

## MSc in Informatics: Cognitive Science and Natural Language

### LCTG—Linguistic and Computational Theories of Grammar Autumn 2007

#### Readings for the Course

There is no course text. P. Sells 1987: *Lectures on Contemporary Syntactic Theories*, CSLI Lecture Notes, CSLI Stanford is an outdated but readable crib on the linguistic side, while F. Pereira and S. Shieber, 1987: *Prolog and Natural Language Analysis*, CSLI Lecture Notes, CSLI Stanford is an excellent introduction to Prolog and DCGs. Both are cheap and should be available from Amazon. The latter is available electronically from the class web-page

Besides the class notes that will incrementally be made available from the class web page, the following readings are all essential.

1. Shannon, Claude E. 1948: A Mathematical Theory of Communication *Bell System Technical Journal*, vol. 27, pp. 379-423 and 623-656
2. Chomsky, Noam, 1957: *Syntactic Structures*, Mouton, The Hague. (Chs 1-5).
3. Pereira, Fernando and Stuart Shieber, 1987: *Prolog and Natural Language Analysis*, CSLI Lecture Notes, CSLI Stanford (see notes)
4. Woods, William, 1973: "An Experimental Parsing System for Transition Network Grammars," in Randall Rustin (ed.), *Natural Language Processing*, 111-154, Algorithmics Press, New York.
5. Ross, J. Robert, 1967: *Constraints on Variables in Syntax* PhD thesis, MIT. (Excerpts)
6. Gazdar, Gerald, 1981: "Unbounded Dependencies and Coordinate Structure," *Linguistic Inquiry* Vol. 12, No. 2, 155-184.
7. Sag, Ivan, Ron Kaplan, Lauri Karttunen, Martin Kay, Carl Pollard, Stuart Shieber and Annie Zaenen, 1986: "Unification and Grammatical Theory," *Proceedings of the 5th West Coast Conference on Formal Linguistics*, Seattle, March, 238-254.
8. Gazdar, Gerald, 1988: "Applicability of Indexed Grammars to Natural Languages," in Uwe Reyle and Christian Rohrer (Eds.) *Natural Language Parsing and Linguistic Theories* Reidel:Dordrecht, 69-94.
9. Joshi, Aravind and K. Vijay-Shanker and David Weir, 1991: "The Convergence of Mildly Context-Sensitive Formalisms," in Peter Sells, Stuart Shieber, and Tom Wasow, (eds.), *Processing of Linguistic Structure*, MIT Press, Cambridge, MA, 31-81.
10. Steedman, Mark and Baldrige, Jason, 2003: "Combinatory Categorical Grammar," ms. University of Edinburgh.
11. Collins, Michael: 2003, 'Head-Driven Statistical Models for natural Language Parsing,' *Computational Linguistics*, 29, 589-637.
12. Chomsky, Noam, 1995: "Bare phrase structure," in Gert Webelhuth (Ed.), *Government and Binding Theory and the Minimalist Program*, Blackwell, Oxford, 383-439.
13. Frank, Robert, 2005: "Phase Theory and Tree Adjoining Grammar," *Lingua*, in press.
14. Epstein, Samuel D., Groat, Erich, Kawashima, Ruriko and Kitahara, Hisatsugu, 1998: *A Derivational Approach to Syntactic Relations*, Oxford University Press, Oxford. (Ch. 6.)
15. Kager, René, 1999: *Optimality Theory*, Cambridge University Press, Cambridge. (Ch. 8: Extensions to Syntax).
16. Pereira, Fernando: 2000. Formal grammar and information theory: Together again?. *Philosophical Transactions of the Royal Society*, 358(1769):1239-1253.