **Gaab, N.** (2010). Brain correlates of early reading development and developmental dyslexia: challenges, new directions and the role of auditory processing. Invited oral presentation at the University of Massachusetts Amherst, Amherst, October 2010.
96. Raschle, N.M., Stering, P.L. & **Gaab, N.** (2010). Disruptive neural response during rapid auditory processing in pre-readers at risk for dyslexia – an fMRI study. Invited oral presentation for the Annual Meeting of the Society for Developmental and Behavioral Pediatrics, Boston, September 2010.
97. **Gaab, N.** (2010). Neural correlates of reading related processes examined with fMRI before reading onset and after language/reading remediation. Invited oral presentation for The Dyslexia Foundation, Cong, Ireland, June 2010.
98. **Gaab, N.** (2010). Brain correlates of early reading development and developmental dyslexia: Challenges, new directions and the role of auditory processing. Special Seminar at the University of Miami, Coral Gables, February 2010.
99. **Gaab, N.** (2009). Neural pre-markers of developmental dyslexia in the pre-reading brain. Invited oral presentation at the Boston Area Cognitive Development Workshop (COGDEV), Cambridge, November 2009.
100. Raschle, N.\*, Chang, M.\* & **Gaab, N.** (2009). Gray matter changes in pre-reading children at risk for dyslexia: Structural pre-markers of dyslexia? Invited oral presentation at the Society for Neuroscience 39<sup>th</sup> Annual Meeting, Chicago, October 2009. (*Abstract also selected for Press Book submission*).
101. **Gaab, N.** (2009). Neural pre-markers of developmental dyslexia in the pre-reading brain. Invited oral presentation at Haskins Laboratories, New Haven, October 2009.
102. **Gaab, N.** (2009). Brain correlates of reading development and developmental dyslexia: challenges, new directions and the role of auditory processing. Invited oral presentation at the University of Konstanz, Konstanz, Germany, July 2009.

103. **Gaab, N.** (2009). Brain correlates of reading development and developmental dyslexia: challenges, new directions and the role of auditory processing. Invited oral presentation at the Freie University of Berlin, Berlin, Germany, August 2009.
104. **Gaab, N.**, Chang, M.\*, Lee, M.\*, Buechler, R.\* & Raschle, N.\* (2009). Neural pre-markers of developmental dyslexia in the pre-reading brain: an fMRI investigation. Invited oral presentation at the Society for the Scientific Study of Reading Conference, Boston, June 2009.
105. **Gaab, N.** (2009). Linking dynamic auditory processing, musical experience and language/reading development and impairment. Invited oral presentation at Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania, June 2009.
106. **Gaab, N.** (2009). Linking music, language and reading. Invited oral presentation at the Massachusetts Arts Education Collaborative (MAEC) School Leadership and Arts Education Symposium, Newton, May 2009.
107. **Gaab, N.** (2009). Brain correlates of reading development and developmental dyslexia: Challenges, new directions and the role of auditory processing. Invited oral presentation at the Clinical Brain Science Collaborative Seminar, Boston Children's Hospital, Boston, May 2009.
108. **Gaab, N.** (2009). Linking dynamic auditory processing, musical experience and language/reading development and impairment. Invited oral presentation at the Developmental Brown Bag, Dartmouth College, Hanover, April 2009.
109. **Gaab, N.** (2009). Linking dynamic auditory processing, musical experience and language/reading development and impairment. Invited oral presentation at Department of Psychology, Boston University, Boston, March 2009.
110. **Gaab, N.** (2009). Pediatric neuroimaging: challenges and solutions. Invited oral presentation at the National Institute of Mental Health (NIMH) at Karen Berman's laboratory, Bethesda, February 2009.
111. **Gaab, N.** (2009). Linking dynamic auditory processing, musical experience and language/reading development and impairment. Invited oral presentation at the National Institute on deafness and other communication disorders (NIDCD), Bethesda, February 2009.
112. **Gaab, N.** (2008). Dynamic auditory processing, musical experience and language/reading development. Invited oral presentation at the Neuropsychology unit at Children's Hospital Salem, Salem, December 2008.
113. **Gaab, N.** (2008). Musical Experience, Auditory Processing and Language Development. Invited oral presentation at the Learning and the Brain Conference, Cambridge, November 2008.
114. **Gaab, N.** (2008). Dynamic auditory processing, musical experience and language/reading development. Keynote Speaker at the 6<sup>th</sup> Annual Neuropsychology Research Day at the Graduate School and University Center, City University of New York, Queens, September 2008.
115. Bishop-Liebler, P., Hostetter, M., Himonides, E., Welch, G. & **Gaab, N.** (2008). Linguistic and non-linguistic auditory processing skills in conservatoire level musicians, with and without developmental dyslexia, and nonmusicians. Invited oral presentation at the Music and Language Conference. Tufts University, Medford, June 2008.

