Resume

CANDACE L. SIDNER

Brief Bio:

Candace L. (Candy) Sidner has a long-standing interest in human communication and collaboration, and their application to agents, and interfaces, especially those using gesture, social behavior, speech, and natural language.

Candy is a Research Professor at Worcester Polytechnic Institute, with extensive experience in industrial labs, and as an independent consultant. She was PI of the Always On Relational Agent project with Chuck Rich at WPI and Tim Bickmore at Northeastern University, Co-PIs and co-PI for the ONR-sponsored WPI project Collaborative Robot Learning from Demonstration Using Hierarchical Task Networks. She has recently worked on multimodal (including gesture) interfaces using a humanoid robot for the role of engagement in conversation, and on interfaces, including those with speech, involving collaborative interface agents using DISCO.

Candy is a Fellow and past Councilor of the Association for the Advancement of Artificial Intelligence, was elected a Fellow of the Association for Computational Linguistics in 2013, and is a senior member of the IEEE. She serves on the editorial board of the Springer journal of Multimodal User Interfaces. She has been an associate editor of the journal ACM Transactions on Intelligent Interactive Systems, an associate editor of the journal Artificial Intelligence (2008-2012), a member of the scientific advisory boards for Intelligent User Interfaces, SIGDIAL, HLT-NAACL, and the EU Cognitive Systems for Cognitive Assistants (CoSy) project. She has served as general chair for HLT-NAACL 2007, program co-chair of Intelligent User Interfaces 2006, SIGIAL 2004, chair of Intelligent User Interfaces in 2001, program chair for ACL 1987, and President of the Association for Computational Linguistics (1989).

She received her Ph.D. from MIT in Computer Science.

Research Experience

2009-present, Research Professor, Worcester Polytechnic Institute
2007-2010, Division Scientist, BAE Systems AIT;
        PI for Curriculum Team, DARPA Bootstrapped Learning Project 2007-2009
2000-2007, Senior Research Scientist, Mitsubishi Electric Research Laboratories
1993-2000, Senior Research Scientist, Lotus Development Corporation
1989--1993, Member of Technical Staff, Cambridge Research Lab, Digital Equipment Corp.
1990--1991, Research Affiliate, Spoken Language Group, Laboratory for Computer Science, MIT
1988--1989, Visiting Scholar, Harvard University.
1988--1989, Division Scientist, BBN Laboratories Inc. (on leave 88-89)
1983--1988, Senior Scientist, BBN Laboratories Inc.
1979--1983, Scientist, Bolt Beranek and Newman Inc.
1974--1979, Research Assistant, AI Laboratory, MIT.

Education

Ph.D. Computer Science, Massachusetts Institute of Technology, 1979.
M.S. Computer Science, University of Pittsburgh, 1975.
B.A. cum laude Mathematics, Kalamazoo College, 1971.

Honorary Memberships

Elected Fellow, Association for the Advancement of Artificial Intelligence, 1991.
Elected Senior Member, IEEE. 2004.
Best Paper Awards: Morency, L.-P., Lee, C., Sidner, C., Darrell, T. Contextual recognition of head gestures, *Proceedings of the Seventh International Conference on Multimodal Interfaces (ICMI'05),* 2005.
Elected Fellow, Association for Computational Linguistics, 2013.

Other awards
Sigma Chi, MIT Chapter, 1979.
Alpha Lambda Delta. Kalamazoo College Chapter, 1971.

Publications

Refereed Journals

Candace Sidner, Timothy Bickmore, Bahador Nooraie, Charles Rich, Lazlo Ring, Mahni Shayganfar, and Laura Vardoulakis. Creating new technologies for companionable agents to support isolated older adults. Transactions on Interactive Intelligent Systems, Volume 8 Issue 3, August 2018.

Anahita Mohseni-Kabir, Changshuo Li, Victoria Wu, Daniel Miller , Benjamin Hylak, Sonia Chernova, Dmitry Berenson, Candace Sidner and Charles Rich. Simultaneous Learning of Hierarchy and Primitives for Complex Robot Tasks. Appeared online, Autonomous Robots, April 2018. https://link.springer.com/article/10.1007/s10514-018-9749-y

Bickmore, T., Schulman, D., Sidner, C.   Automated Interventions for Multiple Health Behaviors Using Conversational Agents, Journal of Patient Education and Counseling. Vol. 92, Issue 2, Pages 142-148, 2013.

Bickmore, T., Schulman, D., Sidner, C. Modeling the Intentional Structure of Health Behavior Change Dialogue, Journal of Biomedical Informatics 44 (2011) 183–197.

C. Rich and C. Sidner, Robots and Avatars as Hosts, Advisors, Companions, and Jesters, AI Magazine, Winter, 2009.

Morency, L.P, Sidner*, C., Lee, C. and Darrell, T. "Head Gestures for Perceptual Interfaces: The Role of Context in Improving Recognition," Artificial Intelligence, 171 (8-9): 568-585. June, 2007.

