

Internship opportunity: Why do people keep stuttering? Using genetics and brain imaging to trace stuttering in the brain

Internship, Language & Genetics, Full-Time

The Max Planck Institute (MPI) for Psycholinguistics, Nijmegen, the Netherlands, is offering 5-6 month MSc internship position in the Language & Genetics Department.

Do you want to help us find out why people stutter? Join us for a 5-6 month bioinformatics internship on the genetics and neuroimaging of stuttering.

Developmental stuttering is a common childhood speech condition, marked by blocks, prolongations, and repetitions in speech. While most children who stutter grow out of it, for some the condition persists into adulthood — and we still do not fully understand why. What is happening in the brain that makes some people more vulnerable to stuttering?

Recently, a large-scale genome-wide association (GWAS) of stuttering has been conducted in over 1 million participants of 23andMe, identifying genetic variants linked to stuttering. We want to understand the link between these genetic findings and the organisation of the brain

In this bioinformatics internship you will combine cutting-edge genetics with advanced brain imaging to explore how genetic risk for stuttering relates to brain structure and function. You will combine advanced genetics with advanced brain imaging to better understand what stuttering looks like in the brain.

In this project you will learn how to:

- Conduct an independent research project
- Program in R, bash and python
- Learn about genetics, brain imaging and stuttering.
- Apply genomic structural equation modelling (Genomic SEM) in R using GWAS summary statistics.
- Derive polygenic risk scores.
- Work with structural, diffusion and functional MRI neuroimaging data.

What we're looking for:

- Availability for a 5-6-month internship starting September 15th, October 1st or 15th.
- Genuine interest in the neurobiology of stuttering and language
- Basic understanding of human genetics and/or neuroscience, enough to follow the project's approach.
- Some background in statistics or linear algebra (ideally at least a few bachelor-level courses at 2nd/3rd year level)
- Previous programming experience is a plus (in for example R, Python, Matlab or Bash), but a strong willingness to learn is just as welcome.
- Candidates who only match with some of the skills are also encouraged to apply.

Background literature:

- Polikowksy et al., 2025, Nat Gen. 57, 1835-1847. www.nature.com/articles/s41588-025-02267-2
- Soheili et al., 2024, Sci Adv 10(51). <https://doi.org/10.1126/sciadv.adq2754>
- Amelink et al., 2024, Comms Bio 7, 1209. <https://www.nature.com/articles/s42003-024-06890-3>

Conditions of employment

- 5-6 months starting September 15th, October 1st or 15th (exact date can be discussed)
- Full-time
- This is a research internship without salary

Application procedure

- The internship will last 5 or 6 months; the starting date should be in September or October. Note that the MPI cannot remunerate any work during this internship.
- To apply, please submit your application contact details [via this link on our recruitment portal](#). Include the following:
 - A motivation letter describing why you are interested in this project and previous experience/knowledge
 - A CV
 - Transcripts with grades for bachelor and master (so far).
 - And 2 reference letters from either internship supervisors or instructors of courses you took
- **The closing date for applications is 29th of July 2026.**

Interested? Contact Jitse Amelink (jitse.amelink@mpi.nl) for questions.

Daily supervisor: Jitse Amelink, M.Sc.

Internship supervisors: Prof. Dr. Clyde Francks, Dr. Else Eising, Prof. Dr. Simon E. Fisher

About the Language and Genetics department

At the [Language and Genetics Department](#), we aim to uncover the DNA variations which ultimately affect different facets of our communicative abilities, not only in children with language-related disorders but also in the general population. In addition, we hope to trace the evolutionary history and worldwide diversity of key genes, which may shed new light on language origins.

About our institute

The [Max Planck Institute for Psycholinguistics](#) is a world-leading research institute devoted to interdisciplinary studies of the science of language and communication, including departments

on genetics, psychology, development, neurobiology and multimodality of these fundamental human abilities.

We investigate how children and adults acquire their language(s), how speaking and listening happen in real-time, how the brain processes language, how the human genome contributes to building a language-ready brain, how multiple modalities (as in speech, gesture and sign) shape language and its use in diverse languages, and how language is related to cognition and culture, and shaped by evolution.

We are part of the [Max Planck Society](#), an independent non-governmental association of German-funded research institutes dedicated to fundamental research in the natural sciences, life sciences, social sciences, and the humanities.

The Max Planck Society is [an equal opportunities employer](#). We recognise the positive value of diversity and inclusion, promote equity and challenge discrimination. We aim to provide a working environment with room for differences, where everyone feels a sense of belonging. Therefore, we welcome applications from all suitably qualified candidates.

Our institute is situated on the campus of the Radboud University and has close collaborative links with the [Donders Institute for Brain, Cognition and Behaviour](#) and the [Centre for Language Studies](#) at Radboud University. We also work closely with other child development researchers as part of the [Baby & Child Research Center](#).