116. **Gaab, N.** (2008). Linking music, language and reading: implications for developmental dyslexia. Invited oral presentation at the International Society for Behavioral Neuroscience Meeting, Sydney, Australia, June 2008.
117. **Gaab, N.** (2008). Dynamic auditory processing, musical experience and language/reading development. Invited oral presentation at the 5<sup>th</sup> Widex Congress of Pediatric Audiology, Amsterdam, The Netherlands, May 2008.
118. **Gaab, N.** (2008). Brain correlates of attention deficit hyperactivity disorder. Invited oral presentation for The Boston Children's Hospital Developmental Medicine Forum, Newton, April 2008.
119. **Gaab, N.** (2008). Neural correlates of rapid auditory processing are disrupted in children with developmental dyslexia and ameliorated with training: An fMRI study. Invited oral presentation for the National Assembly of Wales, Enterprise and Learning Committee Boston Meeting, Boston, April 2008.
120. **Gaab, N.** (2008). Linking music, language and dyslexia: evidence from behavioral and imaging studies. Invited oral presentation at the Massachusetts Neuropsychology Society, Boston, March 2008.
121. **Gaab, N.,** Kovelman, I., Christodoulou, J. A., Liberman, D.A., Weinberg, A., Hostetter, M.K., Norton, E., Reisner, S., Triantafyllou, C. & Gabrieli, J.D.E. (2007). Learning to read changes the developing brain: Comparing phonological and semantic processing between prereaders and readers. Invited oral presentation at the Society for Neuroscience 37<sup>th</sup> Annual Meeting, San Diego, November 2007.
122. Christodoulou, J. A., **Gaab, N.,** Kovelman, I., Liberman, D.A., Weinberg, A., Hostetter, M.K., Norton, E., Reisner, S., Triantafyllou, C., Whitfield-Gabrieli, S. & Gabrieli, J.D.E. (2007). Learning to read changes the developing brain: Orthographic processing in prereaders and readers. Invited oral presentation at the Society for Neuroscience 37<sup>th</sup> Annual Meeting, San Diego, November 2007. (*Abstract also selected for Press Book submission*).
123. **Gaab, N.** (2007). The neglected sense: dynamic auditory processing, musical training and its role in language development and impairment. Special Seminar for the Departments of Cognitive and Linguistic Sciences, Brown University, Providence, February 2007.
124. **Gaab, N.** (2007). The neglected sense: dynamic auditory processing, musical training and its role in language development and impairment. Special Seminar for the Department of Psychology, University of Montreal, Montreal, Canada, February 2007.
125. **Gaab, N.** (2007). Linking music, language and dyslexia. Invited oral presentation at the BMRA symposium, Boston, February 2007.
126. **Gaab, N.** (2007). The neglected sense: auditory processing, musical training and its role in language/reading development and impairment. Invited oral presentation at the Temporal Dynamics of Learning Center and The Center for Research on Language, University of California San Diego, La Jolla, January 2007.

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### **Scientific symposium membership**

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- 04/15 Faculty Discussant of panel entitled *Neurology, Cognition and Learning*. Student research Conference, Harvard Graduate School of Education, Cambridge, MA, April 2015.
- 11/14 Chair, Organizer and Discussant of symposium entitled *Linking Music, Language and Dyslexia*. 65<sup>th</sup> Annual Reading, Literacy and Learning Conference, International Dyslexia Association, San Diego, November 2014.
- 04/14 Faculty Discussant of panel entitled *Recent Developments in Music and Science*. Beyond the Concert Hall Symposium, Harvard University, Cambridge, April 2014.
- 04/13 Faculty Discussant of panel entitled *Cognition and Learning*. Student Research Conference, Harvard Graduate School of Education, Cambridge, MA, April 2013.
- 10/09 Chair for Nanosymposium (Session 217): Reading and Comprehension. 39th Annual Meeting of the Society for Neuroscience, Chicago, October 2009.

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**Teaching Experience (undergraduate/graduate level; since start of faculty position 7/2007)**

**Gaab, N.** (2018). PSY1611: Developmental Disabilities: Neurobiology, Treatment, Implications for Health & Education Policy. Course Director. Department of Psychology, Faculty of Arts and Sciences; Harvard University, Cambridge, Spring 2018.

**Gaab, N. & Nelson, C.** (2017). H126: Typical and Atypical Neurodevelopment. Graduate course for Masters and doctoral students of education. Course Director. Harvard Graduate School of Education, Cambridge, Fall 2017.

**Gaab, N.** (2017). Language Disorders, Reading, and Dyslexia. Summer Seminar Lecture Series, Laboratories of Cognitive Neuroscience, Division of Developmental Medicine, Boston Children's Hospital, August 2017.

**Gaab, N.** (2017). Methods of Investigation: MRI. Summer Seminar Lecture Series, Laboratories of Cognitive Neuroscience, Division of Developmental Medicine, Boston Children's Hospital, July 2017.

**Gaab, N.** (2017). The Typical and Atypical Reading Brain: How Neuroscience Can Inform Educational Practice. Landmark College Summer Institute, Monday Plenary Presentation, June 2017.

**Gaab, N.** J-term (2017). Neuroscience based research in educational settings: a practical guide. Harvard Graduate School of Education 2 hour session, January 2017.

**Gaab, N. & Nelson, C.** (2016). H126: Typical and Atypical Neurodevelopment. Graduate course for Masters and doctoral students of education. Course Director. Harvard Graduate School of Education, Cambridge, Fall 2016.

**Gaab, N.** J-term (2016). Colored blobs on pretty brains: How to interpret a neuroimaging paper. Masters and doctoral students. Harvard Graduate School of Education 2 hour session

**Gaab, N.** J-term (2016). Neuroscience based research in educational settings: a practical guide. Harvard Graduate School of Education 2 hour session

**Gaab, N.** (2015). Infants, Toddlers, Preschoolers in the scanner: practical tips on how to succeed. Lecture at the Helsinki Summer School in Cognitive Neuroscience for Tutorials on brain research methods. University of Helsinki, Helsinki, Finland, August 2015.