Rich, C. and Sidner, C. and Lesh, N. and Garland, A. and Booth, S. and Chimani, M.,
 "DiamondHelp: A New Interaction Design for Networked Home Appliances," Personal and Ubiquitous Computing, 1617-4909, Vol. 10, Issue 2, pp. 187-190, January 2006.

C. Sidner, C. Lee, C. Kidd, N.Lesh, and C. Rich. "Explorations in Engagement for Humans and Robots," Artificial Intelligence, 166(1-2): 140-164, August, 2005.

N.Lesh, J. Marks, C. Rich, C. Sidner. "Man-Computer Symbiosis" Revisited: Achieving Natural Communication and Collaboration with Computers. IEICE Transactions on Information and Systems, Information and Systems Society, Institute of Electronics, Tokyo, Japan, Vol. E87-D, No. 6, pg 1291-1298, June, 2004.

C. Rich and C. L. Sidner. Collagen: A Collaboration Manager for a Collaborative Interface Agent. User Modelling and User Assisted Interaction, Vol. 7, No. 3-4:315-350, Kluwer Academic

Publishers, 1998.

S Whittaker, J Swanson, J Kucan, C Sidner - ACM Transactions on Computer-Human Interaction (TOCHI), 1997.

S. Whittaker, J. Swanson, J. Kucan, and C. Sidner. TeleNotes managing lightweight interactions in the desktop. ACM Transactions on Computer-Human Interaction, 4(2):137-168, 1997.

C. L. Sidner. Negotiation in Collaborative Activity: A Discourse Analysis. Knowledge-Based Systems, Vol. 7, No. 4, 1994.

B. Grosz and C. L. Sidner. Attention, Intention and the Structure of Discourse. Computational Linguistics, Vol. 12, No. 3:175-204, l986. Reprinted in M. Nagao, editor, Language and Artificial Intelligence. Elsevier Science Publishers B.V. (North Holland), 1987.

C. L. Sidner. Plan parsing for intended response recognition in discourse. Computational Intelligence, Vol. 1, No. 1, February 1985.

C. L. Sidner. Focusing and discourse. Discourse Processes, Vol. 6, No. 2, 1983.

C. L. Sidner. What the speaker means: The recognition of speaker plans in discourse. Journal of Computers and Mathematics, Vol. 9, No. 1, 1983.

C. L. Sidner. Focusing for the interpretation of pronouns. Computational Linguistics, Vol. 7. No. 4, 1981.

Refereed Conference Proceedings (excludes workshop papers)

J. Y. Chai, M. Cakmak, and C. Sidner. Teaching robots new tasks through natural interaction. In K. A. Gluck and J. E. Laird, editors, Interactive Task Learning: Agents, Robots, and Humans Acquiring New Tasks through Natural Interactions, chapter 9. MIT Press, 2019.

M. Shayganfar, C. Rich, C. L.Sidner, Expectedness in Human-Robot Collaboration, Proceedings of the Autonomous Agents and Multiagent Systems (AAMAS) conference (Extended Abstract), Singapore, 2016.

M. Shayganfar, C. Rich, C.L.Sidner, Impact of Affective Appraisal on Collaborative Goal Management: My Robot Shares My Worries, Proceedings of 11th ACM-IEEE International Conference on Human-Robot Interaction - HRI (LBR), 2016.

A.Mohseni-Kabir, C.Rich, S.Chernova, C.Sidner, and D.Miller. Interactive hierarchical task learning from a single demonstration. In *Proceedings of the 10th ACM/IEEE International Conference on Human-Robot Interaction*, Portland, OR, 2015.

T. Bickmore, D. Utami, S. Zhou, C. Sidner, L. Quintiliani, M. Paasche-Orlow. Automated Explanation of Research Informed Consent by Virtual Agents, Proceedings of the 15th Annual Conference on Virtual Agents, Delft, The Netherlands, 2015.

M. Behrooz, C. Rich and C. Sidner. On the Sociability of a Game-Playing Agent: A Software Framework and Empirical Study. Proceedings of the Fourteenth Annual Conference on Intelligent Virtual Agents, Boston, 2014.

B. Nooraei, C. Rich and C. Sidner. A Real-Time Architecture for Embodied Conversational Agents: Beyond Turn-Taking. 7th International Conference on Advances in Computer-Human Interactions, Barcelona, Spain, May, 2014.

W. Coon, C. Rich and C. Sidner, "Activity Planning for Long-Term Relationships", Proceedings of the International Conference on Intelligent Virtual Agents, 2013.

C. Rich and C. Sidner. Procedural Dialogue Authoring with Hierarchical Task Networks and Dialogue Trees. 12th International Conference on Intelligent Virtual Agents, August, 2012.

 L. Pfeifer Vardoulakis, L. Ring, B. Barry, C. Sidner, T. Bickmore. Designing Relational Agents as Long Term Social Companions for Older Adults. 12th International Conference on Intelligent Virtual Agents, 2012.

S.Kang, J. Gratch, C.Sidner, R. Artstein, L. Huang, and L. Morency. Towards building a Virtual Counselor: Modeling Nonverbal Behavior during Intimate Self-Disclosure. Eleventh International Conference on Autonomous Agents and Multiagent Systems. 2012.

