

**MICHAEL ARTUR SKEIDE** \*7th June 1984

**Research Group Leader**, Max Planck Institute for Human Cognitive and Brain Sciences

<https://skeidelab.com> <https://twitter.com/skeidelab>

## THEORETICAL OBJECTIVES

Our goal is to understand how the developing human **brain generates intelligent behavior**. We aspire to discover **universal principles** of neurocognitive development in the first years of life. At the same time, we identify **individual, cultural, and clinically relevant differences**.

## METHODOLOGICAL APPROACHES

We conduct **longitudinal** observation and intervention studies from fetal to adult age. Within this framework, our repertoire ranges from **single-subject** to **population-level** designs. In our experiments, we combine brain recording techniques (**MRI, MEG, EEG**) with **behavioral** measures. Analytical approaches comprise **frequentist** statistics, **psychophysical** modeling, **probabilistic** inference and **machine learning**.

## PUBLICATIONS (Top 10)

1. Alex AM ... **Skeide** MA ... Knickmeyer R (2023) Mapping subcortical brain development and cognition in infancy and early childhood: A global, multi-cohort study. **Nature Neuroscience**, accepted.
2. Kuhl U ... **Skeide** MA (2021) Mathematical learning deficits originate in early childhood from atypical development of a fronto-parietal brain network. **PLOS Biology** 19, e3001407.
3. **Skeide** MA ... The Legascreen Consortium (2020) Neurobiological origins of individual differences in mathematical ability. **PLOS Biology** 18, e3000871.
4. Kuhl U ... **Skeide** MA (2020) The emergence of dyslexia in the developing brain. **Neuroimage** 211, 116633.
5. **Skeide** MA ... Friederici AD (2018) Hypermyelination of the left auditory cortex in developmental dyslexia. **Neurology** 90, e492-97.
6. **Skeide** MA ... Huettig F (2017) Learning to read alters intrinsic cortico-subcortical cross-talk in the visual system of illiterates. **Science Advances** 3, e1602612. featured in Science 356, 816.
7. **Skeide** MA ... Friederici AD (2016) NRSN1 associated grey matter volume of the visual word form area reveals dyslexia before school. **Brain** 139, 2792-2803.
8. **Skeide** MA, Friederici AD (2016) The ontogeny of the cortical language network. **Nature Reviews Neuroscience** 17, 323-32. issue cover topic
9. **Skeide** MA ... Friederici AD (2016) Brain functional and structural predictors of language performance. **Cerebral Cortex** 26, 2127-39.
10. Kraft I ... **Skeide** MA (2015) Cortical differences in preliterate children at familiar risk of dyslexia are similar to those observed in dyslexic readers. **Brain** 138, e378.

**GRANTS**

1. **Alexander von Humboldt Foundation** Henriette Herz Scouting Program (2023-26)
2. **DFG Middle East Collaboration Grant** Comparative cognitive neuroscience (2023-26)
3. **NIH R01 Subaward** Genetic influences on infant brain development (2021-2026)
4. **Jacobs Foundation** Research Fellowship Program (2021-23)
5. **DFG Research Grant** The emergence of precise numerosity representations (2021-24)
6. **DFG Heisenberg Program** Variability of learning in early childhood (2021-25)
7. **ERC Starting Grant** How the brain learns to see language (2020-25)

**AWARDS**

1. **Society for the Neurobiology of Language** Early Career Award (2022)
2. **German Society for Social Pediatrics & Child Medicine** Stefan Engel Prize (2021)
3. **International Mind, Brain and Education Society** Early Career Award (2021)
4. **German Society for Dyslexia and Dyscalculia** Science Prize (2020)
5. **Japanese Neuroscience Society** Postdoctoral Travel Award (2019)
6. **German Society for Neuropsychology** Early Career Award (2017)
7. **German Society for Clinical Neurophysiology** Early Career Award (2017)
8. **Organization for Human Brain Mapping** Trainee Abstract Travel Award (2014)
9. **Organization for Human Brain Mapping** Trainee Abstract Travel Award (2013)