**Gaab, N.** (2015). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Lecture at the Helsinki Summer School in Cognitive Neuroscience for Tutorials on brain research methods. University of Helsinki, Helsinki, Finland, August 2015.

**Gaab, N.** & Nelson, C. (2015). H126: Typical and Atypical Neurodevelopment. Graduate course for Masters and doctoral students of education. Course Director. Harvard Graduate School of Education, Cambridge, Fall 2015.

**Gaab, N.** (2014). Human auditory processing: Evidence from neuroimaging. Guest Lecture for doctoral students in Speech and Hearing Bioscience and Technology, Course 205, Neural coding and perception of sound; Instructor: Bertrand Delgutte; Harvard-MIT Program in Speech and Hearing Bioscience and Technology at Harvard Medical School, Boston, April 2014.

**Gaab, N.,** Sheridan, M., & Nelson, C. (2014). H126: Typical and Atypical Neurodevelopment. Graduate course for Masters and doctoral students of education. Harvard Graduate School of Education, Cambridge, Fall 2014.

**Gaab, N.** (2014). The Reading Brain. Guest Lecture for graduate clinical seminar course in the Language Literacy Program; Instructor: Susan Fine; Department of Speech-Language Pathology and Audiology at Northeastern University, Boston, March 2014.

**Gaab, N.** (2013). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Guest Lecture (within class for Special Education students) at Merrimack College, North Andover, May 2013.

**Gaab, N.** (2013). Imaging in Developmental Disorders. Lecture for Harvard Catalyst course: Advanced imaging: Neuroscience imaging for clinical/translational research, Cambridge, April 2013.

**Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Guest Lecture (within class for Special Education students) at Merrimack College, North Andover, October 2012.

**Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Guest Lecture (within class for Special Education students) at Merrimack College, North Andover, March 2012.

**Gaab, N.** (2010). Language, Reading, Neuropsychology. Guest lecture for fall course “PSYC 3466 Cognitive Psychology”; Instructor: Joe Moran; Department of Psychology; Northeastern University, Boston, November 2010.

**Gaab, N.** (2010). Audition and Music. Guest lecture for fall course “9.10 Cognitive Neuroscience”; Instructor: Sue Corkin; Department of Brain and Cognitive Sciences; MIT, Boston, October 2010.

**Gaab, N.** (2010). The typical and atypical reading brain: challenges, new directions and the role of auditory processing. Guest Lecture (within class for Special Education students) at Simmons College, Boston, February 2010.

**Gaab, N.** (2009). Instructor for Quantitative Methods PSYCH 2207. Emmanuel College, Boston, Fall 2009.

**Gaab, N.** (2009). Making MR Imaging Child's Play: challenges and solutions for pediatric neuroimaging. Workshop at Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania, June 2009.

**Gaab, N.** (2008). Audition and Music. Guest lecture for spring course "9.10 Cognitive Neuroscience"; Instructor: Sue Corkin; Department of Brain and Cognitive Sciences; MIT, Boston, October 2008.

**Gaab, N.** (2008). A (very) basic introduction to fMRI and Statistical Parametric Mapping (SPM). Workshop at Boston Children's Hospital, Boston, March 2008.

**Gaab, N., Geiger, N. & Gabrieli, J. D. E.** (2008). Developmental Dyslexia: Perceptual aspects, Diagnosis, Brain-correlates, Remediation and Prevention. One day workshop: Independent Activities Period (IAP); Department of Brain and Cognitive Sciences; MIT, Boston, January 2008.

**Gaab, N. & Geiger, N.** (2007). Developmental Dyslexia: Perceptual Aspects, Diagnosis, Brain-correlates, Remediation and Prevention. One day workshop: Independent Activities Period (IAP); Department of Brain and Cognitive Sciences, MIT, Boston, MA, January 2007.

### **Professional development/Community outreach (since start of faculty position 7/2007)**

**Gaab, N.** (2018). The typical and atypical reading brain. Commonwealth Learning Center, Danvers, MA, March 2018.

**Gaab, N.** (2018). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Special Education Parent Advisory Council, Brookline, MA, February 2018.

**Gaab, N.** (2017). Research on the developing reading brain and resources for parents for their children's reading development. Quincy Parent Advisory Council, Quincy, MA, December 2017.

**Gaab, N.** (2017). The neuroscience of reading. Special Education Parent Advisory Council, Georgetown, MA, November 2017.

**Gaab, N.** (2017). Best practices for the assessment and remediation of dyslexia. Decoding Dyslexia, Belmont, MA, October 2017.

**Gaab, N.** (2017). Brain Awareness Workshop, Second-grade class, Haggerty School, Cambridge, MA, October 2017.

**Gaab, N.** (2017). Solving the dyslexia paradox. Why should we screen? Whom should we screen? Where should we screen? When should we screen? Presentation at Screening & Intervention workshop organized by Tufts University Center for Reading and Language Research. October, 2017.

**Gaab, N.** (2017). HUBWeek Spoke Event: Innovators' Showcase. Boston, MA, October 2017.

**Gaab, N.** (2017). The typical and atypical reading brain and some basic info on dyscalculia. Invited speaker at the Dyslexia Parent Group, Lexington, MA, May 2017.

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**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice. Presentation at Belmont Public School Reading Department, Belmont, MA, May 2017.

