

Eye Tracking in Linguistic Research

- **Time:** 9 - 11 October 2017
- **Place:** UiT, room TBA
- **Course instructors:** Assistant Professor Akira Omaki, University of Washington, Researcher Sol Lago, University of Potsdam
- **Credits:** 5 ECTS
 - Requirements:
 - Complete assigned readings before and during the course
 - Attend all lectures
 - Write a detailed description of an eye tracking experiment that relates to the student's PhD topic. The description should include a description of the material that could be used, the group of speakers that should be tested, and most importantly, what research question the eye tracking experiment could answer.
- **Responsible institution:** UiT/ NTNU
- **Course organizers:** [Björn Lundquist](#), UiT The Arctic University of Norway & [Dave Kush](#), NTNU

Description

Eye tracking is an integral methodology used in a number of subfields of linguistics including, psycholinguistics, (first- and second-language) acquisition, and even formal grammar. The goal of this course is to provide PhD. student and other researchers with an in-depth introduction to eye tracking, with special attention paid to how the method can be used to investigate questions of grammatical representation and real-time language use across diverse populations (e.g. children, adults, and non-native speakers). The course will be taught by Akira Omaki and Sol Lago who both have long experience of working with eye tracking in different types of speaker groups. There will be a focus on language learning and the development of grammar and processing in different types of learners (adults, children). The following issues will be covered:

- Eye tracking in first and second language research
- Reading studies and the visual world paradigm
- How to set up a basic eye tracking experiment
- Analysis of eye-tracking data and presentation of results
- Language processing and its relation to grammar

The course will consist of 8 lectures from Monday to Wednesday. Monday and Tuesday will have two classes before lunch and one class after lunch. Wednesday will only have classes before lunch. The course will also be open for MA students even though they can not take it for credit. See detailed schedule and list of obligatory readings below.

Course website: <http://site.uit.no/acgva/lingphil-course-in-eye-tracking-at-uit-october-9-11/>

Schedule

We will have three time slots on Monday and Tuesday, and two slots on Wednesday. All classes will take place in room 5.502 at the University of Tromsø (house 5 in Teorifagbygget, 5th floor). During the second half of the lunch breaks, participants will have access to an eye tracker, and are encouraged to try it out together with the organisers. Participants may also set up individual meetings with the instructors to discuss future and present projects, get advice about choice of methodology and set-up for specific research questions etc..

Monday: Eye tracking while reading (main instructor Sol Lago)

- 10.00 – 11.00: Overview of the reading eye-tracking paradigm.
- 11.15 – 12.15: Reading eye-tracking in native and non-native processing: methodological issues.
- 12.15 – 14.00: Lunch break including optional lab session (13.00 -14.00)
- 14.00 – 15.00: Hands-on exercises: computation of eye-tracking measures.

Tuesday The visual world paradigm (main instructor Akira Omaki)

- 10.00 – 11.00: Overview of the visual world eye-tracking paradigm
- 11.15 – 12.15: Visual world eye-tracking and first/second language development
- 12.15 – 14.00: Lunch break including optional lab session (13.00 -14.00)
- 14.00 – 15.00: Hands-on exercise in creating visual world eye-tracking stimuli

Wednesday Reading paradigms and the visual world paradigm (Sol Lago and Akira Omaki)

- 10.00 – 11.00: Reflexive binding: diverging findings from reading and visual world paradigm.
- 11.15 – 12.15: Discussion (please prepare questions in advance!)

Syllabus for the course

Readings for the three days are listed below, with links to the published material (click title to access readings). If you for some reason would have problems accessing the readings, don't hesitate to contact the organisers. Participants are encouraged to read the articles in advance of the course.

Readings for the Monday lectures:

1. Rayner, K. (1998). [Eye Movements in Reading and Information Processing: 20 Years of Research](#). *Psychological Bulletin*, 124, 3, 372-422.
2. Felser, C. and Cunnings, I. (2012). [Processing reflexives in a second language: the timing of structural and discourse-level information](#). *Applied Psycholinguistics*, 33, 3, 571-603.
3. von der Malsburg, T. and Angele, B. (2016). [False positives and other statistical errors in standard analyses of eye movements in reading](#). *Journal of Memory and Language*, 94:119-133.

Readings for the Tuesday lectures:

1. Tanenhaus & Trueswell, J. C. (2006). [Eye movements and spoken language comprehension](#). In M. Traxler & M. Gernsbacher (Eds.), *Handbook of psycholinguistics* (2 ed.). (pp. 863-900). London, UK: Academic Press.
2. Lew-Williams, C. & Fernald, A. (2010). [Real-time processing of gender-marked articles by native and non-native spanish speakers](#). *Journal of Memory and Language*, 63(4), 447-464.
3. Atkinson, E., Wagers, M., Lidz, J., Phillips, C., and Omaki, A. (under review). [Developing incrementality in filler-gap dependency processing](#). Manuscript under review for publication.

Readings for the Wednesday lectures:

1. Kaili Clackson, Claudia Felser and Harald Clahsen (2011). [Children's processing of reflexives and pronouns in English: Evidence from eye-movements during listening](#). *Journal of Memory and Language*, 65(2), 128-144
2. P. Sturt (2003). [The time-course of the application of binding constraints in reference resolution](#). *Journal of Memory and Language*, 48 (2003), pp. 542-562
3. Optional reading: Dan Parker and Colin Phillips (2017): [Reflexive attraction in comprehension is selective](#). *Journal of Memory and Language*, 94, pp. 272-290