

I. CURRICULUM VITAE

CAROLYN PENSTEIN ROSE

EDUCATION

- Ph.D., Language and Information Technologies, Carnegie Mellon University, December 1997. Thesis advisor: Lori S. Levin
- M.S., Computational Linguistics, Carnegie Mellon University, May, 1994.
- B.S., Information and Computer Science (Magna Cum Laude), University of California at Irvine, June 1992.

EMPLOYMENT

- [2017-present] *Professor*, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University
 - Interim Director, Language Technologies Institute [August 2021-July 2022]
 - Affiliate faculty in the Institute for Software Research's PhD program in Societal Computing (formerly Computation, Organizations, and Society)
 - Core faculty of English department Minor in Humanities Analytics
- [2014-2017] *Associate Professor (With Tenure)*, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University
 - Affiliate faculty in the Institute for Software Research's PhD program in Societal Computing (formerly Computation, Organizations, and Society)
- [2011-2014] *Associate Professor (Without Tenure)*, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University
- [2008-2011] *Assistant Professor (Tenure Track)*, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University
- [2003-2008] *Research Computer Scientist*, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University
- [1997- 2003] *Research Associate, Learning Research and Development Center, University of Pittsburgh.*
- Project coordinator in Natural Language Tutoring Group

- [1994-1997] *Teaching Assistant, Computational Linguistics Program, Carnegie Mellon University.*
- [Summer 1993] *Summer Research Internship, Apple Computer, San José, CA.*
- [1992-1994] *Research Assistant, Center for Machine Translation, Carnegie Mellon University.*
- [Summer 1991] *Research Internship, Minority Summer Research Internship Program, UC Irvine.*
- [1990-1992] *Honors Research, University of California at Irvine.*

PERSONAL

- US Citizen
- Homepage: <http://www.cs.cmu.edu/~cprose>

II. STATEMENT OF CAREER GOALS

RESEARCH STATEMENT

Vision

My research program is focused on better understanding the social and pragmatic nature of conversation, and using this understanding to build computational systems that can improve the efficacy of conversation between people, and between people and computers. In order to pursue my research goals, I integrate and extend approaches from computational discourse analysis and text mining, conversational agents, and computer-supported collaborative learning. I ground my research in the fields of language technologies and human-computer interaction. I am fortunate to work closely with students and post-docs from the Language Technologies Institute and the Human-Computer Interaction Institute, as well as to direct a lab of my own, called TELEDIA. My group's highly interdisciplinary work, published in over 270 peer reviewed publications, is represented in the top venues in 5 fields: namely, Language Technologies, Learning Sciences, Cognitive Science, Educational Technology, and Human-Computer Interaction, with awards in 4 of these fields.

The specific goal of my research is to develop technology capable of supporting effective participation in conversation to achieve a positive impact on human learning, growth, and wellbeing. My conviction is that in order for the technology to achieve maximum impact, it must first be capable of making meaning from, generating, and engaging in conversation. Second, its behavior should be designed with a deep understanding of the mechanics of what makes conversation work in different settings as well as an understanding of what properties of conversation add to or detract from its positive impact on important outcomes of conversation. Finally, its design should be based on knowledge of what external stimuli manipulate these properties of conversation and in what ways. An example of the nature and impact of my research can be seen in the context of a collaborative effort to improve science instruction in an urban school district's 9th grade Biology courses in collaboration with Lauren Resnick and the Institute for Learning (IFL), funded through the Pittsburgh Science of Learning Center. In the hands of a skillful teacher or privileged student population, classroom facilitation techniques such as IFL's well established Accountable Talk classroom facilitation practices have been demonstrated to contribute towards steep increases in standardized test scores, with retention of up to three years, and transfer across domains. At the time of beginning our collaboration, these effects had so far eluded urban school districts with typical teachers. In my work, I have developed computer-supported collaborative learning interventions, powered by conversational agents and computational discourse analysis technology, that when infused in this district-wide Accountable Talk professional development program led to improved learning gains (with effect sizes between .35 and 1 standard deviation¹) and increased uptake of Accountable Talk practices in the broader classroom community in which it was housed (with effect sizes of up to 1.7 standard deviations). This success provides a proof-of-concept that this work

¹ An effect size of 1 standard deviation is equivalent to one full letter grade.

may lend effectiveness and scalability to similar professional development efforts in challenging contexts like these in the future.

My research has birthed and substantially contributed to the growth of two thriving inter-related areas of research in the Learning Sciences: namely, Automated Analysis of Collaborative Learning Processes and Dynamic Support for Collaborative Learning, where intelligent conversational agents are used to support collaborative learning in a context sensitive way. Early work from my group over a decade ago paved the way for these areas to now be the topic of handbook chapters, workshops, and a special issue of the *International Journal of Artificial Intelligence in Education* (with my former PhD student Rohit Kumar as guest co-editor). This history is recounted in my invited article in the 25th Anniversary edition of the *International Journal of Artificial Intelligence in Education*, which describes how work in tutorial dialogue systems created the field of dynamic support for collaborative learning and then paved the way for emerging technologies enabling collaborative and discussion based learning in Massive Open Online Courses (MOOCs). By now these technologies have already been deployed in a series of MOOCs, as discussed later in this statement. *The frequency of high citation papers in these areas that cite my work (including both review articles and basic research contributions), as well as the high ranking of some papers from my group among the most highly cited papers in these areas, position my team's work at the leading edge.* For example, since 2005 a growing number of publications related to script based collaboration mention using machine learning, and of those, more than half cite my group's work. My 2008 article in the *International Journal of Computer-Supported Collaborative Learning* on automated collaborative process analysis remains one of the top cited articles in that journal since its inception. One of the two text mining tool kits made publically available from my lab to enable other researchers to take advantage of this technology has gotten over 11,500 downloads. Invitations for more than monthly talks at seminars and colloquia, workshops, symposia, panels, and tutorials, frequent awards or award nominations, an active international network of research collaborations including an increasing number of invitations to serve on advisory boards, as well as a substantial amount of press coverage testify that my group's work is highly sought after and appreciated both within the research world and externally.

My work is known for the way it bridges theories of interaction and computational modeling technology. This approach to research in Language Technologies frames my recent co-authored *Computational Linguistics Journal* article (in collaboration with two former members of my lab), which defines a vision for the field of computational sociolinguistics. *The key idea behind my work is to draw insights from rich theoretical models of interaction from sociolinguistics and discourse analysis, and operationalize them in ways that capture the most important essence for achieving impact.* My approach is always to start with investigating how conversation works and formalizing this understanding in models that are precise enough to be reproducible and that demonstrate explanatory power in connection with outcomes that have real world value. The next step is to adapt, extend, and apply machine learning and text mining technologies in ways that leverage that deep understanding in order to build computational models that are capable of automatically applying these constructs to naturally occurring language interactions. Finally, with the technology to automatically monitor naturalistic language communication in place, the next stage is to build interventions that lead to real world benefits.

My research program integrates three intellectual strands in each project:

- (1) *Basic research in discourse analysis* in order to identify conversational constructs that predict important group outcomes such as learning, knowledge transfer, relationship formation, impression management, motivation and decision making.
- (2) *Basic research on text classification* technology for automated analysis of conversational constructs identified under aspect #1 as well as tools to enable other researchers to do the same in their own work.
- (3) *Basic research on conversational agent technology and summarization* that eases development of interventions triggered by automatic analyses from aspect #2. These interventions enable human facilitators to offer support, directly provide feedback to groups, or provide affordances that influence group participation in positive ways.