**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice. Presentation at Education Collaborative for Greater Boston, Inc., Bedford, MA, May 2017.

**Gaab, N.** (2017). Invited webinar presenter to answer pressing questions about dyslexia. AIM Academy, Conshohocken PA, April 2017.

**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation at the 5<sup>th</sup> Annual Research to Practice Symposium, AIM Institute, AIM Academy, Conshohocken PA, March 2017.

**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice. Invited speaker at SEPAC Concord/Carlisle, Concord, MA, March 2017.

**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation at the SEPAC Franklin, Franklin, MA, January 2017.

**Gaab, N.** (2017). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation for the Landmark School parent Association, Prides Crossing, MA, January 2017.

**Gaab, N.** (2017). Tackling the Dyslexia Paradox: How a Neurobiological Framework of Reading Development Can Inform Clinical and Educational Practice. Landmark School Outreach: Professional Development for Educators, 5 hour session, July 2017.

**Gaab, N.** (2017). Hope or Hype? The Use and Misuse of Neuroscience in Education. Landmark College Summer Institute, Sunday Keynote, June 2017.

**Gaab, N.** (2016). Linking Music, Reading, & Cognitive Function in the Brain. Presentation at Science by the Pint, Somerville, MA, December 2016.

**Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation for Teachers and Parents (two presentations) in the Public School District of Andover, MA, November, 2016.

**Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation for parents and educators at The Cambridge School, Pennington, NJ. October 2016.

**Gaab, N.** (2016). The typical and atypical reading brain: How a neurobiological framework of reading development can inform educational practice and policy. Presentation for the Landmark School parent Association, Prides Crossing, MA, March 2016.

**Gaab, N.** (2016). Developmental Dyslexia and Dyscalculia. Invited to the Sharon Special Education Parent Advisory Council (SEPAC), February meeting, Sharon, MA.

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**Gaab, N.** (2016). The Typical and Atypical Reading Brain. Invited to the Winchester Special Education Parent Advisory Council (SEPAC), January meeting, Winchester, MA.

**Gaab, N.** (2015). The Typical and Atypical Reading Brain. Invited to the Ashland Special Education Parent Advisory Council (SEPAC), November meeting, Ashland, MA.

**Gaab, N.** (2015). Developmental Dyslexia: Early Identification, Brain-correlates and Remediation Strategies. Invited to the Weston Special Education Parent Advisory Council (SEPAC), November meeting, Weston, MA.

**Gaab, N.** (2015). The typical and atypical reading brain. Learning Ally's 2<sup>nd</sup> Spotlight on Dyslexia, online conference.

**Gaab, N.** (2015). The Typical and Atypical Reading Brain. Talk presented to the DMC Fellows at Boston Children's Hospital, July, Boston, MA.

**Gaab, N.** (2015). Dyslexia Awareness Presentation. Talk presented at the Andover Special Education Parent Advisory Council (SEPAC), June, Andover, MA.

**Gaab, N.** (2014). The Typical and Atypical Reading Brain. Presentation to parents at the Marblehead Special Education Parent Advisory Council October meeting, Marblehead, MA.

**Gaab, N.** (2014). The Reading Brain and the Influence of Musical Training on Executive Functioning and Language Development at EDCO's McSwiney Center for Professional Learning, Bedford, MA.

**Gaab, N.** (2014). The Typical and Atypical Reading Brain. Community Outreach event organized by Decoding Dyslexia for Dyslexia Awareness Month at Marblehead Community Charter Public School, Marblehead, MA.

**Gaab, N.** (2014). The Typical and Atypical Reading Brain. Presentation to parents at the Rockport Special Education Parent Advisory Council May meeting, Rockport, MA.

**Gaab, N.** (2014). The Typical and Atypical Reading Brain. Presentation to parents at the Framingham Special Education Parent Advisory Council April meeting, Framingham, MA.

**Gaab, N.** (2014). The Typical and Atypical Reading Brain. Presentation to parents at the Acton Boxborough Special Education Parent Advisory Council and Decoding Dyslexia-MA, Acton, MA.

**Gaab, N.** (2014). The Reading Brain. Invited Presentation to the reading and ELA specialists at Bay District Schools, Panama City, FL.

**Gaab, N.** (2013). The Typical and Atypical Reading Brain. Presentation to parents at the Waltham Special Education Parent Advisory Council December meeting, Waltham, MA.

**Gaab, N.** (2013). READ Study Thank You Reception. Presentations to teachers, principals and school coordinators involved in the READ Study, including study progress report, summary of recent publications, and introduction to neuroimaging techniques, at Massachusetts Institute of Technology, Cambridge, MA.

**Gaab, N.** (2013). The typical and atypical reading Brain: Developmental evident from infants, preschoolers and school-age children. Professional development workshop for teachers at Edward Brooke Mattapan Charter School, Boston, MA.

**Gaab, N.** (2012). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Presentation to parents at Landmark School Parent Association, Prides Crossing, MA.

**Gaab, N.** (2012). The typical and atypical reading Brain. Professional development workshop for teachers in Watertown School District, Watertown, MA.

**Gaab, N.** (2012). The typical and atypical reading Brain. Presentation for parents at Wheeler School, Providence, RI.

**Gaab, N.** (2012). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Presentation to parents at Heath-Brook Elementary School, Tewksbury, MA.

