



Venerdì 31 Gennaio 2014

» DPG » DPSS » DPA » BIBLIOTECA » SICI » LIRIPAC » TUTORATO » SAP » TIROCINI

Area riservata ai docenti

Utente Password

» Entra  
» Problemi di password

» Lauree triennali N.O.  
DM 17/2010

» Lauree magistrali N.O.  
DM 17/2010

» Lauree triennali DM  
270/04

» Lauree magistrali DM  
270/04

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**TRENDS IN COGNITION**

, 6 crediti

Corsi di laurea / indirizzi:

> Lauree magistrali N.O. DM 17/2010 / [Psicologia sperimentale e scienze cognitive \(M-1A\)](#)

Prof. Zorzi Marco

Sede e calendario lezioni

Dati statistici votazioni esami

**Teaching language**

Inglese

**Educational And Training Objectives**

The course offers an overview of the current theoretical and methodological trends in the study of cognition.

**Pre-requisites**

None

**Course content**

The first part of the course is focuses on the recent advances in developing formal models of cognitive functions (connectionism, dynamic systems approach, Bayesian approach) and on the integrative effort to bridge the gap between behavioural data and neural data. The second part of the course takes numerical cognition as a case study to show how interdisciplinary research spanning a variety of methods (behavioural, neuroimaging, neurophysiological) and subject populations (healthy adults, infants, brain damaged patients, learning disabled children, and non-human animal species) offers a coherent and integrated path towards understanding cognition, from neurons to behaviour.

**Recommended reading**

All reading material will be made available on the course web site.

- Slides of the course

- Scientific articles (provisional list):

Ansari, D. (2008). Effects of development and enculturation on number representation in the brain. *Nature Reviews Neuroscience*, 9, 278-291

Chater, N., Tenenbaum, J.B., & Yuille, A. (2006). Probabilistic models of cognition: conceptual foundations. *Trends in Cognitive Sciences*, 10, 287-291

Dolan, R.J. (2008). Neuroimaging of Cognition: Past, Present, and Future. *Neuron*, 60, 496-502

Hope, T. H., Stoianov, I., & Zorzi, M. (2010). Through neural stimulation to behavioral manipulation: A novel method for analysing dynamical cognitive models. *Cognitive Science*, 34, 406-433

Houghton, G. (2005). Connectionist models in cognitive psychology (ch 1). Hove: Psychology Press

Nieder, A., & Dehaene, S. (2009). Representation of number in the brain. *Annual Review of Neuroscience*, 32, 185-208

O'Reilly, R.C. (1998). Six principles for biologically based computational models of cortical cognition. *Trends in Cognitive Sciences*, 11, 455-462

Port, R. (2002). The dynamical systems hypothesis in cognitive science. *MacMillan Encyclopedia of Cognitive Science*, 1, 1027-1032

**Teaching methods**

Teaching is based on frontal lectures and group discussions.

**Assessment methods**

**Type of examination:** Written with possible oral integration

**Written examination:** Open questions

**Teaching tools**

Guided tours of several laboratories that use different methodologies to study cognition will be organized during the course.

**Notes**

Access to the course web site (<http://docs.psy.unipd.it>) requires registration using a password that will be provided at the beginning of the course (or requested by email to the lecturer).

**COMUNICAZIONI AGLI STUDENTI (a cura del docente)**

Nessuna comunicazione disponibile.