In an effort to arrive at generalizable models, I am pursuing this research program in multiple parallel contexts that provide opportunities to investigate how both the manifestation of the conversational constructs as well as their effects on outcomes are nuanced through mediating contextual variables. Thus, I am conducting research on projects funded through an array of sources such as NSF, NRL, Google, the Gates Foundation, and Bosch.

In my service as [past] President of the International Society of the Learning Sciences, Executive Board member of the International Artificial Intelligence in Education Society, [past] Steering Committee member of ACM's Learning@Scale, Co-editor-in-Chief of the International Journal of Computer-Supported Collaborative Learning, I have taken the opportunity to build bridges between research communities that foster and support the multi-disciplinary collaborations that have provided a conducive environment for birthing advances in my own research and those of many others. In this capacity I have had the opportunity to host and/or participate in organizing inter-community visioning sessions at conferences such as Computer-Supported Collaborative Learning, Artificial Intelligence in Education, and Learning Analytics and Knowledge. I serve as founder and past chair of the International Alliance to Advance Learning in the Digital Era, which is an alliance of 10 major international research societies in the Learning Sciences to work towards a vision for coordination and bridge building, including co-location of conferences.

In active partnership with edX, with me as Director of DANCE: Discussion Affordances for Natural Collaborative Exchange², I have worked to build community around dissemination of research and resources enabling large scale deployment of discussion based learning practices at scale, including in Massive Open Online Courses (MOOCs). Over 5,600 individuals have participated in the growing DANCE community in some way since the launch of the community website in Spring 2015, and hundreds of return visitors participate in events (such as the monthly online talk series) or access software or publication resources on the community website each month. The DANCE community provides a “go to” place for resources developed by my own lab and other collaborating organizations. My own lab's research in the area of computer-supported collaborative learning in MOOCs includes analyses of data from dozens of MOOCs as well as completed deployment studies in six different MOOCs

² <http://dance.cs.cmu.edu>

In summary, my research has benefited from intense involvement in the School of Computer Science both in the language technologies community and in the learning sciences community as it fits within the human-computer interaction community. Because what drives my research is the goal of developing technology capable of both shaping conversation and supporting conversation to achieve a positive impact on human learning, I look forward to remaining active in both of these communities.

TEACHING STATEMENT

Just as conversation is the cornerstone of my research, it is also a center piece in my teaching. As a notable example, many of the ideas that form the foundation for the collaborative research on classroom discourse my group conducts are at the heart of my own classroom teaching. While leading class discussions was a challenge for me when I first began my teaching career, I have continued to work to put into practice the methodologies that research has proven effective, and now the classroom discussions that come out in my own courses are what I most look forward to as an instructor. I believe it is this emphasis on lively class discussion that is largely responsible for the steady increase in teaching scores I have earned over my years of teaching.

What fascinates me most about studying the role of conversation in learning is that new ideas may be created when exchanging alternative viewpoints. The new ideas that emerge through conversation may draw from the differing perspectives of the participants but nevertheless be distinct from the ideas that existed in any of their minds prior to the interaction. The research literature on group learning provides strong evidence that the success of such interactions between students depends upon the ability of the instructor to facilitate this process. The instructor creates opportunities for learning by meeting the students on their own path and offering the support necessary to draw out the students' differing perspectives and ideas. In the midst of this conversation, the instructor is well situated to present the content of the course in a way that is seen by students as relevant to meeting their own goals. In creating an environment where students see their involvement in a course as a means to move forward on their own path, the instructor has the opportunity to play the role of a mentor who comes along side students to offer experience and wisdom and to help them navigate the maze that is before them. That investment of the instructor in individual students yields the greatest increase when it is internalized by the students and then brought back into small group activities and the whole group discussion. Thus, my philosophy of teaching is to strive for a personal connection through conversation with and between students.

An essential ingredient in this learning conversation is the differing perspectives of the participants who are involved. The School of Computer Science at Carnegie Mellon is made up of distinct, tight knit communities of specialization that are situated in such a way as to provide many opportunities for exchanging views. This is an ideal environment in which this philosophy of teaching can flourish. Thus, in my position with appointments in both the Language Technologies Institute and the Human-Computer Interaction Institute, I have taken advantage of the opportunity to create four several courses designed to promote understanding and strengthen interactions between departments and to keep the conversation active. This list includes Conversational Interfaces, Machine Learning in Practice/Applied Machine Learning, Summarization and Personal Information Management (now called Summarization of Documents and

Interaction), Computer Supported Collaborative Learning, and Computational Models of Discourse Analysis.

One thing I greatly appreciate about teaching in the School of Computer Science at Carnegie Mellon University is the tremendous freedom we have here as faculty to design and teach courses according to our interests, and I immensely enjoy teaching a wide variety of courses, which nevertheless synergize and build on one another. In addition to the five bridge courses mentioned above, I have designed and taught a cross-cutting course called Research Design and Writing, which emphasized the connection between research design and scientific writing. While the course touched upon basic issues in research methodology, the focus was on writing, evaluating writing, and revision.

Contributing to the broader university community is important to me. Thus, in addition to curriculum development and teaching I have done for the two departments I am directly affiliated with, I have made an effort to invest in resources that meet the educational needs of students in the broad campus community, including outside the School of Computer Science. For example, the Machine Learning in Practice course taught each semester regularly has over 70 students, often with more than 40 students from outside of SCS who are either enrolled, and almost as many waitlisted. Beyond this, I have developed a unit on Verbal Protocol Analysis for the PIER course on Research Methods in the Learning Sciences and collaborated on the development of the Information Literacy unit for the online Computing@Carnegie Mellon course, which all Carnegie Mellon students take in their Freshman year. Most recently I have taken an active role in CMU's Technology Enhanced Learning Writing Initiative, as informal leader of the technology thrust and collaborator with David Kauffer and Chris Neuwirth on projects related to technology supported instruction in Rhetoric. I have also served on the Computing@Carnegie Mellon steering committee and the University Education Council. In the past I also developed a unit on architectures for robust language understanding that I taught in the Spring 2004 offering of Grammar Formalisms, a unit on Human-Computer Interaction as part of the Software Engineering for Information Systems course in Fall of 2007. I had also added a computational track to the Meaning in Language course, with primary instructor Mandy Simons in H&SS, which was a precursor to the current Computational Models of Discourse Analysis class.

In conclusion, just as my research interests in supporting and shaping learning through collaborative conversation informs my teaching, my teaching also informs my research. My conversations with students and observations of their interactions with each other in my courses and in my lab give me insight into their learning processes, which I can then apply in my research.

III. PUBLICATION LIST

BOOKS

1. Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (2013). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
2. Cress, U., Rosé, C. P., Oshima, J., Wise, A. F. (2021). **International Handbook of Computer-Supported Collaborative Learning**, Springer.