**Gaab, N.** (2012). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Presentation to parents at Saint Joseph School, Wakefield, MA.

**Gaab, N.** (2012). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Presentation to parents at Saint Joseph School, Haverhill, MA.

**Gaab, N.** (2012). The typical and atypical reading brain: Developmental evidence from infants, preschoolers and school-age children. Presentation to parents at Saint Raphael School, Medford, MA.

**Gaab, N.** (2012). Examining the summer (brain) drain and is there a link between music, language and literacy? Professional development workshop for teachers at Wheeler School, Providence, RI.

**Gaab, N.** (2012). The Reading Brain: Part II. Presentation to reading specialists and parents, Commonwealth Learning Center, Needham, MA.

**Gaab, N.** (2012). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Presentation for Carroll School Parent Association, Lincoln, MA.

**Gaab, N.** (2011). The Typical and Atypical Reading Brain: Developmental Evidence from Infants, Preschoolers and School-age children. Presentation to parents at the Cambridge Special Education Parent Advisory Council meeting, Cambridge, MA.

**Gaab, N.** (2011). The Reading Brain. Presentation to reading specialists and parents, Commonwealth Learning Center, Needham, MA.

**Gaab, N.** (2011). The Reading Brain. Presentation for parents at Wheeler School, Providence, RI.

**Gaab, N.** (2011). Atypical and typical reading development in the brain. Professional development workshop for teachers at Wheeler School, Providence, RI.

**Gaab, N.** (2011). The Reading Brain. Presentation for parents at St. John School, Wellesley Hills, MA.

**Gaab, N.** (2011). The Reading Brain. Presentation for parents at the Saint Raphael School, Medford, MA.

- Gaab, N.** (2011). The Reading Brain. Presentation for parents at the Cheverus School, Malden, MA.
- Gaab, N.** (2011). The Reading Brain. Professional development for teachers at the Sacred Heart School, Roslindale, MA.
- Gaab, N.** (2011). The Reading Brain. Professional development for teachers at the Tower Day School, Lynnfield, MA.
- Gaab, N.** (2011). The Reading Brain. Presentation for parents at the Carroll School, Lincoln, MA.
- Gaab, N.** (2011). Atypical and typical reading development in the brain. Professional development workshop for teachers at Greenwood School, Putney, VT.
- Gaab, N.** (2011). The typical and atypical reading brain. Presentation for Parents at Landmark School, Prides Crossing, MA.
- Gaab N.** (2010). The Brain. Lecture and activities for a Brain awareness Day for 5-10th graders at the German International School. Allston, MA.
- Gaab, N.** (2010). Literacy, Music and the Brain. Talk for the Florida Alliance for Arts Education in collaboration with the Florida Department of State/Division of Cultural Affairs, 2010 Arts Symposium Series; Panama City, FL.
- Gaab, N.** (2009). Linking music, language and reading. Workshop presentation for Massachusetts Department of Elementary and Secondary Education second annual summit on curriculum, instruction and assessment, Marlborough, MA.
- Gaab, N.,** Thompson, J. & Geiser, E. (2007-2009). Organization of Music and Language Journal Club for the Boston Area.
- Gaab, N.** (2009). Mentor for mentorship event of the Science Club for Girls, Cambridge, MA.
- Gaab, N.** & Christodoulou, J. (2009). The Reading Brain. Lecture for the Southborough/Northborough Special Education Parents Advisory Council, Southborough, MA.
- Gaab, N.** (2009). Music, language and reading. Lecture for parents at the Kingsley School, Boston, MA.
- Gaab, N.** (2008). In our own backyard: cutting edge research in the diagnosis and treatment of dyslexia. Lecture for the Brookline Special Education Parents Advisory Council, Boston, MA.
- Gaab, N.** (2008). The Reading Brain. Workshop at the Build the Out-of-School Time Network (BOSTnet) All Means All Conference, Boston, MA.
- Gaab, N.** & Christodoulou, J. (2008). The Reading Brain. Parent Workshop at the Landmark School, Prides Crossing, MA.
- Gaab, N.** (2008). The Reading Brain. Life Cycle Science Adult Workshop. Museum of Science, Boston, MA.

**Gaab, N.** (2008). Why it all works: What brain development tells us about learning. Workshop for teachers: Science Club for Girls. Cambridge, MA.

**Gaab, N.** & Christodoulou, J. (2008). Landmark School: Teaching principals and Cognitive Neuroscience. Workshop for teachers at Landmark School, Prides Crossing, MA.

**Gaab, N.** (2007). Cognitive Neuroscience: Methods, brain plasticity, implications and applications. Workshop at the BCASLPA (British Columbia Association of Speech/Language Pathologists and Audiologists) meeting, Whistler, Canada.

**Gaab, N.** (2007). The musical brain. Day class taught at the Beaver Country Day School (Senior class), Chestnut Hill, MA.

**Gaab, N.** (2007). Cognitive Neuroscience and Education: A useful collaboration? Workshop for the annual meeting of the Studienstiftung fellows in the US, Massachusetts Institute of Technology, Boston, MA.

