Research Methods in Cognitive Science

Aim

The course gives an introductory overview of a variety of research methods typically used in cognitive science and is intended for graduate students in Cognitive Science. The course will contain: philosophy of science, conceptual analysis, methods for data collection and data analysis, e.g audio, video recordings, questionnaires, interviews, experiments, computer simulation. Examples might be taken from neuroscience, cognitive robotics, MDI research, research on cognitive evolution, especially animal studies. The course might include visits to different SweCog sites in Sweden, where experts will give an introduction to the methods they use in current projects. The examination ”course paper” will be in the form of a research application with a focus on the specification of research methods, which will be presented and defended at a final seminar. There will also be assignments related to the different methods.

Course content

Philosophy of science, experimental studies, corpus studies transliteration, statistical methods, metjods for HCI and interaction design, methods for neuroimaging, simulation an neural networks.

Organisation and Schedule

1.	Metodöversikt	(Göteborg)	Jens Allwood, Elisabeth Ahlsén	(27 Jan 10-12)
2.	Vetenskapsfilosofi	(Göteborg)	Jens Allwood	(27 Jan 13-18 28 Jan 1012)
3.	Experimentell metod	(Göteborg)	Elisabeth Ahlsén, Mikael Jensen	(28 jan 13-18)
4.	Inspelning, transkription, korpusmetod	(Göteborg)	Jens Allwood, Ingvar Lind Elisabeth Ahlsén, Kalle Sandberg	(29 jan) 9-12, 13-16)
5.	Statistiska metoder	(Linköping)	Örjan Dahlström	(18-feb fm)
6.	Metoder for MDI och ID	(Linköping)	?	(18 feb em)
7.	Simulering med neurala nätverk	(Umeå)	Magnus Jonsson	(6 Maj fm)
8.	Metoder för neuroimaging	(Umeå)	Roland Johansson, Lars Nyberg	(6 Maj em)
9.	Avslutning	(Göteborg)		(27 Maj)

Examination

Active participation, exercises given by teachers. Paper written lika a research grant with a detailed section on research methods.

Prerequisites

Teachers

See Organisation and Schedule. Jens Allwood is course leader, jens@ling.gu.se

Literature

27jan-29 jan. Available at http://www.ling.gu.se/~jens/publications/index.html

Allwood, J. 2001. Dialog Coding - Function and Grammar: Göteborg Coding Schemas. *Gothenburg Papers in Theoretical Linguistics 85*, University of Göteborg, Dept of Linguistics, pp. 1-67

Allwood, J. (ed.). 2002. *Lingvistiska metoder*. Göteborgs universitet. Institutionen för lingvistik (Urval som fil)

Allwood, J. 2008. Multimodal Corpora. In Lüdeling, Anke & Kytö, Merja (eds.) *Corpus Linguistics. An International Handbook.* Mouton de Gruyter, Berlin. 207-225.

Allwood, J. (2010) Philosophy of science. (Fil)

Allwood, Jens, Cerrato, Loredana, Dybkjaer, Laila, Jokinen, Kristiina, Navaretta, Costanza & Paggio, Patrizia. 2005. The MUMIN Multimodal Coding Scheme. *NorFA yearbook 2005,*pp. 129-157.

Allwood, J., Grönqvist, L., Ahlsén, E., & Gunnarsson, M. 2002. *Göteborgkorpusen för talspråk* (The Göteborg spoken Language Corpus, GSLC): Copenhagen: Akademisk Forlag. Nydanske Studier 30, pp. 39-58

Other information