CHAPTERS IN BOOKS

1. Rosé, C. P. (invited, to be published in Sept. 2022). Learning Analytics. in Ian Wilkinson and Judy Parr (section eds.) **International Encyclopedia of Education**, volume on Learning, cognition, and human development, 4th edition, Elsevier.
2. Rosé, C. P., Riggs, M., Barbarao, N. (to appear, invited). Social Analytics to Support Engagement with Learning Communities, in Ben du Boulay, Antonija Mitrovic, Kalina Yacef (Eds.) **Handbook of Artificial Intelligence in Education**, Springer.
3. Rosé, C. P. & Dimitriadis, Y. (2021). Tools and Resources for Setting Up Collaborative Spaces, in Cress, Rosé, Oshima, & Wise (Eds.) **International Handbook of Computer-Supported Collaborative Learning**, Springer.
4. Borge, M. & Rosé, C. P. (2021). Quantitative approaches to language in CSCL, in Cress, Rosé, Oshima, & Wise (Eds.) **International Handbook of Computer-Supported Collaborative Learning**, Springer.
5. Chen, B., Haklev, S., Rosé, C. P. (2021). Collaborative Learning at Scale, in Cress, Rosé, Oshima, & Wise (Eds.) **International Handbook of Computer-Supported Collaborative Learning**, Springer.
6. Rosé, C. P., Clarke, S., Resnick, L. (2019). Scaling Up Ambitious Learning Practices, In Dirk Van Damme, Sonia Guerriero, Soo-Siang Lim & Patricia Kuhl (Eds.) **Science of Learning**, OECD.
7. Clarke, S. N., Resnick, L. B., Rosé, C. P. (2018) Discourse Analytics for Learning, in D. Niemi, R. Pea, C. Dick, & B. Saxberg (Eds.) **Learning Analytics in Education**, Information Age Publishing
8. Baker, R.S. Wang, Y., Paquette, L., Aleven, V., Popsecu, O., Sewall, J., Rosé, C., Tomar, G., Ferschke, O., Zhang, J., Cennamo, M., Ogden, S., Condit, T., Diaz, J., Crossley, S., McNamara, D., Comer, D., Lynch, C., Brown, R., Barnes, T., Bergner, Y. (in press) A MOOC on Educational Data Mining. To appear in ElAtia, S., Zaiane, O.R., Ipperciel, D. (Eds.) **Handbook of Data Mining and Learning Analytics**. Hoboken, NJ: Wiley.
9. Rosé, C. P., Howley, I., Wen, M., Yang, D., & Ferschke, O. (2017). Assessment of Discussion in Learning Contexts, invited chapter in A. von Davier, M. Zhu, & P. Kyllonon (Eds.) **Innovative Assessment of Collaboration**. New York, NY: Springer Verlag.
10. Rosé, C. P. (2017). Discourse Analytics, **Handbook of Data Mining and Learning Analytics**. Hoboken, NJ: Wiley.
11. Rosé, C. P. (2018). Learning analytics in the Learning Sciences, invited chapter in F. Fischer, C. Hmelo-Silver, S. Goldman, & P. Reimann (Eds.) **International Handbook of the Learning Sciences**, Taylor & Francis.
12. Clarke, S., Resnick, L. & Rosé, C. P. (2015). Dialogic Instruction: A New Frontier. In Corno, L. & Anderman, E. (Eds.). **Handbook of Educational Psychology**, 3rd Edition, pp 378-389, Routledge.

13. Rosé, C. P. & Lund, K. (2013). Methods for Multivocality, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
14. Lund, K., Rosé, C. P., Suthers, D., & Baker, M. (2013). Theoretical perspectives on multivocality, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
15. Dyke, G., Howley, I., Adamson, D., Kumar, R., Rosé, C. P. (2013). Towards Academically Productive Talk Supported by Conversational Agents, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
16. Howley, I., Kumar, R., Mayfield, E., Dyke, G., & Rosé, C. P. (2013). Gaining Insights from Sociolinguistic Style Analysis for Redesign of Conversational Agent Based Support for Collaborative Learning, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
17. Howley, I., Mayfield, E., Rosé, C. P., & Strijbos, J. W. (2013). A Multivocal Process Analysis of Social Positioning in Study Group Interactions, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
18. Rosé, C. P. (2013). A Multivocal Analysis of the Emergence of Leadership in Chemistry Study Groups, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
19. Suthers, D., Lund, K., Law, N., Rosé, C. P., & Teplovs, C. (2013). Achieving Multivocality in the Analysis of Group Interactions, in Suthers, D., Lund, K., Rosé, C. P., Teplovs, C., Law, N. (Eds.). **Productive Multivocality in the Analysis of Group Interactions**, edited volume, Springer.
20. Rosé, C. P. & Tovaes, A. (2015). What Sociolinguistics and Machine Learning Have to Say to One Another about Interaction Analysis, in Resnick, L., Asterhan, C., Clarke, S. (Eds.) **Socializing Intelligence Through Academic Talk and Dialogue, Washington, DC: American Educational Research Association.**
21. Mayfield, E. & Rosé, C. P. (2013). LightSIDE: Open Source Machine Learning for Text Accessible to Non-Experts, Invited chapter in the **Handbook of Automated Essay Grading**, Routledge Academic Press.
22. Howley, I., Mayfield, E. & Rosé, C. P. (2013). Linguistic Analysis Methods for Studying Small Groups, in Cindy Hmelo-Silver, Angela O'Donnell, Carol Chan, & Clark Chin (Eds.) **International Handbook of Collaborative Learning**, Taylor and Francis, Inc.
23. Sionti, M, Claudino, L., Markantonatou, S., Rosé, C. P., & Aloimonos, Y. (2012). Semantic Clusters Combined with Kinematics: the Case with English Motion Verbs, in Nikolaos Lavidas (Ed.) **Selected Papers from the 20th International Symposium on Theoretical and Applied Linguistics**, Thessaloniki Greece, April 2011.
24. Rosé, C. P. (2012). Assessing Socio-Emotional Learning, in Luckin, R., Underwood, J., Winters, N., Goodyear, P., Grabowski, B., Puntambekar, S. (Eds.) **Handbook of Educational Technology**, Taylor & Francis.
25. Stahl, G. & Rosé, C. P. (2011). Group Cognition in Online Teams, in Salas, E., Fiore, S., & Letsky, M. (Eds.) **Theories of Team Cognition: Cross-Disciplinary Perspectives**, Section V: Social Psychology and Communication Perspectives, American Psychological Society.
26. Sionti, M., Ai, H., Rosé, C. P., Resnick, L. (2011). A Framework for Analyzing Development of Argumentation through Classroom Discussions, in Niels Pinkwart & Bruce McClaren (Eds.) **Educational Technologies for Teaching Argumentation Skills**, Bentham Science.

27. Gweon, G., Jeon, S., Lee, J., Rosé, C. P. (2011). Diagnosing Problems in Student Project Groups, in Puntambekar, S., Erkens, G., Hmelo-Silver, C. (Eds.) **Analyzing Collaborative Interactions in CSCL: Methods, Approaches and Issues**, Springer.
28. Cui, Y., Chaudhuri, S., Kumar, R., Gweon, G., Rosé, C. P. (2009). Helping Agents in VMT, in G. Stahl (Ed.) **Studying Virtual Math Teams**, Springer CSCL Series, Springer.
29. Lavie, A. & Rosé, C. P. (2004). Optimal Ambiguity Packing in Context-Free Parsers with Interleaved Unification. In H. Bunt, J. Carroll and G. Satta (eds.), **Current Issues in Parsing Technologies**, Kluwer Academic Press. (24% of submissions accepted for book publication)
30. Rosé, C. P., and Lavie, A. (2001). Balancing Robustness and Efficiency in Unification-augmented Context-Free Parsers for Large Practical Applications. In van Noord and Junqua (Eds.), **Robustness in Language and Speech Technology**, ELSNET series, Kluwer Academic Press.
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32. Rosé, C. P. & Waibel, A. H. (1997). Recovering from Parser Failures: A Hybrid Statistical/Symbolic Approach, in J. Klavans and P. Resnik (eds.), **The Balancing Act: Combining Symbolic and Statistical Approaches to Language Processing**, MIT Press.
33. Qu, Y., DiEugenio, B., Lavie, A., Levin, L., & Rosé, C. P. (1997). Minimizing Cumulative Error in Discourse Context, In E. Maier, M. Mast and S. LuperFoy (eds.), **Dialogue Processing in Spoken Language Systems: Revised Papers from ECAI-96 Workshop**, LNCS series, Springer Verlag.