D. Becroft, J. Bassett, A. Mejia, C. Rich and C. Sidner. AIPaint: A Sketch-Based Behavior Tree Authoring Tool, Proceedings of Seventh AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-11), 2011.

A. Holroyd, C. Rich, C. Sidner and B. Ponsler.   Generating Connection Events for Human-Robot Collaboration, *Proceedings of Ro-Man 2011, 20th IEEE International Symposium on Robot and Human Interactive Communication*, July 2011.

O'Brian, K., Sutherland, J., Rich, C. and Sidner, C. Collaboration with an autonomous Humanoid Robot: a Little Gesture Goes a Long Way. *Proceedings of the 2011 ACM/IEEE International Conference on Human Robot Interaction,* (poster), March 2011.

Rich, C., Holroyd, A., Ponsler, B. and Sidner, C. Recognizing Engagement in Human-Robot Interaction, *Proceedings of the 2010 ACM/IEEE International Conference on Human Robot Interaction*, pp. 375-382, March, 2010.

Sidner, C. Humanoid Agents as Hosts, Advisors, Companions and Jesters, invited paper, *Proceedings of the 21st International Florida AI Research Society Conference*, May, 2008.

Rich, C. and Sidner, C. ``DiamondHelp: A generic collaborative task guidance system.'' AI Magazine: Special Issue on Mixed-Initiative Assistants. *AI Magazine*, pp. 33-46, Summer, 2007.

Rich, C. and Sidner, C. "From the Programmer's Apprentice to Human-Robot Interaction: Thirty Years of Research on Human-Computer Collaboration," *Proceedings of AAAI 2006*, July, 2006.

Bickmore, T.W. and Sidner, C.L. Towards plan-based health behavior change counseling systems, *Argumentation for Consumers of Healthcare* , AAAI Spring Symposium Series, April 2006.

Sidner, C., Lee, C., Morency, L-P., Forlines, C. The Effect of Head-Nod Recognition in Human-Robot Conversation, *Proceedings of the 2006 ACM Conference on Human Robot Interaction*, pp. 290-296, March 2006.

Morency, L.-P., Lee, C., Sidner, C., Darrell, T. Contextual recognition of head gestures, *Proceedings of the Seventh International Conference on Multimodal Interfaces (ICMI'05),* 2005. Best Paper award.

Rich, C.; Sidner, C.; Lesh, N.; Garland, A.; Booth, S.; Chimani, M., "DiamondHelp: A Collaborative Interface Framework", *5th International WorkShop on Smart Appliances and Wearable Computing*, June 2005.

Morency, L.-P., Sidner, C., Darrell, T. Towards context-based visual feedback Recognition for Embodied Agents, *Proceedings of the Symposium on conversational Informatics for Supporting Social Intelligence and Interaction*, AISB-05, pp 69-72, 2005.

Sidner, C.L..; Lee, C., "Robots as Laboratory Hosts", *Interactions*, ISSN: 1072-5520, Vol. 12, Issue 2, pp. 24-16, ACM Press, March, 2005.

Rich, C.; Sidner, C.; Lesh, N.; Garland, A.; Booth, S., "Collaborative Help for Networked Home Products", *IEEE International Conference on Consumer Electronics (ICCE)*, January 2005.

Sidner, C.; Lee, C.; Kidd, C.; Lesh, N., "Explorations in Engagement for Humans and Robots", *IEEE RAS/RSJ International Conference on Humanoid Robots*, November 2004.

D. DeVault, C.Rich, C. Sidner, "Natural Language Generation and Discourse Context: Computing Distractor Sets from the Focus Stack," *Proceedings of the 17th Annual Flairs Conference*, May, 2004.

C. Lee, N. Lesh, C. Sidner, L. Morency, A. Kapoor, T.Darrell, "Nodding in Conversations with a Robot," in *Proceedings of the ACM International Conference Human Factors in Computing Systems,* April, 2004.

Sidner, C.L.; Kidd, C., Lee, C.; Lesh, N., "Where to Look: A Study of Human-Robot Engagement," *ACM International Conference on Intelligent User Interfaces*, pp. 78-84, 2004.

Sidner, C.L.; Lee, C.; Lesh, N., "Engagement Rules for Human-Robot Collaborative Interactions", *IEEE International Conference on Systems, Man & Cybernetics*, October, 2003.

Sidner, C.L.; Lee, C.; Lesh, N., "Engagement by Looking: Behaviors for Robots when Collaborating with People", *DiaBruck: The Proceedings of the Seventh Workshop on the Semantics and Pragmatics of Dialogue*, Kruiff-Korbayova and Kosny (eds.), University of Saarland, pp, 123-130, 2003.

Sidner, C.L.; Lee, C.; Lesh, N.B., "The Role of Dialog in Human Robot Interaction", *International Workshop on Language Understanding and Agents for Real World Interaction*, Hokkaido University, Japan., July 2003.

