

Topic: (Spoken) Dialogue Systems

Themes:

- Interaction in dialogue systems
- Dialogue management – models, learning, adaptation

Reading list:

Discourse and Dialogue – Theory

1. Jurafsky, D. & Martin, J. H. (2000). *Speech and Language Processing: An Introduction to Natural Language Processing, Computational Linguistics, and Speech Recognition*. (Chapters 18, 19 (new))
2. Grosz, B. J., and Sidner, C. L. (1986). *Attentions, intentions and the structure of discourse*. *Computational Linguistics*, 12:175-204

Dialogue Systems – Practice

3. Allen, J. F., et. al. (2000). *An Architecture for a Generic Dialogue Shell*. *Journal of Natural Language Engineering*, special issue on Best Practices in Spoken Dialogue Systems Engineering 6(3): 1-16.
4. B. Pellom, W. Ward, and S. Pradhan, (2000) *The CU Communicator: An architecture for dialogue systems*. In Proc. of ICSLP
5. Oviatt, S.L., Cohen, P. R., Wu, L., Vergo, J., Duncan, L., Suhm, B., Bers, J., Holzman, T., Winograd, T., Landay, J., Larson, J., Ferro, D. (2000) *Designing the user interface for multimodal speech and gesture applications: State-of-the-art systems and future research directions*. In Proc. HCI

Interaction in Dialogue Systems

Speech channel issues

6. Peter Heeman and James Allen. (1999). *Speech repairs, intonational phrases and discourse markers: modeling speakers' utterances in spoken dialog*. *Computational Linguistics*, 25(4)
7. Diane Litman, Julia Hirschberg, and Marc Swerts. (2000) *Predicting Automatic Speech Recognition Performance Using Prosodic Cues*. Proceedings of the First Meeting of the North American Chapter of the Association for Computational Linguistics (NAACL).

Dialogue structure

8. Mark Core, James Allen. (1997). *Coding Dialogs with the DAMSL Annotation Scheme* AAAI Fall Symposium on Communicative Action in Humans and Machines
9. Andreas Stolcke, Klaus Ries, Noah Coccaro, Elizabeth Shriberg, Rebecca Bates, Daniel Jurafsky, Paul Taylor, Rachel Martin, Marie Meteer, and Carol Van Ess-Dykema. (2000). *Dialogue Act Modeling for Automatic Tagging and Recognition of Conversational Speech*. *Computational Linguistics* 26:3

Recovering from errors

10. Matthew Purver, Jonathan Ginzburg and Patrick Healey. (2003) *On the Means for Clarification in Dialogue*. In J. van Kuppevelt and R. Smith, editors, *Current and New Directions in Discourse and Dialogue*, pages 235-255, (Text, Speech and Language Technology series vol 22), Kluwer Academic Publishers, 2003
11. Edward Filisko and Stephanie Seneff. (2004) *Error Detection and Recovery in Spoken Dialogue Systems*. In Proc of HLT-NAACL 2004 Workshop on Spoken Language Understanding for Conversational Systems and Higher Level Linguistic Information for Speech Processing

12. Garland, A.; Lesh, N.B.; Rich, C. (2003) *Responding to and Recovering from Mistakes During Collaboration*. International Joint Conference on Artificial Intelligence (IJCAI)

Dialogue Managers – Models

13. McTear, M. (1998) *Modelling spoken dialogues with state transition diagrams: experiences with the CSLU toolkit*. ICSLP
14. Staffan Larsson and David Traum. (2000). *Information state and dialogue management in the TRINDI Dialogue Move Engine Toolkit*. In Natural Language Engineering Special Issue on Best Practice in Spoken Language Dialogue Systems Engineering, Cambridge University Press
15. Rich, C., Sidner, C. L., Lesh, N. B. (2001). *COLLAGEN: Applying Collaborative Discourse Theory to Human-Computer Interaction*. Artificial Intelligence Magazine 22 (4): 15-25
16. Dan Bohus, Alex Rudnicky. (2003) *RavenClaw: Dialog Management Using Hierarchical Task Decomposition and an Expectation Agenda*. In Proc of Eurospeech
17. E. Horvitz, T. Paek. (1999) *A Computational Architecture for Conversation*. Proceedings of the 7th International Conference on User Modeling (UM), 1999.

Dialogue Managers – Learning and Adaptation

18. Esther Levin, Roberto Pieraccini and Wieland Eckert. (2000). *A Stochastic Model of Human Machine Interaction for Learning Dialog Strategies*. IEEE Transactions on Speech and Audio Processing, 8:1, 2000.
19. Satinder Singh, Diane Litman, Michael Kearns and Marilyn Walker. (2002). *Optimizing Dialogue Management with Reinforcement Learning: Experiments with the NJFun System*. Journal of Artificial Intelligence Research (JAIR), Vol. 16
20. K. Scheffler and S. Young (2002). "Automatic Learning of Dialogue Strategy using Dialogue Simulation and Reinforcement Learning." HLT
21. Jennifer Chu-Carroll. (2000). *MIMIC: An adaptive mixed initiative spoken dialogue system for information queries*. Proceedings of the 6th ACL Conference on Applied Natural Language Processing (ANLP)
22. Tim Paek and Eric Horvitz (2004) *Optimizing Automated Call Routing by Integrating Spoken Dialog Models with Queuing Models*. HLT-NAACL

Dialogue System Evaluation

23. Marilyn A. Walker, Diane J. Litman, Candace A. Kamm and Alicia Abella (1998) *Towards Developing General Models of Usability with PARADISE*. Natural Language Engineering, 2000.
24. Walker, M. A., Passonneau, R., & Boland, J. E. (2001). *Quantitative and Qualitative Evaluation of Darpa Communicator Spoken Dialogue Systems*. ACL
25. Litman, D. J., & Pan. S. (2002). *Designing and Evaluating an Adaptive Spoken Dialogue System*. User Modeling and User-Adapted Interaction 12: 111-137.