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35. Rosé, C. P., Kumar, R., Aleven, V., Robinson, A., Wu, C. (2006). CycleTalk: Data Driven Design of Support for Simulation Based Learning, *International Journal of Artificial Intelligence in Education Special Issue on The Best of ITS '04*, 16, 195-223.
36. Litman, D., Rosé, C. P., Forbes-Riley, K., Silliman, S., & VanLehn, K. (2006). Spoken Versus Typed Human and Computer Dialogue Tutoring, *International Journal of Artificial Intelligence in Education Special Issue on The Best of ITS '04*, 16, pp145-170.
37. VanLehn, K., Graesser, A., Jackson, G. T., Jordan, P., Olney, A., Rosé, C. P., (2007). Natural Language Tutoring: A comparison of human tutors, computer tutors, and text. *Cognitive Science* 31(1), 3-52 (**Impact factor: 2.59**)
38. Rosé, C. P., Wang, Y.C., Cui, Y., Arguello, J., Stegmann, K., Weinberger, A., Fischer, F., (2008). Analyzing Collaborative Learning Processes Automatically: Exploiting the Advances of Computational Linguistics in Computer-Supported Collaborative Learning, submitted to the *International Journal of Computer Supported Collaborative Learning* 3(3), pp237-271. (**Impact factor: 2.68**)
39. Sherwani, J., Ali, N., Rosé, C. P., Rosenfeld, R. (2009). Orality-Grounded HCID: Understanding the Oral User, *Information Technologies & International Development* 5(4), pp37-49 (**Impact factor 2.35**)
40. Gupta, N. K. & Rosé, C. P. (2010). Understanding Instructional Support Needs of Emerging Internet Users for Web-based Information Seeking, *Journal of Educational Data Mining* 2(1), pp 38-82.
41. Kumar, R. & Rosé, C. P. (2011). Architecture for building Conversational Agents that support Collaborative Learning, *IEEE Transactions on Learning Technologies*, 4(1), pp 21-34 (**Impact factor: 4**)

42. Wang, H. C., Rose, C. P., Chang, C. Y. (2011). Agent-based Dynamic Support for Learning from Collaborative Brainstorming in Scientific Inquiry, *International Journal of Computer Supported Collaborative Learning* 6(3), pp 371-396.
43. Xiang, G., Hong, J., Rosé, C. P., Cranor, L., (2011). CANTINA+: A Feature-rich Machine Learning Framework for Detecting Phishing Web Sites, submitted to *ACM Transactions on Information and System Security (TISSEC)* 14, pp2-21.
44. Mu, J., Stegmann, K., Mayfield, E., Rosé, C. P., Fischer, F. (2012). The ACODEA Framework: Developing Segmentation and Classification Schemes for Fully Automatic Analysis of Online Discussions. *International Journal of Computer Supported Collaborative Learning* 7(2), pp285-305.
45. Habte, B., Finger, S., Rosé, C. P. (2013). E-Learning in Engineering through Videoconferencing: The case of Addis Ababa Institute of Technology, *International Journal of Engineering Pedagogy (iJEP)* 3(2).
46. Gweon, G., Jain, M., Mc Donough, J., Raj, B., Rosé, C. P. (2013). Measuring Prevalence of Other-Oriented Transactive Contributions Using an Automated Measure of Speech Style Accommodation, *International Journal of Computer Supported Collaborative Learning* 8(2), pp 245-265.
47. Dyke, G., Adamson, A., Howley, I., & Rosé, C. P. (2013). Enhancing Scientific Reasoning and Discussion with Conversational Agents, *IEEE Transactions on Learning Technologies* 6(3), special issue on Science Teaching, pp 240-247.
48. Kumar, R. & Rosé, C. P. (2014). Triggering Effective Social Support for Online Groups. *ACM Transactions on Interactive Intelligent Systems* 3 (4).
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50. Adamson, D., Dyke, G., Jang, H. J., Rosé, C. P. (2014). Towards an Agile Approach to Adapting Dynamic Collaboration Support to Student Needs, *International Journal of AI in Education* 24(1), pp91-121.
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52. Rosé, C. P., Goldman, P., Sherer, J. Z., Resnick, L. (2015). Supportive Technologies for Group Discussion in MOOCs, *Current Issues in Emerging eLearning*, Special issue on MOOCs, 2(1), article 5.
53. Koedinger, K., Brunskill, E., D'mello, S., Pardos, Z., Rosé, C. P. (2015). Data Mining and Education, *WIRES Cognitive Science* 6(4), pp333-353.
54. Clarke, S. N., Howley, I., Resnick, L. B., Rosé, C. P. (2016) Student Agency to Participate in Dialogic Science Discussions. *Learning, Culture and Social Interaction* 10, pp27-39
55. Rosé, C. P. & Ferschke, O. (2016). Technology Support for Discussion Based Learning: From Computer Supported Collaborative Learning to the Future of Massive Open Online Courses, *International Journal of AI in Education*, 25th Anniversary Edition, volume 26(2), pp 660-678
56. Towne, B., Rosé, C. P., & Herbsleb, J. (2016). Measuring Similarity Similarity: LDA and Human Perception, *ACM Transactions on Intelligent Systems and Technology*, Volume 8 Issue 1, Article 7 **(impact factor 2.41)**
57. Nguyen, D., Dogruöz, A. S., Rosé, C. P., de Jong, F. (2016). Computational Sociolinguistics: A Survey, *Computational Linguistics* 42 (3), pp 537-593. **(impact factor 2.2)**
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213. Rosé, C. P., Litman, D., Bhembé, D., Forbes, K., Silliman, S., Srivastava, R., VanLehn, K. (2003c). A Comparison on Tutor and Student Behavior in Speech Versus Text Based

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UNREFEREED CONFERENCE/WORKSHOP PAPERS

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2. Dragan Gašević, George Siemens, Carolyn Penstein Rosé (2017). Guest Editorial: Special Section on Learning Analytics **IEEE Transactions on Learning Technologies** 10(1), 3-5, IEEE, 2017
3. Elizabeth K. Bowman, Matt Turek, Paul Tunison, Reid Porter, Steve Thomas, Vadas Gintautas, Peter Shargo, Jessica Lin, Qingzhe Li, Yifeng Gao, Xiaosheng Li, Ranjeev Mittu , Carolyn Penstein Rosé , Keith Maki, Chris Bogart, Samrihdi Shree Choudhari (2017). Advanced text and video analytics for proactive decision making, **Proceedings of SPIE**
4. Ranjeev Mittu ; Jessica Lin ; Yifeng Gao ; Huzefa Rangwala ; Peter Shargo ; Joshua Robinson ; Carolyn Rose ; Paul Tunison ; Matt Turek ; Stephen Thomas ; Phil Hanselman; Foundations for context-aware retrieval for proactive decision support **Proc. SPIE 9851, Next-Generation Analyst IV**, 985108 (May 12, 2016); doi:10.1117/12.2231152.
5. Gaurav Singh Tomar, Sreecharan Sankaranarayanan and Carolyn Penstein Roé (2016). Intelligent Conversational Agents as Facilitators and Coordinators for Group Work in Distributed Learning Environments (MOOCs), in **AAAI 2016 Spring Symposium** at Stanford University in Palo Alto, California.
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12. Rosé, C. P. (2014). Review of Uncharted: Big Data as a Lens on Human Culture, **Journal of Research and Practice in Assessment**, Winter, Special Issue on Big Data and Analytics on Assessment (Book Review)
13. Rosé, C. P. (2014). Automated Linguistics Analysis as a Lens for Analysis of Group Learning, in **Proceedings of the Second International Workshop on Discourse-Centric Learning Analytics**.
14. Hmelo-Silver, C., Rosé, C. P., Levy, J. (2014). Fostering a Learning Community in MOOCs, in **Proceedings of the LAK 2014 Workshop on Conceptual Approaches to Connecting Levels of Analysis in Networked Learning**.

