SOLAB

# Intro to Applications of Eye-Tracking in Language Studiest

**Arianna Colombani**[1*]

1. International Doctorate for Experimental Approaches to Language and Brain (IDEALAB), University of Potsdam, Macquarie University, Sydney, Australia

## Abstract

Eye-tracking is increasingly used in language research as a powerful method to investigate real-time processing across a wide range of language domains, from reading and spoken-word recognition to language acquisition and multimodal communication. Yet, the first approach to the method can feel overwhelming: while an abundance of resources is available, it is often difficult to know where to begin or how to navigate the technical and methodological complexity of the field. The session is primarily designed for MA and PhD students as well as early-career researchers. The focus is on the theoretical foundations and basic practical considerations of experimental design, with the aim of helping participants develop an initial understanding of the method and take their first steps toward integrating it into their own investigations.

Topics include a progression from basic principles to applied research examples. These range from core questions – such as why gaze behavior is informative, how visual processing works, and how eye-trackers function – to more practical aspects of data collection and analysis, including calibration, commonly used metrics, and a brief introduction to pupillometry. Applications in language research are presented through examples of reading experiments, the Visual World paradigm, and the Preferential Looking paradigm. Practical suggestions are provided throughout the workshop, with attention to strategies for maximizing data quality when working with different age groups, along with suggested readings and reference materials to guide future study design.

**Keywords:** Eye-tracking, Visual processing, Language studies

**Email:** Aarianna.colombani@uni-potsdam.de

doi.org/10.30514/icss.27.0.16

The Second International Biennial Conference on the Science of Language & the Brain (SOLAB 2025) 9-10 October