Balter, O.; Sidner, C.L., "Bifrost Inbox Organizer: Giving Users Control Over the Inbox", *ACM Nordic Conference on Human-Computer Interaction (NordiCHI)*, ISBN: 1-58113-616-1, pp. 111-118, ACM Press, October 2002.

Sidner, C.L.; Dzikovska, M., "Human-Robot Interaction: Engagement Between Humans and Robots for Hosting Activities", *IEEE International Conference on Multimodal Interfaces*, pp. 123-128, October 2002.

Sidner, C.L.; Forlines, C., "Subset Languages for Conversing with Collaborative Interface Agents", *International Conference on Spoken Language Processing (ICSLP)*, September 2002.

Rickel, J.; Lesh, N.B.; Rich, C.; Sidner, C.L.; Gertner, A., "Collaborative Discourse Theory as a Foundation for Tutorial Dialogue", *International Conference on Intelligent Tutoring Systems (ITS)*, Vol 2363, pps 542-551, June 2002 (Lecture Notes in Computer Science).

Sidner, C.L.; Dzikovska, M., "Hosting Activities: Experience with and Future Directions for a

Robot Agent Host", *ACM International Conference on Intelligent User Interfaces*, ISBN: 1-58113-382-0, pps 143-150, January 2002.

J. Cassell, Y. I. Nakano, T. W. Bickmore, C. L. Sidner, C. Rich. "Non-Verbal Cues for Discourse Structure." in *Proceedings of the 39th meeting of the Association for Computational Linguistics*, Toulouse, France, July 2001.

J. Rickel, N. Lesh, C. Rich, C. Sidner, and A. Gertner. "Building a Bridge between Intelligent Tutoring and Collaborative Dialogue Systems." in *Proceedings of the 10th Int. Conf. on Artificial Intelligence in Education,* San Antonio, TX, pp. 592-594, May 2001.

C. Rich, N. Lesh, and C. Sidner. "Human-Computer Collaboration for Universal Access." In the *First Int. Conf. On Universal Access in Human-Computer Interaction*, New Orleans, LA, Aug 2001 (Invited Paper).

N. Lesh, C. Rich and C. Sidner. Collaborating with Focused and Unfocused Users under Imperfect Communication, in *Proceedings of the Ninth Int. Conf. on User Modelling*, pp. 64-73, July, 2001.

J. Davies, A. Gentner, N. Lesh, C. Rich, C. Sidner, and J. Rickel. Incorporating Tutorial Strategies Into an Intellignet Assistant, in *Proceedings of the 2001 International Conference on Intelligent User Interfaces*, Santa Fe, NM, January, 2001, pp.53-56.

N. Lesh, C. Rich, and C. Sidner. Using Plan Recognition in Human-Computer Collaboration. in *Proceedings of the Seventh Int. Conf. on User Modelling*, Banff, Canada, July 1999, pp. 23-32.

D. Gruen, C. Sidner, C. Boettner, C. Rich. A Collaborative Assistant for Email. in *Proceedings of Human Factors in Computing Systems, 1999: Extended Abstracts*, pp 196-197.

C. Rich and C. Sidner. COLLAGEN: When Agents Collaborate with People. in Proceedings of the *First International Conference on Autonomous Agents*, Marina del Rey, California, p. 284-291, 1997.

C. Rich and C. Sidner. Segmented Interaction History in a Collaborative Interface Agent. in *Proceedings of the Third International Conference on Intelligent User Interfaces*, Orlando, Florida, p. 23-30, 1997.

S. Whittaker, J. Swanson, J. Kucan, C. Sidner. TeleNotes: managing lightweight interactions in the desktop, ACM Transactions on Computer-Human Interaction (TOCHI). Volume 4 (2): 137-168, (June 1997)

C. Rich and C. Sidner. Adding a Collaborative Agent to Graphical User Interfaces. in *Ninth Annual Symposium on User Interface Software and Technology (UIST '96)*, Seattle, Washington, p. 21-30, 1996.

S. Whittaker and C. Sidner. Information overload leads to overloaded email: an empirical study of email usage. in *Proceedings of the Human Factors in Computing Systems*, CHI'96 conference, ACM Press, p. 276-283, 1996.

C. L. Sidner. An Artificial Discourse Language for Collaborative Negotiation. in Proceedings of the *Twelfth National Conference on Artificial Intelligence,* MIT Press, Cambridge, MA, Vol 1, pgs. 814-819, 1994.

K. Lochbaum, B. Grosz, C.L. Sidner. Models of Plans to Support Communication: An Initial Report. In *Proceedings of AAAI-90*, Boston, MA, 1990.

B. Grosz and C. L. Sidner. Discourse structure and the proper treatment of interruptions. In Proc. 9th Int. Joint Conf. Artificial Intelligence, pages 832--839, Los Angeles, CA, August 1985.

C. L. Sidner and J. J. Vittal. Knowledge representation tools for design, training and use of information systems. In Proc. ECICS-82. Reprinted in E. Sandewall, editor, Integrated Interactive Systems. North Holland, 1983.