### **Formally supervised trainees (graduate students (PhD level) & postdocs)**

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- 2017-present Theodore Turesky, Ph.D./ Postdoctoral Research Fellow at the Gaab Lab  
Supervising postdoctoral research
- 2008 - present Jennifer Zuk, Ed.M./Doctoral Student at Harvard University (SHBT).  
Supervised her Master's thesis project at Harvard Graduate School of Education;  
Supervised as Full-time Research Assistant; currently supervising doctoral research; 1 book chapter; 8 peer-reviewed papers, 3 first authorships and 1 shared first authorship; 25 conference posters;  
selected for 7th International Summer School on Literacy Research;  
2015 ASHF New Century Scholarship  
Albert J. Ryan Fellowship recipient 2017
- 2010 – 2016 Michael Figuccio, PhD. .Assistant Professor of Psychology at Farmingdale State College. Supervised senior thesis at Boston University. Supervised research as Masters student; second reader on his thesis committee; served as doctoral advisor, supervised doctoral research, and acted as second reader on qualifying/dissertation committee; 1 peer-reviewed paper; 14 conference presentations
- 2011 – present Ola Ozranov-Palchik, M.S./Doctoral Student at Tufts University.  
Supervised as Research Study Coordinator (2011-2013); supervising doctoral work; 5 peer-reviewed papers, including 3 first authorship and 1 shared first authorship; 1 manuscript under peer review; 25 conference presentations. Received 2017 Science of Learning Symposium award (\$750), for presentation at Flux Congress, Portland, OR.
- 2014 –present Xi Yu, Ph.D./Postdoctoral Research Fellow at Gaab Lab  
Supervising postdoctoral research; 1 peer reviewed publication; 5 conference posters. Selected for UCLA Advanced Neuroimaging Summer program 2015 and selected 7th International Summer School on Literacy Research 2015.
- 2015-present Rachel Romeo, B.S. Graduate student at Harvard University (SHBT program)  
Member of the Qualifying exam committee

Member of dissertation committee

- 2010 - 2015 Elizabeth Norton, Ph.D./Assistant Professor at Northwestern University  
Supervised pre-doctoral and postdoctoral work; 2 peer-reviewed papers, including 1 co-first authorship; 21 conference presentations;  
Society for Scientific Study of Reading Rebecca Sandak Young Investigator Award (2012); UC Davis Center For Mind And Brain ERP Boot Camp Award;  
Completed postdoc fellowship at MIT
- 2014 – 2015 Yingying Wang, Ph.D./ Assistant Professor at University of Nebraska  
Supervised postdoctoral research; ; 4 peer-reviewed papers (one first authorship); 10 conference posters  
Selected for UCLA Advanced Neuroimaging Summer program 2014
- 2008-2014 Nora Raschle, Ph.D./Postdoctoral Research Fellow at Kinder- und Jugendpsychiatrischer Dienst, Universitäre Psychiatrische Kliniken, Basel, Switzerland  
Supervised her research as a Visiting Doctoral Student from University of Zurich, Switzerland (2008-2011); supervised as Postdoctoral Research Fellow (2011-2014); published 8 peer-reviewed articles (7 first authorships), one book chapter; 21 conference presentations. Ph.D. thesis summa cum laude; 2010 Research Fellowship from Janggen Poehn Stiftung; and 2008/2009 Prospective Researcher Fellowship from Swiss National Foundation
- 2010 - 2014 Einat Shetreet, Ph.D./ Postdoctoral Research Fellow at Tufts University, Assistant Professor of Linguistics at Tel Aviv University (Starting 2016).  
Supervising postdoctoral research through EBRO fellowship with G. Chierchia (Harvard Linguistics); 3 peer-reviewed papers; 5 conference posters
- 2012 - 2014 Sara Smith, Ph.D./Assistant Professor at California State University East Bay  
Supervised as Research Assistant; 4 peer-reviewed papers; 11 conference presentations
- 2013 - 2014 Maria Dauvermann, Ph.D./ Postdoctoral Associate at Massachusetts Institute of Technology  
Supervised as Postdoctoral Research Fellow for 6 months; 1 peer-reviewed manuscript, 2 conference posters
- 2012 - 2013 Nicolas Langer, Ph.D./Assistant professor at the University of Zurich, Switzerland  
Supervised postdoctoral research; 2 peer-reviewed papers
- 2008-2011 Christopher Benjamin, Ph.D./Assistant Professor of Neurology and Neurosurgery at Yale University  
Supervised postdoctoral research; published 4 peer-reviewed papers, including 2 1st authorships; 7 conference presentations

### **Grant review activities**

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- 10/2016 -present: Member Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) study section ‘Language and Communication’ (LCOM)

10/2015	Temporary member NICHD study section 'Cognition and Perception'
11/2013	Temporary member NICHD Specific Emphasis Panel (Biobehavioral and Behavioral Processes)

*Adhoc reviewer* for grants from the University of Leuven, Belgium, European Cooperation in Science and Technology, Marsden Fund, New Zealand, National Science Foundation

## **Editorial Roles**

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2018 - present	Member, Editorial Review Board for Annals of Dyslexia
2017	Member of Habilitation Committee for Michael Skeide, Max-Planck Institute for University of Leipzig, Germany
2017 - present	Reviewer for Ruhr-Universität Bochum Faculty of Cognitive Science Masters thesis
2016 - present	Associated Editor for Developmental Science
2015 - present	Editorial Board of Understanding Neuroscience (specialty section of Frontiers for Young Minds).
2016	Editor for: A. Galaburda, N. Gaab & F. Hoefft (Eds.), Dyslexia and Neuroscience: The Geschwind-Galaburda Hypothesis, 30 Years Later
2016	Guest Editor for the Proceedings of the National Academy of Sciences
2015 - 2016	Guest Editor for Journal of Experimental Psychology
2015	Guest editor for issue of International Dyslexia Association's Perspectives on Language and Literacy entitled: "Early Identification and Treatment of Dyslexia: a Brain-based Perspective".
2013-2014	Associate Editorial Board of Frontiers in Human Neuroscience
2006 -2012, 2014	Organization for Human Brain Mapping conference: Scientific abstracts