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16. Yang, D., Sinha, T., Adamson, D., & Rosé, C. P. (2013). Turn on, Tune in, Drop out: Anticipating student dropouts in Massive Open Online Courses, **NIPS Data-Driven Education Workshop**.
17. Dyke, G., Mayfield, E., Howley, I., Adamson, D., Rosé, C. P. (2013). Analysis of Discourse and the Importance of Time. **1st International Workshop on Discourse-Centric Learning Analytics (invited paper)**.
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21. Gweon, G., Kane, A., Rosé, C. P. (2011). Facilitating knowledge transfer between groups through idea co-construction processes, in **Proceedings of the Annual Meeting of the Interdisciplinary Network for Group Research (INGroup)**, Minneapolis, MN.
22. Mayfield, E., Garbus, M., Adamson, D., & Rosé, C. P. (2011). Data Driven Interaction Patterns: Authority and Information Sharing in Dialogue, **Proceedings of the AAAI Symposium on Building Representations of Common Ground with Intelligent Agents**.
23. Kumar, R. & Rosé, C. P. (2010). Conversational Tutors with Rich Interactive Behaviors that support Collaborative Learning, **Proceedings of the Workshop on Opportunities for Intelligent and Adaptive Behavior in Collaborative Learning Systems**, ITS 2010, Pittsburgh, PA
24. Stahl, G., Rosé, C. P., Goggins, S. (2010). Analyzing the discourse of GeoGebra collaborations. **Proceedings of the GeoGebra NA 2010 Conference**
25. Stahl, G., Rosé, C. P., O'Hara, K., & Powell, A. (2010). Supporting group math cognition in virtual GeoGebra teams with software conversational agents, **Proceedings of the GeoGebra NA 2010 Conference**
26. Gonzalez-Brenes, J., Sherwani, J., Rosé, C. P., Rosenfeld, R. (2009). Speech Interfaces in the Context of the HealthLine Project, **CHI Workshop on Human-centered computing in International Development**
27. Weusijana, B. A., Kumar, R., Rosé, C. P. (2008). MultiTalker: Building Conversational Agents in Second Life using Basilica, **Second Life Education Community Convention, Purple Strand: Educational Tools and Products**, 2008, Tampa, FL.
28. Wang, Y. C., Rosé, C. P., Barnett, J. (2008). Are you listening to me? An assessment paradigm for Doctor-Patient Communication, **Proceedings of AACH**.
29. Rosé, C. P. and Fussell, S. (2008). Towards Measuring Group Affect in Computer-Mediated Communication, CHI Notes, **Working Notes of the ACM SIG-CHI Workshop on Measuring Affect in HCI: Going Beyond the Individual**
30. Kumar, R., Gweon, G., Joshi, M., Cui, Y., Nwaigwe, A., Rosé, C. P. (2007). Evaluating the Effect of Social Conversation on Learning, Interaction, and Perceived Interdependence in a Collaborative Math Problem Solving Environment, **Working notes of the CSCL Workshop on Chat Analysis in Virtual Math Teams**
31. Rosé, C. P., Fischer, F. & Chang, C. Y. (2007). Exploring the Influence of Culture on Collaborative Learning, **Working Notes of the ACM SIG-CHI Workshop on Culture and Collaborative Technologies**
32. Gweon, G., Rosé, C. P., Albright, E., Cui, Y. (2006). Help Providers and Help Receivers in a Computer Supported Collaborative Learning Environment, **Proceedings of the CSCW Workshop on Role Based Collaboration**

33. Stegmann, K., Weinberger, A., Fischer, F., & Rosé, C. P. (2006). Automatische Analyse nat, rlich-sprachlicher Daten aus Onlinediskussionen [Automatic corpus analysis of natural language data of online discussions]. Paper presented at the **68th Tagung der Arbeitsgruppe für Empirische Pädagogische Forschung** (AEPF, Working Group for Empirical Educational Research) Munich, Germany.
34. Ai, H., Harris, T., Rosé, C. P. (2006). The Effect of Miscommunication Rate on User Response Preferences, **CHI Notes (Work in Progress Papers)**.
35. Tribble, A. & Rosé, C. P. (2006). Usable Browsers for Ontological Knowledge Acquisition, **CHI Notes (Work in Progress Papers)**.
36. Dzikovska, M. & Rosé, C. P. (2005). TFLEX: Making Deep Parsing Practical with Strategic Pruning, **Proceedings of the International Workshop on Parsing Technologies** (poster)
37. Rosé C. P. & Kraut, R. E. (2005). Towards Community Building for Improving Retention and Achievement in Asynchronous Distance Education, **Proceedings of the Interact 2005 Workshop on E-Learning and Human Computer Interaction**
38. Rosé C. P., Cavalli-Sforza, V., & Robinson, A. (2005). Adapting to and from student goal orientation in guided exploratory learning, invited Symposium presentation, **EARLI Symposium on Adaptation in Tutoring and Collaborative Learning**
39. Gweon, G., Rosé, C. P., Carey, R., Zaiss, Z. (2005). Exploring the Effectiveness of Mixed-Language Peer Problem Solving Interactions, **Proceedings of the AIED 2005 Workshop on Mixed Language Explanations in Learning Environments**.
40. Rosé C. P. & Donmez, P. (2005). TagHelper: An application of text classification technology to automatic and semi-automatic modeling of collaborative learning interactions, **Proceedings of the AIED 2005 Workshop on Representing and Analyzing Collaborative Interactions: What works? When does it work? To what extent? .**
41. Rosé C. P., Alevén, V. & Torrey, C. (2004). CycleTalk: Supporting Reflection in Design Scenarios with Negotiation Dialogue, **Proceedings of the CHI 2004 Workshop on Designing for Reflective Practitioners: Sharing and Assessing Progress by Diverse Communities**
42. Rosé, C. P., Torrey, C. & Alevén, V. (2004). Guided Exploratory Learning in a Simulation Environment for Thermodynamics: A Pilot Study, **Proceedings of the ITS Workshop on Tutorial Dialogue Systems**
43. Alevén, V. & Rosé, C. P. (2004). Towards Easier Creation of Tutorial Dialogue Systems: Integration of Authoring Environments for Tutoring and Dialogue Systems, **Proceedings of the ITS Workshop on Tutorial Dialogue Systems**
44. Rosé, C. P., VanLehn, K. & NLT Group (2003). Is Human Tutoring Always More Effective than Reading, **Proceedings of AIED Workshop on Tutorial Dialogue Systems: With a View Towards the Classroom**.
45. Siler, S., Rosé, C. P., Frost, T., VanLehn, K., & Koehler, P. (2002,). Evaluating Knowledge Construction Dialogues (KCDs) versus minilessons within Andes2 and alone, **Proceedings of ITS Workshop on Empirical Methods for Tutorial Dialogue Systems**, San Sebastian, Spain.
46. Rosé, C. P., VanLehn, K., Jordan, P. (2002). Can we help students with a high initial competency?, **Proceedings of ITS Workshop on Empirical Methods for Tutorial Dialogue Systems**, San Sebastian, Spain.
47. Graesser, A. C., VanLehn, K., Rosé, C. P., Jordan, P. W., & Harter, D. (2001). Intelligent Tutoring Systems with Conversational Dialogue, **AI Magazine**, Special Issue on Intelligent User Interfaces, Volume 2, Number 4.
48. Rosé, C. P. (2000). A Syntactic Framework for Semantic Interpretation, **Proceedings of the ESSLI Workshop on Linguistic Theory and Grammar Implementation**
49. Rosé, C. P. (2000). Facilitating the Rapid Development of Language Understanding Interfaces for Tutoring Systems, **Proceedings of the AAI Fall Symposium on Building Tutorial Dialogue Systems**