M. Bates and C. L. Sidner. A case study of a method for determining the necessary characteristics of a natural language interface. In Proc. ECICS-82. Reprinted in E. Sandewall, editor, Integrated Interactive Systems. North Holland, 1983.

C. L. Sidner and D.J. Israel. Recognizing intended meaning and speakers's plans. In Proc. Seventh International Joint Conference on Artificial Intelligence. August, 1981.

R. W. Pew, C. L. Sidner, and J. J. Vittal. MMI design documentation: Representing and user's model of a system. In Proceedings of the Human Factors Society, 1980.

C. L. Sidner. The role of focusing in the interpretation of pronouns. In Proceedings of the 17th Annual Meeting of the Association of Computational Linguistics, August, 1979.

C. L. Sidner. The use of focus as a tool for diambiguation of definite noun phrases. In Proc. of Theoretical Issues of Natural Language Processing-2, July, 1978.

C. L. Sidner. A progress report on the discourse and reference components of PAL. In Proc. 2nd National Conf. Canadian Soc. Computational Study of Intelligence, Toronto, July 1978.

C. L. Sidner. Levels of complexity in discourse for anaphora disambiguation and speech act interpretation. In Proc. 5th International Joint Conf. Artificial Intelligence, August 1977. Reprinted in P. H. Winston and R. Brown, editors, Artificial Intelligence: An MIT Perspective. MIT Press, 1979.

C. L. Sidner (Bullwinkle). Picnics, kittens and wigs: Using scenarios for the sentence completion task. In Proc. 4th International Joint Conf. Artificial Intelligence, August 1975.

Books and Book Chapters

J. Hurwitz, H. Morris, C. Sidner, D. Kirsch. Augmented Intelligence: The Business Power of Human-Machine Collaboration. Auerbach Publications, New York, 2019.

C. Sidner. Engagement, emotions and relationships: On building intelligent agents. In S. Tettegah and M. Gartmeier (eds.) *Emotions, Technology, Design and Learning*. Elsevier, 2015.

T. Bickmore, S. Marsella, C. Sidner. Proceedings of the 14th International Conference on Intelligent Virtual Agents, Lecture Notes In Artificial Intelligence, ISBN 978-3-319-09767-1, Springer, 2015.

P. Kühnlein, A. Benz and C. L. Sidner (eds.). Constraints in Discourse 2. Pragmatics & Beyond New Series, 194. John Benjamins Publishing Co, Amsterdam, 2010.

C. Sidner, C. Lee, Attentional Gestures in Dialogues between People and Robots, in Engineering Approaches to Conversational Informatics, Toyoaki Nishida (ed), Wiley and Sons, January, 2008.

L-P Morency, C. Sidner and T. Darrell, Dialogue Context for Visual Feedback Recognition, in Engineering Approaches to Conversational Informatics, Toyoaki Nishida (ed), Wiley and Sons, January 2008.

C. Paris and C. Sidner, Special Issue on Intelligent User Interfaces, Knowledge-Based Systems, Vol. 20: 6, 2007. Note also Introduction to the issue, pages 509-510.

C. Sidner, J. Harpur, A. Benz, and P. Kuehnlein (editors), Proceedings of the Workshop on Constraints in Discourse 2006, http://www.constraints-in-discourse.org/cid06, Maynooth, Ireland, July, 2006.

C.L. Paris and C.L. Sidner (editors), Proceedings of the 2006 International Conference on Intelligent User Interfaces, ACM Press, New York, 2006.

C. Sidner, M. Dzikovska, A First Experiment In Engagement For Human-Robot Interaction in Hosting Activities, In Natural, Intelligent and Effective Interaction in Multimodal Dialogue Systems, N.O. Bernsen, L. Dybkjaer, and J. van Kuppevelt (eds.), Kluwer Academic Publishers, 2005.

C. Sidner, Building Spoken-Language Collaborative Interface Agents, in Practical Spoken Dialogue Systems, D. Dahl (ed.), Kluwer Academic Publishers, Dordrecht, 2004.

M. Strube and C. Sidner (editors), Proceedings of the 5th SIGdial Workshop on Discourse and Dialogue, Cambridge, MA, ACL publication, 2004.

Rich, C.; Sidner, C.L.; Lesh, N.B., "COLLAGEN: Applying Collaborative Discourse Theory to Human-Computer Interaction", *Artificial Intelligence Magazine*, Winter 2001 (Vol 22, Issue 4, pps 15-25).

C. Sidner, (ed.) ANLP/NAACL 2000 Workshop on Conversational Systems, Assoc for Computational Linguistics, New Brunswick, N.J., 2000.

K. Lochbaum, B. Grosz, C.L. Sidner. Discourse Structure and Intention Recognition. in A Handbook of Natural Language Processing: Techniques and Applications for the Processing of Language as Text R. Dale, H. Moisl, and H. Somers, editors, Marcel Dekker, Inc., New York, 2000.

B. Grosz and C. L. Sidner. Lost Intuitions and Forgotten Intentions. In Walker, Joshi and Prince, editors, Centering Theory in Discourse. Oxford University Press, 1998.

