



UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG

## CRUS Doctoral Programme - Language & Cognition

# Module: Robust experimental methods for experimental linguistics

### WHAT

#### Robust experimental methods for experimental linguistics

All paradigms in experimental linguistic research, independently of the measures used (i.e., response times, physiological measures, eye movements, EEG<sup>1</sup>), rely on several assumptions that cannot be ignored when building an experiment. Some of these assumptions, such as ensuring generalizability across items, are so important that all high-level journals (e.g., *Cognition*, *JEP: LMC*, *Journal of Memory and Language*) only accept data that demonstrate generalizability, of both participants and items, statistically.

In this methodological workshop, you will be presented with the assumptions at the very heart of sound experimental designs and will have a chance to exercise them within the context of experiments that you design.

We will cover a wide range of practical issues, from building an experiment – accounting for item/language variability – to running state-of-the-art data analyses. Part of the workshop will be devoted to getting more from your data and to discovering hidden effects in experimental linguistics (e.g. specific distributional analyses), as well as to running neat analyses (F1 and F2, linear mixed models). For the latter, we will use both SPSS and R.<sup>2</sup>

In sum, after this workshop, you will be able to construct sound designs in experimental linguistics and to process your data in ways that are compatible with the expectations of high-level international journals. Ample space will be devoted to the discussion of practical questions raised by the participants.

### WHO

**Dr. Carol Madden-Lombardi**

(Senior Researcher, *Institut National de Recherche Lyon I, F*)

**Dr. Christelle Gillioz**

(Lecturer in Psycholinguistics, *University of Fribourg, CH*)

**Dr. Pascal Gyğax**

(Reader in Psycholinguistics, *University of Fribourg, CH*)

<sup>1</sup> In the workshop, we will present the pros and cons of frequently used measures in experimental psycholinguistics (eye-tracking, fMRI, response times).

<sup>2</sup> We do not intend to teach SPSS or R, yet, irrespective of your level, we will attempt to guide you individually.

### WHEN

The module will take place on Thursday-Friday **10-11 December** 2015.

### WHERE

This module is offered at the University of Fribourg and hosted by the psycholinguistic research team.

### Registration

15 doctoral students can take part in this module. The registration deadline is on **7 December 2015**. The programme reimburses travel expenses as well as meals and a fixed accommodation rate of 90CHF/day for participants affiliated with a Swiss university.

This workshop can be used towards obtaining course credits.

In order to register, doctoral students should contact the coordinator at [heidi.aro@unifr.ch](mailto:heidi.aro@unifr.ch).

### Contact

All practical and administrative questions should be addressed to the programme coordinator, Mrs Heidi Aro, at [heidi.aro@unifr.ch](mailto:heidi.aro@unifr.ch)

More information (incl. schedule) can be found here: [lettres.unifr.ch/fr/langues-litteratures/anglais/DocProg.html](http://lettres.unifr.ch/fr/langues-litteratures/anglais/DocProg.html)

### Organisation

The CRUS doctoral workshop *Language & Cognition* is organised by the University of Fribourg with the collaboration of the University of Geneva and the University of Neuchâtel.

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**Module: Robust experimental methods  
for experimental linguistics**

*Dr. P. Gygax, Dr. C. Madden, Dr. C. Gillioz*

*Dr. C. Madden, Dr. P. Gygax, Dr. C. Gillioz*

Thursday 10 December 2015, salle H – PER C130		
815h-8h20	D. Maillat	Welcome and introduction
8h10-10h00	P. Gygax	Designing an experiment: <i>Hypotheses, IV, DV, generalisability</i>
<b>10h30-11h</b>	<b>Coffee Break</b>	
11h-12h00	C. Madden	Designing an experiment: <i>Behavioural measures, levels of processing, tasks, stimuli</i>
<b>12h-13h</b>	<b>Lunch</b>	
Thursday 10 December 2015, salle H – PER D130		
13h-15h	C. Madden, P. Gygax	Material preparation – word level: <i>Controls - French/English/German versions of Lexique 3, sentence/discourse level, LSA</i>
<b>15h-15h20</b>	<b>Coffee Break</b>	
15h30-18h	C. Madden, P. Gygax, C. Gillioz	Pretests & norming: <i>Familiarity, frequency Subjects, within vs. between, laypersons, lists, blocking, repeating items, - lists</i>
<b>19h</b>	<b>Dinner</b>	

Friday, 11 December 2015, salle MIS8 0101 – Espace Guggi		
8h15-10h00	C. Madden	E-prime: hands-on session with example
<b>10h-10h20</b>	<b>Coffee Break</b>	
10h30-12h00	P. Gygax, C. Madden, C. Gillioz	Running an experiment
<b>12h-13h00</b>	<b>Lunch</b>	
Friday 11 December 2015, salle MIS8 0101 – Espace Guggi		
13h-15h	C. Gillioz	Analysis and own design: <i>descriptive stats, inferential stats, F1, F2, dos-and-don'ts</i>
<b>15h-15h20</b>	<b>Coffee Break</b>	
15h30-18h	C. Gillioz	Analysis and own design: <i>Mixed Linear Models using R</i>
<b>Conclusion</b>		