50. Mason, M. & Rosé, C. P. (1998). Learning Constraints for Plan-Based Discourse Processors With Genetic Programming, **AAAI Spring Symposium on Discourse and Machine Learning**.
51. Rosé, C. P. (1996). A Genetic Programming Approach to Robust Interactive Dialogue Interpretation, **American Association of Artificial Intelligence Workshop on Detecting, Repairing, and Preventing Human-Machine Miscommunication**, Portland, Oregon.
52. Rosé, C. P. (1995). Conversation Acts, Interactional Structure, and Conversational Outcomes, **Proceedings of the American Association of Artificial Intelligence Spring Symposium on Empirical Methods in Discourse Interpretation and Generation**
53. Suhm, B., Levin, L., Coccaro, N., Carbonell, J., Horiguchi, K., Isotani, R., Lavie, A., Mayfield, L., Rosé, C. P., Van Ess-Dykema, C., Waibel, A. (1994). Speech-Language Integration in a Multi-Lingual Speech Translation System, **Proceedings of the American Association of Artificial Intelligence Workshop on Integration of Natural Language and Speech Processing**.
54. Woszczyna, M., Coccaro, N., Eisele, A., Lavie, A., McNair, A., Polzin, T., Rogina, I., Rosé, C. P., Sloboda, T., Tsutsumi, J., Aoki-Waibel, N., Waibel, A., Ward, W. (1993). Recent Advances in JANUS: A Speech Translation System, **ARPA Proceedings of the Human Language Technologies Workshop**.

TECHNICAL REPORTS

55. Rosé, C. P. (1997). **Robust Interactive Dialogue Interpretation** , Ph.D. Dissertation, School of Computer Science, Carnegie Mellon University.

SOFTWARE ARTIFACTS

Last Updated Feb 12, 2014

56. *The LCFlex* robust parser
57. *The CARMEL Workbench*, including technology and general purpose knowledge sources for authoring robust language understanding interfaces for English, being used or having been used in 9 universities in the US, Europe, and Asia
58. *TagHelper Tools*, a resource for supporting content analysis of corpus data [*Google Analytics counter indicates that 3,447 new users from 91 countries have downloaded TagHelper tools since July '07 (4,448 downloads) as of February, 2014, with 6,635 total downloads as of Dec of 2015.*]
59. *TuTalk*, an authoring environment for tutorial dialogue agents
60. *LightSIDE: the Summarization Integrated Development Environment*, a general purpose text mining tool bench. The total number of downloads as of May 1, 2016 is 11,557.
61. *Bazaar*, architecture for development of multi-agent dynamic support for collaborative learning
62. *DANCE* website (<http://dance.cs.cmu.edu>), hundreds of return visitors each month
63. *MedType*: Type based medical concept normalization tool, <https://github.com/svjan5/medtype>, <https://medtype.github.io/>

IV. EVIDENCE OF EXTERNAL REPUTATION

CITATIONS AND AWARDS

- 2021 Association for the Advancement of Computing in Education paper award
- American Academy for the Advancement of Science Fellow of the Leshner Leadership Institute for Public Engagement with Science, focusing on Artificial Intelligence, 2020-2021 Cohort
- Top Downloaded Paper in the British Journal of Educational Technology (2018-2019)
- IEEE Senior Member since April 2018
- Inaugural Fellow, International Society for the Learning Sciences, 2017
- Winner of Honorable Mention Award at ACM SIG-CHI, 2006, 2007, 2020
- Winner of Best Student Paper Award at International Joint Conference on Natural Language Processing (IJCNLP) 2017
 - Lee B. Lusted Best Student Poster award at the 39th Annual Meeting of the Society for Medical Decision Making, 2017
- Winner of Best Student Paper Award at Computer Supported Collaborative Learning (CSCL) 2011
- Winner of Best Paper Award at Computer Supported Collaborative Learning (CSCL) 2021
- Leadership Award, International Society for the Learning Sciences, June 2016
- Semifinalist for the 2008 Elsevier Grand Challenge (14% acceptance rate)
- Winner of Best Poster Award at the Intelligent Tutoring Systems conference (ITS), 2006
- Nominated for Best Paper Award at Learning Analytics and Knowledge (LAK'19)
- “Area chair favorite” paper at COLING 2018
- Nominated for Best Paper Award at Computer Supported Collaborative Learning (CSCL), 2005, 2015
- Nominated for Best Paper Award at the International Conference of the Learning Science (ICLS) 2012
- Nominated for best technical design award, CSCL 2009
- Nominated for Best Student Paper Award at Computer Supported Collaborative Learning (CSCL), 2007
- Language Technologies Institute Faculty Fellowship Award (Jr. Faculty Chair), July 2007-2009
- Nominated for Best Paper Award at the Intelligent Tutoring Systems conference (ITS), 2006
- Nominated for Best Paper Award at AI in Education Conference, 2001, 2007.
- Carnegie Scholar Award, Carnegie Mellon University, 1994-1997.
- Phi Beta Kappa, University of California at Irvine, 1991.
- Golden Key National Honor Society, University of California at Irvine, 1991.

- Simms Memorial Scholarship, University of California at Irvine, 1991-1992.

INVITED TALKS

- **Invited Speaker**, 2021 Global Smart Education Conference (GCE 2021), Beijing Normal University, August 20, 2021
- **Invited speaker/panelist**, virtual ATP EdTech and Computational Psychometrics Summit, December 9, 2021.
- **Keynote Speaker**, 2021 LASER Summer Institute, June 21, 2021
- **Invited Speaker**, Enrichment: Insights Towards AI Impact in Education through a Mycelial Partnership between Research, Policy, and Practice, SIG AI Learning Webinar, June 2021
- **Invited Speaker**, AI Enabled Mobs for Learning with Carolyn Rosé, Mob mentality podcast, July 1, 2021
 - https://twitter.com/mob_mentality/status/1411675600448675846
 - https://www.linkedin.com/posts/austin-chadwick-3a58151a4_ai-mobprogramming-ensembleprogramming-activity-6817441751511519232-p1BM
 - https://www.linkedin.com/posts/austin-chadwick-3a58151a4_ai-enabled-mobs-for-learning-with-carolyn-activity-6823221062898204672-gchw
 - https://twitter.com/mob_mentality/status/1417456209146171393
- **Keynote Speaker**, 2021 Encuentro Nacional de Computación (ENC 2021), Mexican Society on Computer Science A.C. in Mexico, August 10, 2021, 10am EDT
- **Invited Speaker**, Innovations in Artificial Intelligence for Education Research plenary session at the 2021 meeting of the National Academy of Education (NAEd), breakout on Modeling How Collaborative Processes Interact with Learning Processes, Washington DC, November 12, 2021
- **Invited Speaker**, CMU Summit, Panel on Online Education, April 2021
- **Invited Panelist**, The 4th session of the MDEpiNet Annual Meeting Series, January 2021
- **Invited Speaker**, Measurable Creative AI, Workshop at CVPR'21 (June 19 to June 25, 2021)
- **Keynote Speaker**: The 2021 Meeting of the International Society of the Learning Sciences, June 7-11, Bochum, Germany, hosted online
- **Keynote Speaker**: 2021 International Conference on Program Comprehension (Colocated with the International Conference on Software Engineering), “A Layered Model of Comprehension in Collaborative Software Development: Programs, Programming, and Programmers”, May 2021
- **Invited Panelist**, If you build it, will they come? Panel at the Annual Meeting of the American Educational Research Association, April 2021
- **Invited Panelist**, New Challenges for Educational Technology in the Time of the Pandemic, BEA Workshop, April 2021
- **Keynote Speaker**: 2020 International Conference on Computer Assisted Language Learning, December 5-6, 2020, Beijing, China