C. L. Sidner. Creating Interfaces Founded on the Principles of Discourse Communication and Collaboration. In National Research Council, editor, More Than Screen Deep: Toward Every-Citizen Interfaces to the Nation's Information Infrastructure. National Academy Press, 1997.

C. L. Sidner. Building a Collaborative Interface Agent. in Xabier Arrazola, Kepa Korta and Francis Jeffry Pelletier, editors, Discourse, Interaction, and Communication. Kluwer Publishing. 1997.

S. Whittaker and C. Sidner, Email Overload: Exploring Personal Information Management of Email. in Culture of the Internet, S. Kiesler, editor, Lawrence Earlbaum Publishers, 1997.

B. Grosz and C. L. Sidner. Plans for discourse. In Cohen, Morgan, and Pollack, editors, Intentions and Plans in Communication and Discourse. MIT Press, 1990.

B. Grosz, M. Pollack, and C. L. Sidner. Computational Models of Discourse. In M. Posner, editor, Foundations of Cognitive Science. MIT Press, 1989.

C. L. Sidner. Focusing in the comprehension of definite anaphora. In Berwick and Brady, editors, Computational Models of Discourse. MIT Press, 1983.

Professional Activities (Service)

Educational Committees

Jason R. Wilson, A Framework for Designing a Socially Assistive Robot to Preserve the Dignity of Older Adults, Computer Science and Cognitive Science, Tufts University, June 2017.

Ria Pereira, Interactive Behavior for Humanoid Robot Mediated Applied Behavioral Analysis Autism Therapy, Worcester Polytechnic Institute, M.S. thesis, co-advisor, April 2017.

Mahni Shayganfar, Affective Motivational Collaboration Theory, Worcester Polytechnic Institute, Ph.D. thesis (co-advisor). January 2017.

Tom Williams. Pragmatics and Situated Human Robot Interaction. Cogntive Science and Computer Science, Tufts University, reader, February, 2017.

Josephine Brixey, Virtual Rapport with Extraverted Agents, M.S. thesis, University of Texas at El Paso, November, 2015.

Adrian Boteanu, Similarity Reasoning over Semantic Context Graphs, Worcester Polytechnic Institute, August, 2015.

Crystal Chao, Timing multimodal reciprocal behavior in human-robot cooperation, Ph.D. Thesis (reader), Georgia Institute of Technology, April, 2015.

Morteza Behrooz, On the Sociability of a Game-Playing Agent: A Software Framework and Empirical Study, MS Thesis, WPI, 2014 (co-advisor).

Andrew Lampert, Making Email Actionable: the Identification and Use of Obligation Acts in Workplace email, Ph.D. (examiner), Macquarie University, Australia, 2013.

Maxim Makatchev, Cross-Cultural Believability of Robot Characters, Ph.D. thesis (reader), CMU, 2013.

William Coon, A Computational Model for Building Relationships between Humans and Agents, MS Thesis, WPI, 2012 (co-advisor).

Bahador Nooraei, A Real-Time Architecture for Conversational Agents, MS Thesis, WPI, 2012 (co-advisor).

Aaron Holroyd, Generating Engagement Behaviors in Human-Robot Interaction, MS Thesis, WPI, 2011 (co-advisor).

Brett Ponsler, Recognizing Engagement Behaviors in Human-Robot Interaction, MS Thesis, WPI, 2010 (co-advisor).

Jeff Orkin, Phd Qualifying Exams, MIT Media Lab, MIT, Spring 2009.

Anders Green, Designing and Evaluating Human-Robot Communication: Informing Design through Analysis of Hi-Fi Use Scenarios, Ph.D. thesis, Royal Institute of Technology, Stockholm, February, 2009 (Opponent).

Jacob Eisenstein: Gesture in Automatic Discourse Processing, Ph.D. thesis, MIT, 2008 (Reader).

Stefanie Tomko: Improving User Interaction With Spoken Dialog Systems via Shaping, Ph.D. thesis, Carnegie Mellon University, 2006 (Reader).

Louis-Philippe Morency: Context-Based Visual Feedback Recognition, Ph.D. thesis, CSAIL, M.I.T, 2006 (Reader).

Susan Converse: Pronominal Anaphora Resolution in Chinese , Ph.D. thesis, Computer and Information Science, University of Pennsylvania, 2006 (Reader).

Joan M. DiMicco: Changing Small Group Interaction through Visual Reflections of Social Behavior, MIT Media Lab, MIT, 2005 (Reader).

E. DeKoven, Help Me Help You: Designing Support for Person Product Collaboration, Ph.D. thesis, Technical University Delft, The Netherlands, 2004 (Reader).

T. Bickmore, Relational Agents: Affecting Change through Human-Computer Relationships, Ph.D. thesis, Media Lab, M.I.T., 2003 (Reader).

D. Byron, Resolving Pronominal Reference to Abstract Entities, Ph.D. thesis, University of Rochester, 2003 (Reader).

Y. Nikano, Non-Verbal Signals for Grounding in Embodied Conversational Agents, M.S. Thesis, Media Lab, M.I.T., 2002 (Reader).

