International school in
psycholinguistics, neurolinguistics and
clinical linguistics

2023 SCHOOL

COURSE DESCRIPTIONS

Introduction to linguistics: Srdjan Popov (Introductory, MONDAY, slot 1)

This introductory course to linguistics is intended for a wide audience, from linguists to students or professionals with no previous linguistic training. The course will cover a number of essential theoretical topics, mainly in the fields of morphology and syntax. The goal of the course is to prepare the students for the courses in psycholinguistics and neurolinguistics. The course is also of interest to (advanced) linguistics students, as it will focus in detail on a number of selected topics that will later be covered from an experimental perspective.

Visual word recognition: Dusica Filipovic Djurdjevic (Introductory, MONDAY, slot 2)

This course will introduce the multitude of variables that have been shown to correlate with the processing of isolated words. It will compare the traditional techniques of data collection to the novel approach of crowdsourcing and mega studies. In addition to presenting empirical findings, the course will present the dominant attempts in explaining the observed effects. Finally, the advantages and the limitations of the study of processing of isolated words will be discussed.

Verb production in language impaired populations: agrammatic aphasia: Roelien Bastiaanse (Advanced, MONDAY, slot 3)

A stroke in the left hemisphere may result in aphasia. One of the possible syndroms is Broca's aphasia. People with Broca's aphasia are called agrammatic speakers because they demonstrate grammatical deficits: they speak in short, simple sentences and omit or substitute free and bound grammatical morphemes. This has long been the core of the definition of so-called 'agrammatic speech'. The grammatical errors seem to be closely related to verbs: many utterances do not contain a verb and the verbs that are produced are often uninflected for tense and agreement. In this class we will focus on the question why this is the case. Examples from agrammatic speakers of many typologically different languages will be used to illustrate the underlying deficits in agrammatic aphasia.

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Information theory in psycholinguistics: Dusica Filipovic Djurdjevic (Advanced, MONDAY, slot 4)

This course will describe the conceptual background of information theory and its application in the study of various language phenomena. At the very start, the basic concepts of information theory will be introduced. Throughout the course, several information theory measures will be explained and illustrated through presentation of published research which demonstrated their effects in language processing at the levels of phonology, morphology, syntax and semantics.

Neuroanatomy for linguists I & II: Silvia Martínez-Ferreiro (Introductory, TUESDAY, slots 1 & 2)

The course provides an overview of the main anatomical landmarks involved in speech and language production and comprehension. The course departs from genetics and a broad characterization of the phono-articulatory and the nervous system and deepens into cortical and subcortical structures relevant for language.

Theoretical approaches to language acquisition: Mirjana Miric (Advanced, TUESDAY, slot 3)

This course will present various theoretical approaches to the phenomenon of typical language acquisition, such as generative, cognitive and socio-cultural. The focus will be on the issues of innateness, universal grammar, poverty of stimulus argument, and critical period for language acquisition.

Verb production in language impaired populations: peri-operative testing for action and object naming in brain tumor patients: Roelien Bastiaanse (Advanced, TUESDAY, slot 4)

Brain tumors can infiltrate in areas that are important for language. The consequence may be that language disorders arise. However, some of these tumors grow very slowly, allowing the brain to reorganize language functions. This means that the neurosurgeon should be informed which cortical and subcortical areas are involved in comprehending and producing language, since these should be spared during resection of the tumor. This can be done before (although globally) and during the surgery. It is of the upmost importance that relevant language functions are tested. During this class, a number of

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linguistically motivated tests, specifically developed for language testing in this patient group, will be introduced and their application will be illustrated.

Ethics and data management: Srdjan Popov (Introductory, WEDNESDAY, slot 1)

This course focuses on ethical (and legal) aspects of conducting research with human participants. We will talk about why it is necessary to have your research evaluated by an ethical committee and what to do in case there is no such body at your institution. Particular emphasis will be placed on the difference between research requiring medical ethical and non-medical/general ethical review. In addition, we will talk about general aspects of data and privacy protection, but we will also discuss (research) data handling in terms of the EU General Data Protection Regulation.

Clinical linguistics I - IV: Silvia Martínez-Ferreiro, Ana Matic Skoric, Claudia Penaloza (Introductory, WEDNESDAY, slot 2, THURSDAY, slots 1 and 2, FRIDAY, slot 2)

The course includes an overview of the main communication disorders. There is a focus on the description, assessment and treatment of speech and language pathologies occurring throughout the lifespan. This includes genetic, developmental, acquired, and degenerative conditions.

Research methodology in language acquisition: Mirjana Miric (Advanced, WEDNESDAY, slot 3)

This course will provide an overview of different research methods which are used for exploring various phenomena in the domain of language acquisition. We will present the most suitable corpus and experimental methods for investigating different linguistic phenomena, taking into account that different levels of linguistic structure or different age of children require different methods.

Eye-tracking in language research: Ana Matic Skoric (Advanced, WEDNESDAY, slot 4)

In this course, you will get the most important information about eye-tracking as a method used in language processing studies. Specifically, we will review 1) basic aspects of this technique, 2) the most commonly used eye-tracking measures, 3) different eye-tracking paradigms, e.g., the reading paradigm and

the visual world paradigm, and 4) examples of studies with different populations.

Applied statistics for linguistics I & II: Seçkin Arslan (Advanced, THURSDAY, slots 3 & 4)

This course offers a gentle and accessible introduction to using mixed-effects regression models for psycho- and neurolinguistic data, by providing step-by-step tutorials in R studio. We will be using pieces of sample data from a reaction times experiment for the mixed-effect regression model, and from an eye-tracking experiment for generalized mixed-effect regression model. The course requires no prerequisites; however, we recommend participants to bring along a laptop computer with R and R-studio installed.

Introduction to neuroimaging: Christina Manouilidou (Introductory, FRIDAY, slot 1)

The course will give an introduction to the field of neuroimaging. It will be divided into two parts. The first part will be a short theoretical introduction into neuroscience and neuroimaging, covering all relevant aspects on physiology, neuroanatomy and some of the most relevant functional networks. In the second part, the course will cover the latest developments on electrophysiological (EEG), electromagnetic (MEG) and hemodynamic techniques (fMRI & PET) used in the study of language.

Neuromodulation of language: Christina Manouilidou (Advanced, FRIDAY, slot 3)

The course will be an introduction to the neuromodulation of language. Students will get familiar with the use of Transcranial Magnetic Stimulation (TMS) and transcranial Direct-Current Stimulation (tDCS) in improving language performance in populations with brain damage. The techniques are being used for the treatment of chronic stroke-induced aphasia, but also for a number of neurodegenerative conditions, such as Primary Progressive Aphasia, Mild Cognitive Impairment and Alzheimer's disease.

Experiment design in PsychoPy: Seçkin Arslan (Introductory, FRIDAY, slot 4)

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PsychoPy is a freely available open-source software tool (created by Jonathan Peirce) that can allow you to program experiments for psychology and linguistics. This tutorial will provide you basic principles of designing a simple experiment using PsychoPy using its builder interface. Following this tutorial, you will be able to build an experiment on your own laptop ready for data collection. Participants who will attend to this tutorial are kindly asked to install PsychoPy.