- **Invited Speaker**, The power of intelligent conversation systems in collaborative learning, NeurIPS 2020 workshop on Advances and Opportunities: Machine Learning for Education, December 2020
- **Discussant**, Symposium Cosima & Learning Analytics, University of Munich, July 2020
- **Invited Speaker**, Learning Data Institute Workshop at the 2020 Educational Data Mining Conference, July 2020
- **Panelist**, Panel on How AI Can Support Learning Under COVID-19 and Beyond, hosted by Alelo, July 2020
- **Panelist**, Panel on COVID-19 and the Future of AI in Education and Training, AIED 2020 (<https://www.slideshare.net/LewisJohnson34/covid19-and-the-future-of-ai-in-education-and-training>), July 2020
- **Distinguished Computational Linguistics Lecture**, Rochester Institute of Technology, March 2019
- **Panelist**, Widening the Lens through Multiple Glasses: A Multi-Society Perspective on Studying CSCL, Computer-Supported Collaborative Learning conference, June 2019, Lyon, France
- **Invited Speaker**, China-US Smart Education Conference, University of North Texas, March 2019
- **Invited Speaker**, Israeli Symposium on Learning Analytics, March, 2019, Rehovot, Israel
- **Symposium Presentation**, CSCL Gets to Work: Towards Collaborative Learning with Working Professionals, Symposium: Group Formation in the Digital Age: Relevant Characteristics, their Diagnosis, and Combination for Productive Collaboration, talk given by student author, Computer-Supported Collaborative Learning, Lyon, France, June 2019.
- **Keynote Speaker**, Learning and Education with Web Data (LILE'19), collocated with WebSci'19, Boston, MI, US on 30 June, 2019
- **Keynote Speaker**, Synthesis and Design Workshop on Digitally-Mediated Team Learning, Balancing Learning and Productivity Through Shared Cognition in Team-Based Learning, Orlando, FL, March 2019
- **Invited Speaker**, European Association of Technology-Enhanced Learning ([EATEL](#)) Bi-annual Webinar on The Profession, session on Interdisciplinarity, December 2018.
- **Honorable Speaker**, 4th “Belt and Road Open Education Learning Week” co-hosted by Open Educational Resources lab and Design & Learning Lab, Beijing Normal University, on the theme of “How will emerging IT reshape learning and industry?”, October 2018
- **Discussant**, Crowdsourcing and Education: Towards a Theory and Praxis of Learnersourcing, International Conference of the Learning Sciences, London, UK, June 2018.
- **Keynote Speaker**, 10th Knowledge Management & E-Learning (KM&EL) workshop, Beijing, China, May 23, 2018
- **Keynote Speaker**, “Lifelong Learning in a Web Scale Opportunity Space”, 13th European Conference on Technology Enhanced Learning, Leeds, UK, September 3-6, 2018
- **Keynote Speaker**, 56th Annual Meeting of the Association for Computational Linguistics, “The Who is the Bridge between the What and the How”, July 2018, Melbourne, Australia.

- Invited Symposium Speaker, Agent-based support for collaborative discourse, Towards citizenship with deliberative argumentation and technologies for new political education, Biennial meeting of the European Association for Research on Learning and Instruction, Finland, September 2017
- Invited Symposium Speaker, The Interplay of Cognitive, Social, and Metacognitive processes in collaboration: Can the threads be disentangled?, Symposium entitled “What you say and how you say it: Social and content-related processes and their interplay in instructional communication”, Society for Text and Discourse, Philadelphia, August 2017
- Invited Panelist, EC-TEL panel on Alliance of Learning Sciences Societies, Tallin, Estonia, Fall 2017
- **Keynote Speaker** and Tutorial Instructor, Discourse Analytics, Workshop on Education and Social Science Technologies (WESST), National University of Singapore, Singapore, July 2017
- Panelist, Quo vadis CSCL? Considering Directions for the Future of CSCL Research, CSCL 2017, June 2017, Philadelphia
- Discussant, Measuring and supporting CSCL at scale, CSCL 2017, June 2017, Philadelphia
- **Keynote speaker**, The 21st Global Chinese Conference on Computers in Education, Beijing, June 2017
 - Additionally: Invited visitor at the Advanced Innovation Center for Future Education and Invited talk at Beijing Normal University
- Invited co-presenter, Symposium: Making a Difference: Analytics for Quality Knowledge-Building Conversations, Computer-Supported Collaborative Learning 2017
- Invited Talk, NSF funded workshop on The Future of Cyber-Social Learning Systems, sponsored through the CCC, Nov 2, 2016.
- Invited Talk, American College Testing (ACT)’s Insight Analytics & Emerging Technologies Symposium, November 2016
- Invited Tutorial on Discourse Analytics (expanded to tutorial on LearnSphere in collaboration with Ken Koedinger and John Stamper), Learning Analytics Summer Institute (Co-Organized by the Society for Learning Analytics Research and the School of Informatics at the University of Michigan), June 2016, University of Michigan
- Invited Symposium Chair, Symposium on Learning Analytics, International Conference of the Learning Sciences, June 2016.
- Symposium Talk, Symposium on The Learning Sciences @ Scale: Current Developments in Open Online Learning, International Conference of the Learning Sciences, June 2016
- Symposium Talk, Fostering deliberative argumentation in schools towards the constitution of a deliberative democracy, International Conference of the Learning Sciences, June 2016
- Discussant, Building on Cultural Capacity for Innovation through International Collaboration: In Memory of Naomi Miyake, International Conference of the Learning Sciences, Singapore, June 2016
- International Expert Panelist, Discourse Analytics, Learning Analytics in Education roundtable-cum symposium, event co-located with the International Conference of the Learning Sciences, Singapore, June 2016.