A. Garland, Learning To Better Coordinate in Joint Activity, Ph.D. thesis, Brandeis University, 2000. (Reader)

O. Balter, Modelling Use of Email, Ph.D. thesis, Royal Institute of Technology, Stockholm, Sweden, 1998. (Opponent)

B. Baldwin. A Centering Model of Anaphora in Discourse. Ph.D. thesis, Dept. of Computer and Information Science, University of Pennsylvania, Philadelphia, PA, 1996. (Reader)

J. A. Herman. NewsTalk: A Speech Interface to a Personalized Information Agent. M.S. thesis in Media Arts and Sciences, Media Lab, Massachusetts Institute of Technology, Cambridge, MA, May, 1995. (Reader)

K. Lochbaum. Plan Recognition in Collaborative Discourse. Ph.D. thesis, Division of Applied Science, Harvard University, Cambridge, MA, 1994. (Reader)

C. Balkanski. Actions, Beliefs and Intentions in Rationale Clauses and Means Clauses. Ph.D., Division of Applied Science, Harvard University, Cambridge, MA, 1993. (Reader)

E. Ly. Chatter: A Conversational Voice Mail System. M.S. Program in Media Arts and Sciences, M.I.T., Cambridge, MA, 1993. (Reader).

E. Schuster. Referring to Events. Ph.D. thesis, Dept. of Computer and Info. Science, Univ. of Pennsylvania, 1992. (Reader).

S. Luperfoy, Discourse Pegs: An Analysis of Context-Dependent Referring Expression in Human-Machine Dialogs. Ph.D. thesis, Dept. of Linguistics, Univ. of Texas at Austin, 1991. (Reader).

K. Lochbaum, Doctoral Qualifying Exams, Division of Applied Science, Harvard University, Cambridge, MA, 1990. (Reader)

J. Cahn, Doctoral Qualifying Exams, Media Lab, MIT, Cambridge, MA, 1990 (Reader).

J. Hirschberg. A Theory of Scalar Implicature. Ph.D. Thesis, Dept. of Computer and Info. Science, Univ. of Pennsylvania, 1985. (Reader)

B. Goodman. Communication and Miscommunication, Ph.D. Thesis, Dept. of Computer Science, Univ. of Illinois, 1984. (Supervisor of Research at BBN)

Current and Recent Service Activities

Co-Chair, Local Arrangements, HRI 2012, March 2012.

Chair, Best Paper Awards, HLT-NAACL, June, 2009.

Editorial Board, Springer journal on Multimodal User Interfaces, 2010-present

Associate Editor, ACM Transactions on Intelligent Interactive Systems, 2009-present

Associate Editor, *Artificial Intelligence*, Jan 2009 (until 2013).

Scientific Advisory Board, European Union funded project on Cognitive Systems for Cognitive Assistants (CoSy) project, 2006-2008.

Advisory Board, Intelligent User Interfaces, 2006-present.

Advisory Board, NAACL-HLT, 2007-present.

SIGDIAL Advisory Board, 2006 – present.

General Chair, HLT-NAACL (Human Language Technologies-North American Association for Computational Linguistics) Conference, 2007.

Senior Program Committee, the 2007 ACM Conference on Human Robot Interaction, 2007.

Review Board, Joint Action in Systems and Technology, European Union Commission funded project, March 2006.

Program CoChair, International Conference on Intelligent User Interfaces, 2006.

Member of ARDA board (reviewing proposals for the intelligence community), 2004-2005.

CoChair, SIGDIAL 2004, April 30-May 1, Boston, 2004.

General Chair, ACM International Conference on Intelligent User Interfaces, 2001.

Chair, Organizing Committee, Workshop on Conversational Systems, ANLP/NAACL 2000, May 2000.

Digital Equipment Corporation. Research and Development Committee, 1989—1991.

Assoc. for Computational Linguistics: President, 1989. Vice President, 1988. Program Chair, 1987.

International Joint Conf. on Computational Linguistics (COLING): Program Sub-Chair, Discourse, 1992.

Assoc. for the Advancement of Artificial Intelligence. Councillor, 1991--1994.

International Joint Conf. on Artificial Intelligence. Area Co-Chair, Natural Language, 1989.

Editorial Boards (past)

ACL Series, MIT Press, 1988.
Language and Cognitive Processes. 1984--1987
Studies in Natural Language Processing. Cambridge Univ. Press, 1982--1986.
Models of Cognition and Perception Series. MIT Press, 1984—1987.
Journal of Computational Linguistics. 1980--1982.

Reviews for journals (Computational Linguistics; Artificial Intelligence, TOCHI), conference committees (including AAMAS, AAAI, IJCAI, IUI, HRI, CHI, ACL, NAACL, SIGDIAL, IVA) and workshops.

Patents

C. Rich and C. Sidner. *System with Collaborative Interface Agent*, U.S. Patent 5,819,243 issued Oct. 6, 1998.

Recent Invited Lectures (since 2001)

Dialog with Robots: Engagement, Collaboration and Relationship, AAAI Fall Symposium, "Dialog with Robots", November, 2010.

