Cs 263B Book Bibliography & Other Points of Departure Spr '09

AIAMA: Russell, S. J. and Norvig, P. (2003). *Artificial Intelligence: A Modern Approach*. 2nd Ed., Prentice Hall, NJ. (Section 20.5: Neural Networks; Chapters 22&23: Communication and Probabilistic NLP)

C&M: Bechtel, W. and Abrahamsen (2001). *Connectionism and the Mind*, Blackwell.

C&PM: Horgan, T. and Tiennson, J. (eds.) (1991). *Connectionism and the Philosophy of Mind*. Kluwer.

C&S: S. Pinker and J. Mehler (eds.) (1988). *Connections and Symbols*. Bradford Book/MIT Press, Cambridge, MA.

CAIN&SP: R. Sun and L. A. Bookman (eds.), *Computational Architectures Integrating Neural and Symbolic Processes*. Kluwer, MA.

CANLP: R. Reilly and N. Sharkey (eds.) (1992). *Connectionist Approaches to Natural Language Processing*. Lawrence Erlbaum Assoc.

CNLP: N. Sharkey (ed.) *Connectionist Natural Language Processing*. Intellect, Oxford, England.

CSI: Sun, R. and Alexandre, F. (eds.). (1997). *Connectionist-Symbolic Integration: From Unified to Hybrid Approaches*. Lawrence Erlbaum Assoc.

CSP: Hinton, G. (ed.) (1990). *Connectionist Symbol Processing*. MIT/ Elsevier.

HLCM: Barnden, J. and Pollack, J. (Eds.) (1991). *High-Level Connectionist Models*. Ablex Publ., Norwood NJ, pp. 32-86, 1991.

INN: Anderson, J. A. (1995). *An Introduction to Neural Networks*. Bradford Book/MIT Press, Cambridge, MA.

NC: Anderson, J. A. and Rosenfeld, E. (Eds.) (1988), *Neurocomputing: Foundations of Research*. MIT Press.

NCMC: Nadel, Cooper, Culicover and Harnish (eds.). (1989). *Neural Connections, Mental Computation*. MIT Press.

NNAI: Zeidenberg, M. (1990). *Neural Networks in Artificial Intelligence*. Ellis Horwood. NY

NNKRI: Levine, D. S. and Aparicio IV, M. (eds.) (1994). *Neural Networks for Knowledge Representation and Inference*. Lawrence Erlbaum Associates, Publishers.

NN&NI: Grossberg, S. (Ed.) (1988). *Neural Networks and Natural Intelligence*. Bradford Book/MIT Press.

PDP: Rumelhart, D. E., McClelland, J. L. and PDP Research Group (1986). *Parallel Distributed Processing, Volumes 1 & 2*. Bradford Book/MIT Press, Cambridge, MA.

PMAS: Hinton, G. E. and Anderson, J. A. (eds.) (1981). *Parallel Models of Associative Memory*. Lawrence Erlbaum Assoc.

SUBSYMNLP: Miikkulainen, R. (1993). *Subsymbolic Natural Language Processing: An Integrated Model of Scripts, Lexicon, and Memory*. MIT Press, Cambridge, MA.

Conference proceedings of:
- *Advances in Neural Information Processing Systems(NIPS)*
- *Intern. Joint Confs. on AI (IJCAI)*
- *Cognitive Science Society*
- *AAAI (American Assoc. of AI)*
- *Intern. Joint Conf. on Neural Networks*

Journals:
- *Artificial Intelligence*
- *Behavioral and Brain Sciences*
- *Cognitive Science*
- *Connection Science*
- *Knowledge-Based Systems*
- *Neural Networks*
- *Applied Intelligence*
- *Neural Networks*
- *Neural Computation*

Neurobiological Journals:
- *Trends in Neuroscience*
- *Journal of Neuroscience*
- *Nature Neuroscience*
- *Neuron*

<u>Some topics or authors not covered in syllabus:</u>

Logic Processing with Neural Networks
Holldobler, S. (1990). A Structured Connectionist Unification Algorithm. Proceedings Eighth National Conf. on Artificial Intelligence (AAAI-90), Vol. 2, 587-593.

Holldobler, S., Kalinke, Y. and Storr, H. (1999). Approximating the Semantics of Logic Programs by Recurrent Neural Networks. Applied Intelligence 11, 45-58.