2013	Reviewer for Harvard Neuroscience Undergraduate thesis
2012 - 2013	Editorial review Board of Frontiers in Auditory Cognitive Neuroscience
2012	Member of the Editorial Board: PLOS ONE, NeuroMapping and Therapeutics Collection
2008 - present	Review editor for Frontiers in Integrative Neuroscience
2007-2012	Journal of Interdisciplinary Music Studies (Advisory and Editorial board)

### **Editorial Activities: Ad hoc Reviewer**

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Behavioral Brain Research, Behavioral and Brain Functions, Brain and Language, Cerebral Cortex, Child Development, Clinical Physiology and Functional Imaging, Cognitive, Affective and Behavioral Neuroscience, Current Biology, Developmental Science, European Journal of Neuroscience, Frontiers in Human Neuroscience, Human Brain Mapping, Journal of Child Psychology and Psychiatry, Journal of Cognitive Neuroscience, Journal of Neuroscience, Nature Reviews Neuroscience, Neuroimage, Neuropsychologia, Neuropsychology, Neuroreport, Proceedings of the National Academy of Sciences of the United States of America

### **Languages**

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German	Citizenship (permanent resident in the US)
English	Fluent
French	Basic Knowledge

### **Technologies and other scientific interventions/products**

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Development of a tablet App for early dyslexia screening in progress in collaboration with the Innovation and Digital Health Accelerator Office at Boston Children's Hospital (see <https://vector.childrenshospital.org/2017/04/30-minute-dyslexia-screening-test/> for details)

## **Selected national media coverage**

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### **DeVos Invested More Money in 'Brain Performance' Company, Despite Weak Evidence**

Education Week, 8/7/17

<https://www.edweek.org/ew/articles/2017/08/07/devos-invested-more-money-in-brain-performance.html?cmp=soc-twitter-shr>

### **What's Behind The Push In Scientific Research To Identify Dyslexia Early**

NPR (WBUR), 5/30/17

<http://www.wbur.org/commonhealth/2017/05/30/identifying-dyslexia-early>

### **Dealing With Dyslexia, Starting With One Family's Battle For A Diagnosis**

NPR (WBUR), 5/30/17

<http://www.wbur.org/edify/2017/05/30/dyslexia-diagnosis-battle>

### **Is There a Link between Music and Math?**

Scientific American, 5/1/17

<https://www.scientificamerican.com/article/is-there-a-link-between-music-and-math/>

### **A 30-minute screening test for dyslexia?**

Vector, Boston Children's Hospital's science and clinical innovation blog, 4/14/2017

<https://vector.childrenshospital.org/2017/04/30-minute-dyslexia-screening-test/>

### **Innovator Spotlight: Nadine Gaab**

Innovation & Digital Health Accelerator Newsletter, 05/2017

### **Decoding Dyslexia: Why Doesn't Massachusetts Screen at an Early Age?**

Aired on Boston Channel 5 *Chronicle*, 4/5/16

<http://www.wcvb.com/chronicle/tuesday-april-5-decoding-dyslexia/38803734>

### **Music Lessons: Tracing links between musical training and executive function — and bolstering the case for music in schools**

Usable Knowledge, 3/8/16

<https://www.gse.harvard.edu/news/uk/16/03/music-lessons>

### **To find the roots of dyslexia, Boston Children's coaxes babies into MRI**

Boston Globe, 1/11/2016

<http://www.betaboston.com/news/2016/01/11/dyslexia-research-provides-insight-into-brain-function/>

### **For dyslexia, writing is often on the wall from birth**

Vector, Boston Children's Hospital's science and clinical innovation blog, 12/7/2015

<http://vector.childrenshospital.org/2015/12/for-dyslexia-writing-is-often-on-the-wall-from-birth/>

### **Writing on the Wall**

Harvard Medicine News and the *Harvard Gazette*, 12/7/2015

[http://hms.harvard.edu/news/writing-wall?utm\\_source=SilverpopMailing&utm\\_medium=email&utm\\_campaign=12.15.2015%20\(1\)&utm\\_content=](http://hms.harvard.edu/news/writing-wall?utm_source=SilverpopMailing&utm_medium=email&utm_campaign=12.15.2015%20(1)&utm_content=)

### **Music and Auditory Skills can hone Cognition and Language**

Boston Children's Hospital's science and clinical innovation blog, 5/20/2015

<http://vector.childrenshospital.org/2015/05/music-and-auditory-skills-can-hone-cognition-and-language/>

**How Playing Music Affects the Developing Brain** NPR (WBUR) story featuring research, aired on MorningEdition and All Things Considered, 7/17/14

<http://commonhealth.wbur.org/2014/07/music-language-brain>

### **'I'm Not Stupid, Just Dyslexic' — And How Brain Science Can Help**

NPR (WBUR) story featuring research, aired on Morning Edition and All Things Considered, 6/19/14