The Recognition of Engagement in Human-Robot Dialogs, Dept. of Computer Science, Univ of Colorado, Boulder, February, 2010; also given as invited lecture, Boston area CHI chapter, April, 2010.

Problems in Taking Turns, Workshop on Human Communication Dynamics, Institute for Creative Technologies, Culver City, CA, August, 2010.

What can Bootstrapped Learning Tell us about Lifelong Learning Companions? Lifelong Companions Workshop, ICT, Marina Del Rey, September, 2008.

Humanoid Agents as Hosts, Advisors, Companions and Jesters, Keynote talk, FLAIRS-21, the 21st Annual Florida AI Conference, May 2008.

Robots and People Collaborating: How to be an Engaging Robot, MIT Interface Seminar Series, March 2008, and Brown University CS Colloquium, February, 2008.

Engaging Robots with Humans: Mel and Melvin, Mitsubishi Electric Research Labs, Jan 2007.

Collaborative Interface Agents: On the screen and on the robot, Carnegie Mellon University, Dec 15, 2006.

Initiation of Engagement and Paradigms for Evaluation, workshop on Getting Things Done, at the Conference on Robotics, System and Science, University of Pennsylvania, 2006.

Engagement During Dialogues with Robots, Distinguished Lecture Series, Sun Microsystems, Burlington, MA, May, 2006.

Engagement During Dialogues with Robots, Computer and Information Science Colloquia, Northeastern University, April 2006.

Engagement During Dialogues with Robots, CSIRO (the Australian Commonwealth Science and Research Organization), Brisbane, Australia, February, 2006.

DiamondHelp: Applying Collaborative Discourse Theory to Human-Computer Interaction, CSIRO, Sydney, Australia, February, 2006.

DiamondHelp: Evaluating a dialogue system for use with consumer products," workshop on Evaluation in Multi-Modal Dialogue Systems, Sydney, Australia, January, 2006.

COLLAGEN and Tutoring Applications: Collaborative Discourse Theory in Tutorial Dialogues, University of Edinburgh, April 2005.

 Explorations in Engagement for Human-Robot Interaction, Cambridge University and Sheffield University, April 2005.

Engagement During Dialogues with Robots, at symposium on Conversational informatics for Supporting Social Intelligence and Interaction, AISB, April, 2005.

Collaborative Agents for 2D Interfaces and Real World Robots,Keynote talk, Adaptive Hypermedia, Technical University Eindhoven , The Netherlands, August, 2004.

Making a Conversation with a Machine Like a Conversation with a Person, and Creating an Engaging Robot: An Architecture and Evaluation of Human- Robot Interaction. The Mills Lectures in Science, Kalamazoo College, April, 2004.

Creating an Engaging Robot: Gestures and Collaboration for Human Robot Interaction, National Institute of Standards and Technology, Washington, D.C., March, 2004.

Enagement by Looking: Behaviors for Robots When Collaborating with People, User Interface Series, MIT, September, 2003.

Creating an Engaging Robot for Human-Robot Collaboration, ATR, Japan, July 2003.

The Role of Dialog in Human Robot Interaction, Invited Talk at First International Workshop on Language Understanding and Agents for Real World Interaction, held at Hokkaido University, Sapporo, Japan, July 2003.

Creating and Interacting with Collaborative Interface Agents, Distinguished Lecturer Series, University of Pennsylvania, Nov 2002.

Engagement between Humans and Robots for Hosting Activities, Speech Colloquium, Carnegie Mellon University, October, 2002.

Hosting Activities: Experience with and Future Directions for a Robot Agent Host at the CLASS 2002 Workshop on mulitimodal dialogue systems, Copenhagen, June 2002.

Building Collaborative Spoken Dialogue Systems, at Specification, Interaction and

Reconfiguration in Dialogue Understanding Systems, The Siridus Project, Seville, Spain, 12-13 April 2002, Seville, April 2002.

Engagement for Robots in Hosting Activities, at Coordination and Fusion in Multimodal Interaction, Dagstuhl, Germany, November, 2001.

Research Contracts

HCC: Large: Collaborative Research: Always-On Relational Agents for Social Support of Older Adults, Principal Investigator, National Science Foundation, September, 2010-August 2014, total funding: $1,084,361.

Defense Advanced Research Projects Agency. Curriculum for Bootstrapped Learning. Phase 2: $3,800,000 January, 2009-December 2009. (Principal Investigator for start of phase 2 through 1 Feb 2009; scientific advisor to present).

Defense Advanced Research Projects Agency. Curriculum for Bootstrapped Learning. Phase 1: $4,200,000 July 2007-October 2008. (Principal Investigator). Note that this contract was obtained through the efforts of a proposal writing team, not just me.

Defense Advanced Research Projects Agency. Research in Knowledge Representation and Natural Language for Planning Assistance. $3,400,000. March 1985--April 1988. (Principal Investigator).