Pinkas, G. (1994). A Fault-Tolerant Connectionist Architecture for Construction of Logic Proofs. pp. 321-340. In **[AI&NN]**

More on Extracting/Inserting Knowledge from/to Connectionist Networks:
Servan-Schreiber, D., Cleeremans, A. and McClelland, J. L. (1994). Graded State Machines: The Representation of Temporal Contingencies in Simple Recurrent Networks. In V. Honavar and L. Uhr (eds.) Artificial Intelligence and Neural Networks: Steps toward Principled Integration. Academic Press, pp. 241-269. **[AI&NN]**

Olmin, C. W. and Giles, C. L. (1994). Extraction and insertion of Symbolic Information in Recurrent Neural Networks. pp. 271-299. In **[AI&NN]**

Shavlik, J. W. (1994). A Framework for Combining Symbolic and Neural Learning. pp. 561-580. In **[AI&NN]**

Wermter, S. (2000). Knowledge Extraction from Transducer Neural Networks. *Applied Intelligence* 12, 27-42.

More Computational Theory & Neural Networks:
Judd, J. S (1990). *Neural Network Design and the Complexity of Learning*. Bradford Book/MIT Press.

Hornik, K., Stinchcombe, M. and White, H. (1989). Multilayer feed-forward networks are universal approximators. *Neural Networks*, vol. 2, 359-366.

Sperduti, A. (1997). On the computational power of recurrent neural networks, *Neural Networks*, vol. 10, no. 3, 395-400.

Phillips, S. (2000). Constituent similarity and systematicity: the limits of first-order connectionism. *Connection Science*, Vol. 12, No. 1, 45-63.

Explanation-Based Learning (EBL) vs Similarity-Based Learning (SBL):
Katz, B. F. (1989) (1989) EBL and SBL: A Neural Network Synthesis. *Proc. of the 11th Annual Conference of the Cognitive Science Society*. 683-689.

Shavlik, J. and Towell, G. G. (1989) An Approach to Combining Explanation-based and Neural Learning Algorithms. *Connection Science*, 1(3), 231-253.

Coarse/Fine-Grain Architectures:
Bookman, L. A. (1995). A Framework for Integrating Relational and Associational Knowledge for Comprehension. In **[CAIN&SP]**

Support Vector/Kernel Machines:
Cristianini, N. and Scholkopf, B. (2002). Support Vector machines and Kernel Methods: The New Generation of Learning Machines. *AI Magazine*, Vol. 23, No. 3, 31-41.

Echo State and Liquid State Machines:
H. Jaeger (2001). The "echo state"approach to analyzing and training recurrent neural networks. GMD Report 148, GMD – German National Research institute for Computer Science.

T. Natshclager, W. Maass, H. Markram. (2002). The "liquid computer": a novel strategy for real-time computing on time series. Special Issue on Foundations of Info. Proc. of TELEMATIK, 8(1):39-43.

Corpus-Based NNs:
Tepper, J. A., Powell, H. M. and Palmer-Brown, D. (2002). A corpus-based connectionist architecture for large-scale natural language processing. *Connection Science*, Vol. 14, No. 2, 93-114.

Other:
Chan, S. W. K. and Franklin, J. (1998). Symbolic Connectionism in Natural Language Disambiguation. *IEEE Transactions on Neural Networks*, Vol. 9, No. 5. 739-755.

Prepositional Phrase Attachment
Touretzky, D. S. (1989) Connectionism and PP Attachment. In D. Touretzky, G. Hinton and T. Sejnowski (eds.) *Proc. of the 1988 Connectionist Models Summerschool*. 325-332.

Neurobiological Topics:
"Spatial and Temporal Dynamics of Cortical Inhibitory Circuits", Massimo Scanziani, Neurobiology Section, University of California, San Diego

"Complex Organization of Synapse Signaling and Behavior" Seth Grant, Wellcome Trust Sanger Institute, Hinxton, Cambidgeshire, United Kingdom

"Scale-Invariant Dynamics in Neural Systems" Laurence F. Abbott, Volen Center and Department of Biology, Brandeis University, Waltham, Massachusetts

"Single Neuron Perturbations and Synaptic Plasticity" Venkatesh Murthy, Department of Molecular & Cellular Biology, Harvard University, Cambridge, Massachusetts

"Dendritic Spine Changes During Hebbian (LTP) and Homeostatic Synaptic Plasticity" Kristen Harris, Synapses and Cognitive Neuroscience Center, Professor of Neurology, Medical College of Georgia, Augusta

Spiking neural models (other than DETE): ...