<http://commonhealth.wbur.org/2014/06/dyslexia-brain>

### **Musical training 'improves executive brain function'**

Article on our publication in Medical News Daily, 6/22/14

<http://www.medicalnewstoday.com/articles/278469.php>

### **Music Has the Power to Increase Executive Function in the Human Brain**

Article on our publication in Science World Report, 6/19/14

<http://www.scienceworldreport.com/articles/15533/20140619/music-power-increase-executive-function-human-brain.htm>

### **A Link Found Between Musical Training and Executive Brain Function**

Article on our publication in RedOrbit, 6/18/14

<http://www.redorbit.com/news/science/1113172967/early-musical-training-linked-academic-success-executive-brain-function-061814/>

### **New Evidence of Mental Benefits from Music Training**

Article on our publication in Pacific Standard, 6/18/14

<http://www.psmag.com/navigation/books-and-culture/new-evidence-brain-benefits-music-training-83761/>

### **Brain imaging shows enhanced executive brain function in people with musical training**

Article on our publication in ScienceDaily, 6/17/14

<http://www.sciencedaily.com/releases/2014/06/140617211020.htm>

**“You wouldn't wish dyslexia on your child. Or would you?”**

### **Does musical training help kids do better in school?**

Vector, Boston Children's Hospital, Summer 2014

<http://vectorblog.org/2014/06/does-musical-training-help-kids-do-better-in-school/>

### **A musical fix for American schools**

The Wall Street Journal, 10/10/14

<http://online.wsj.com/articles/a-musical-fix-for-american-schools-1412954652?KEYWORDS=music>

### **At Charter School, insight into dyslexic brain**

Wicked Local Marblehead 10/16/14

<http://marblehead.wickedlocal.com/article/20141016/NEWS/141017539>

Chapter featuring an interview in Part 2 of Malcom Gladwell's (2013) book David and Goliath: Underdogs, Misfits, and the Art of Battling Giants. New York: Little, Brown and Company.

<http://gladwell.com/david-and-goliath/>

**Dyslexia ‘Seen’ in Brain Scans of Kindergartners: Earlier Learning Interventions May Be Possible**

Article covering our publication on Medical Daily, 08/14/13

<http://www.medicaldaily.com/dyslexia-seen-brain-scans-kindergartners-earlier-learning-interventions-may-be-possible-251307>

**Can MRI brain scans identify children with dyslexia?**

Article covering our publication on Fox News, 08/14/13

<http://www.foxnews.com/health/2013/08/14/can-mri-brain-scans-identify-children-with-dyslexia/>

**Brain Scan detects Dyslexia in Children Early, Study Finds**

Article covering our publication on Parent Herald, 08/14/13

<http://www.parentherald.com/articles/1880/20130814/brain-scan-detects-dyslexia-children-early-study-finds.htm>

**Brain scans could uncover dyslexia before kids learn to read**

Article covering our publication on CNET, 08/14/13

[http://news.cnet.com/8301-11386\\_3-57598594-76/brain-scans-could-uncover-dyslexia-before-kids-learn-to-read/](http://news.cnet.com/8301-11386_3-57598594-76/brain-scans-could-uncover-dyslexia-before-kids-learn-to-read/)

**MRI scans may detect dyslexia in children earlier**

Article covering our publication on Examiner, 08/14/13

<http://www.examiner.com/article/mri-scans-may-detect-dyslexia-children-earlier>

**Early Brain changes may indicate dyslexia**

Article covering our publication on ABC News, 01/23/12

<http://abcnews.go.com/blogs/health/2012/01/23/children-brain-changes-may-detect-dyslexia/>

**Brain scans spot early signs of dyslexia**

Article covering our publication on Fox news, 01/24/12

<http://www.foxnews.com/health/2012/01/24/brain-scans-spot-early-signs-dyslexia/>

**Top 10 science and clinical innovation trends: Looking forward to 2012**

Article mentioning our research in CHB Vector, 01/04/12

<http://vectorblog.org/2012/01/top-10-science-and-clinical-innovation-trends-looking-forward-to-2012/>

**Scanning for early signs of reading woes**

Article in Science Careers, 08/11

[http://sciencecareers.sciencemag.org/career\\_magazine/previous\\_issues/articles/2011\\_08\\_19/carecredit.a1100084](http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2011_08_19/carecredit.a1100084)

**Babies enlisted in brain research**

Article about our research in the Boston Globe, 05/16/11

[http://articles.boston.com/2011-05-16/lifestyle/29549187\\_1\\_albert-galaburda-brain-research-brain-imaging](http://articles.boston.com/2011-05-16/lifestyle/29549187_1_albert-galaburda-brain-research-brain-imaging)

**Exploring the brains of babies**

Boston Children’s Hospital Blog, 05/16/11

<http://childrenshospitalblog.org/exploring-the-brains-of-babies/>

**Early brain checkups for dyslexia, autism and more**

Vector blog, Boston Children's Hospital, 05/16/11

<http://vectorblog.org/2011/05/early-brain-checkups-for-dyslexia-autism-and-more/>

**Influences of musical training on language processing and executive functioning in typical and atypical developing children**

The Science Network, 03/24/11

<http://thesciencenetwork.org/programs/newark-workshop-on-music-brain-and-education/influences-of-musical-training-on-language-processing-and-executive-functioning-in-typical-and-atypical-developing-children>

**Music, Brain and Education Panel**

The Science Network, 03/24/11

<http://thesciencenetwork.org/programs/newark-workshop-on-music-brain-and-education/music-brain-and-education-panel>