



Department of Linguistics
University of Mumbai

organizes

Workshop on
**Experiment Design
and Analysis in
Linguistics**

Faculty:

Ashwini Vaidya (HSS, IIT Delhi)

&

Samar Husain (HSS, IIT Delhi)

Dates: 10th – 14th December, 2018

Venue: Virtual Classroom, Pherozeshah Mehta
Bhavan, University of Mumbai

Contact for details: linguistics@linguistics.mu.ac.in

**Department of Linguistics
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**Workshop on
Experiment Design and Analysis in Linguistics
(10th – 14th of December, 2018)**

Faculty: Ashwini Vaidya (HSS, IIT Delhi) & Samar Husain (HSS, IIT Delhi)

Aims of the workshop:

The workshop aims to introduce the idea of experimentation in the discipline of linguistics. We will discuss the following questions:

- What is an experiment?
- What can we investigate using experimentation?
- What are the key considerations while conducting an experiment?
- How does one conduct an experiment?
- What are the different experimental paradigms in psycholinguistics?
- Ethics and practices.

Workshop Schedule

Date	Time	Topic
10 th December	10.00 am - 11.30 am	Why do we conduct experiment? <ul style="list-style-type: none">▪ Testing hypothesis▪ Other methods to get to the truth
	12.00 am – 01.30 pm	What is an experiment? <ul style="list-style-type: none">▪ Control▪ Randomization▪ Designs▪ Factors▪ Measuring observations▪ Making decisions
	02.30 pm – 05.30 pm	Practical session: Building a simple experiment <ul style="list-style-type: none">▪ Is a sentence complex?▪ Comprehension accuracy▪ Analyzing the data by hand▪ Linking hypothesis
11 th December	10.00 am - 11.30 am	What linguistic questions can we investigate using experimentation?
	12.00 am – 01.30 pm	<ul style="list-style-type: none">▪ What is the organization of the lexicon?▪ How is meaning represented in the lexicon?▪ How do we investigate compositionality?▪ What are the grammatical constraints during building sentential structure? (Islands, c-command, etc.)
	02.30 pm – 05.30 pm	Practical session: Building a simple experiment <ul style="list-style-type: none">▪ How are predicates composed?

		<ul style="list-style-type: none"> ▪ Reaction time ▪ Analyzing the data by hand ▪ Linking Hypothesis
12 th December	10.00 am - 11.30 am	<p>What are the different experimental paradigms in psycholinguistics?</p> <ul style="list-style-type: none"> ▪ Words <ul style="list-style-type: none"> • Lexical decision task • Lexical naming task ▪ Sentence <ul style="list-style-type: none"> • Acceptability rating • Comprehension accuracy • Self-paced reading • Eye-tracking • ERP
	12.00 am – 01.30 pm	What are the advantages and disadvantages of some of these paradigms?
	02.30 pm – 05.30 pm	<p>Practical session: Building an experiment</p> <ul style="list-style-type: none"> ▪ Investigating word order variation ▪ Acceptability rating and Self-paced reading ▪ Analyzing the data by hand ▪ Linking hypothesis
13 th December	10.00 am - 11.30 am	<p>What are the key considerations while conducting an experiment?</p> <ul style="list-style-type: none"> ▪ Theory ▪ Design ▪ Items and Fillers ▪ Paradigm ▪ Participants ▪ Instructions ▪ Data collection ▪ Data analysis ▪ Interpretation and Confounds ▪ Replications ▪ Ethics ▪ Data sharing
	12.00 am – 01.30 pm	Basics of analysing data: How to do a t-test in R?
	02.30 pm – 05.30 pm	<p>Practical session: Building an experiment</p> <ul style="list-style-type: none"> ▪ Investigating binding theory ▪ Self-paced reading ▪ Analyzing the data by hand ▪ Analysing the data automatically ▪ Linking hypothesis
14 th December	10.00 am - 11.30 am	<p>Understanding some important concepts in hypothesis testing</p> <ul style="list-style-type: none"> ▪ NULL hypothesis
	12.00 am –	<ul style="list-style-type: none"> ▪ Alternative hypothesis

	01.30 pm	▪ Type I and Type II error
	02.30 pm – 05.30 pm	Revision and doubt clearance

Post-workshop readings:

1. Stefan Th. Gries. 2009. Quantitative Corpus Linguistics with R. A Practical Introduction. Routledge.
2. Daniela Navarro. Learning Statistics with R. <https://compcogscisydney.org/learning-statistics-with-r/>