**PRESENTATIONS**

- 2015 – **35 invited talks** incl. 4 keynotes (Rio de Janeiro, Basel, Innsbruck, Zurich)  
2011 – **16 other talks** (Oxford, Stanford, UCL) + **25 posters** (Europe, USA, Australia)

**EDUCATION**

- 2020 **Management and Leadership** program of the **Max Planck Society**  
2018 **Habilitation** in Psychology, HU **Berlin** (not graded)  
2012 **Ph.D.** in Psychology, University of **Leipzig**, Germany (grade: **A**, summa cum laude)

**POSITIONS**

- 2020 – **Research Group Leader** Learning in Early Childhood  
**Max Planck Institute** for Human Cognitive and Brain Sciences, Leipzig (**MPI CBS**)  
2016 Postdoctoral fellow, **Stanford** University, Cognitive and Systems Neuroscience Lab  
2009–20 Ph.D. student, postdoctoral researcher and team leader, **MPI CBS**

**FELLOWSHIPS**

- 2009–12 Ph.D. scholarship, **German Federal Ministry of Research and Education (BMBF)**  
2007–9 Undergraduate scholarship, **BMBF**

**SUPERVISION**

- 2021 – 5 Postdocs  
2012 – 3 Ph.D. students (all grades: A, summa cum laude)  
2011 – 33 B.Sc. / M.Sc. students, research assistants and interns

**TEACHING**

- 2014 – **9 seminars** in Biological, Developmental and Educational Psychology  
Universities of Berlin (Humboldt University) and Leipzig
- 2013 – **9 lectures** in Biological, Developmental and Educational Psychology  
Universities of Berlin (Humboldt University and Free University), Leipzig and Potsdam

**REVIEWING**

- 2017 – **5 funding bodies** incl. DFG, NWO, SNF, FWF
- 2011 – **34 peer-reviewed journals** incl. Nature Neuroscience, PNAS, Neuroimage

**MEMBERSHIPS** (selected)

- 2017 – German Psychological Society (DGPs)
- 2014 – Society for Research in Child Development (SRCD)
- 2011 – Society for Neuroscience (SfN), Organization for Human Brain Mapping (OHBM),  
Cognitive Neuroscience Society (CNS)

**INSTITUTIONAL RESPONSIBILITIES**

- 2019 – **Faculty** member, International Max Planck **Graduate School** Cognitive Neuroimaging

**COLLABORATIONS** (selected)

- 2022 – Co-PI in the NSF-funded **Many Numbers Consortium** (130+ labs) (UCSD)
- 2021 – Co-PI in the NIH-funded **ENIGMA Origins Consortium** (30+ labs) (Michigan State)
- 2020 – Tzipi Horowitz-Kraus (**Johns Hopkins** & Technion) Neurobiology of word recognition
- 2020 – Andreas Nieder (U **Tübingen**) Neurobiology of numerical cognition
- 2015 – Falk Huettig (**MPI Nijmegen**) Cross-cultural cognitive psychology

**MEETING ORGANIZATION**

- 2019 Organized symposium DGPs, Leipzig, Germany  
Organized symposium EARLI, Aachen, Germany
- 2018 Chaired symposium DFKI, Kaiserslautern, Germany

**PUBLIC OUTREACH** (selected)

- 2012 – **Blog** What are you looking for?  
**Exposition** Language - world of words, signs, gestures; German Health Museum  
**Public panel discussion** on effects of new media on reading and brain development  
**Movie** about early child development research in Leipzig  
**Workshops** for early educational practitioners

**MEDIA**

- 2017 – **Radio** MDR, WDR, RBB, HR2 (Germany); BNR (Netherlands); CBC (Canada)
- 2012 – **TV** 3sat, SAT.1, RTL (Germany); Donga Science (Korea)
- 2011 – **Print** (selected) Gehirn & Geist, Süddeutsche Zeitung, FAZ, ZEIT (Germany), Daily Mail (United Kingdom), Neue Zürcher Zeitung (Switzerland), La Repubblica (Italy), El Mundo (Spain), Scientific American, Newsweek, Washington Post (USA)