- Invited Talk, Community Engagement as a Resource for Learning, Learning in Social Contexts Conference, Pittsburgh, PA, May 19-21, 2016.
- **Featured Speaker**, Text Mining for Assessment of Writing and Social Positioning, Association of Test Publishers, Education Division, Session on NLP, text mining, and automated scoring, March 20-23, 2016
- **Opening Keynote Talk**, From Data to Support of Social Interaction for Learning in MOOCs, Digital Learning Week Conference, hosted by the School of Education, Teaching Innovation Unit, University of South Australia, March 2016
- Guest Speaker, Strategies for Successful Career Building in Academia, The AECT Early Career Symposium, November 2015.
- Invited Panel Talk, Teaming in Team Based MOOCs, Digital Learning Research Network Conference on Making Sense of Higher Education: Networks and Change, Stanford University, October 2015.
- Invited Talk, Workshop on Computing Education hosted by Al Akhawayn University, in collaboration with the Moroccan Ministry of Higher Education, Oct 2-3, 2015, talk delivered remotely.
- Invited Panelist, Open edX Universities Symposium, George Washington University, November 11, 2015
- Invited Panelist, Research and Resources Towards Collaborative and Discussion Based Learning in MOOCs, CCC Computer-Aided Personalized Education Workshop, November 12-13, 2015 in Washington, DC
- Invited Speaker and Panel Leader, NSF Funded MARWiSE workshop on Multidisciplinary Advances in Reading and Writing for Science Education, NYC, May 7-8, 2015.
- Invited participant, NSF funded Symposium on Learning Sciences and Online Learning, MIT, May 21-22, 2015.
- Invited Symposium Talk, Discourse Analytics to Support Persistent Participation in MOOCs, Symposium on CSCL and Learning Analytics: Opportunities to Support Social Interaction, Self-Regulation and Socially Shared Regulation, CSCL 2015
- Invited Symposium Talk, A Script Theory of Guidance Perspective on Learning Analytics for CSCL, Symposium on CSCL and Learning Analytics: Opportunities to Support Social Interaction, Self-Regulation and Socially Shared Regulation, CSCL 2015
- Invited Panelist, Online Learning: Shaping the Future of Higher Education On and Off Campus, Summit hosted by MIT, Harvard, UC Berkeley and Stanford
- Discussant, Invited Symposium on research on design and computational aspects of CSCL environments, CSCL 2015
- Panel Talk, MOOC Hype vs. MOOC Research: The Role of Cross-Institutional Collaborations in Advancing Science and Equity, AERA 2015 Annual Meeting
- **Keynote talk**, Discourse Analytics, Southeast Educational Data Symposium (SEEDS), jointly hosted by The Institute for Quantitative Theory and Methods and the Society for Learning Analytics Research, Emory University, February 20, 2015
- **Kenote talk** and Invited Workshop Leader, REASON: International Spring school on Measuring Scientific Reasoning and Argumentation, March 5-7, 2015, University of Munich, http://www.en.mcls.uni-muenchen.de/study_programs/reason/index.html

- Invited talk, September 12, 2014. Department of Education Policy and Practice, SUNY Albany
- Invited talk, September 15, 2014, Reasoning Mind, Houston TX
- Invited talk, October 8, 2014, FutureLearn, UK (delivered remotely)
- Invited talk, October 10, 2014, EdX, Boston MA, EdX Communities of Practice Webinar Series
- Invited poster presentation, Social and Motivational Factors Associated with Attrition in MOOCs, Global Learning Council, September 2014
 - https://www.youtube.com/watch?v=FcjuXeL5_K4&list=PL1HxVGmcukuKNJbQ_oEVLmNwXbyMeq0r&index=12
 - https://www.youtube.com/watch?v=NENY2LQ6XeA&list=PL1HxVGmcukuKNJbQ_oEVLmNwXbyMeq0r&index=13
- Invited presentation, Social Factors that Impact Persistence in MOOCs, The 2014 Learning with MOOCs Workshop, Massachusetts Institute of Technology
- Invited Tutorial on Text Mining, Learning Analytics Summer Institute (Co-Organized by the Society for Learning Analytic Research and Harvard University), July 2014, Harvard University
 - Also an invited panel talk at the same conference on Learning Analytics and the Learning Sciences
- Invited panelist, Educational Testing Service sponsored conference on “Innovative Assessment of Collaboration”, November 3-4, 2014
- Invited Panelist, ITS & Learning@Scale panel at the Intelligent Tutoring Systems Conference 2014, June 2014
- **Keynote talk**, Cultivating the Seeds of Mentorship: Students as Resources for Creating a Conducive Online Learning Environment, Intelligent Tutoring Systems Conference 2014, June 2014
- Invited Speaker, Human-Technology Partnership in Facilitation of Discursive Instruction, 2014 Cyberlearning Summit, June 2014
- Invited presentation, A network analytic technique for identifying practices of emerging subcommunities in massive online learning communities, ICLS 2014 Workshop on Analytics for Learning and Becoming in Practice, Summer 2014
- Invited Talk, School of Education, University of California at Irvine, March 14, 2014
- Learning through Discussion: Foundations, Findings, and Future, Tutorial at the First Annual ACM Conference on Learning @ Scale, March 2014
- Invited Talk/Visit at Educational Testing Service, invited by Alina von Davier, February 21, 2014
- Invited Talk/Visit at Coursera, invited by Chuong Do (Lead on Data Science team), December 2013
- Invited Participant and presenter at the MOOC Workshop: Defining and Advancing Change (December 2013), with financial support from the Bill and Melinda Gates Foundation
- Invited Panelist, Virtual Villages Panel (platforms that enable people to create virtual villages for to participate meaningfully, but remotely, in the lives of youth), Village Scholar Educational Summit, Convened jointly by the Village Scholar Foundation and the Institute for Urban and Minority Education at Teacher’s College, Columbia University, May 11, 2013.

- Invited Tutorial on Discourse Analytics, Learning Analytics Summer Institute (Co-Organized by the Society for Learning Analytic Research and Stanford University), July 2013, Stanford University
- Invited Panel Talk, Panel on Translating collaborative project-based learning to online and blended environments, Workshop on Multidisciplinary Research for Online Education (MunROE, <http://www.cra.org/ccc/mroe>), sponsored by the Computing Community Consortium, Feb 11-12, 2013, Washington, DC
- Invited Symposium Talk, Automated Approaches to Analyzing Data from Collaborative Learning Settings, Symposium on Trends in Support and Analysis of Collaborative Learning, Jointly organized by the Special Interest Groups on Instructional Design and Learning and Instruction with Computers, at the Biennial Meeting of the European Association for Research on Learning and Instruction, August 2013
- Invited Symposium Talk (co-author, presented by Sherice Clarke), Understanding Student Engagement in Classroom Dialogue, Symposium on Enablers and Barriers of Productive Learning Dialogues: Where social meets cognitive, Biennial Meeting of the European Association for Research on Learning and Instruction, August 2013
- Invited Workshop Talk, Measuring Engagement in Social Processes that Support Shared Cognition, Workshop on Developing Multi-Disciplinary Measurement Approaches for Shared Cognition, University of Central Florida, February 2013
- Invited Instructor, Discourse Analytics: Assessment of Collaborative Learning Discussions, 2013 Academy of the German Institute for International Education Research, Salzschlirf, Germany, June 2013
- Invited Feedback Panel Talk, Invited Workshop: How will Collaborative Problem Solving be assessed at international scale?, Workshop at the Computer Supported Collaborative Learning conference, June 2013
- Invited Panel Talk, Zooming In and Out of Collaborative Process Analysis through Linguistically Informed Machine Learning Models, Invited Plenary Panel: To see the world and a grain of sand: Multiple methods in CSCL research, Computer Supported Collaborative Learning conference, June 2013
- Invited Panel Talk, From Research Instruments to Classroom Assessments: A Call for Tools to Assist Teacher Assessment of Collaborative Learning, Computer Supported Collaborative Learning conference, June 2013
- Invited talk, MIT Media Lab, Summarization of Behavior Trajectories in Online Support Groups, October 19, 2012
 - Gave a similar invited talk at BBN on the same day
- Invited talk, WPI, Supporting Discursive Instruction Online and In the Classroom with Intelligent Conversational Agents, October 22, 2012
- Symposium Invited Talk, Robot Facilitation as Dynamic Support for Collaborative Learning, Symposium at the International Conference of the Learning Sciences, July 2012.
- Workshop Keynote, *Institut Français de l'Éducation* 3rd International Learning Sciences seminar, Methodology Track, Lyon, France, June 2012
- Workshop Invited Talk, LightSIDE: Open Source Machine Learning for Text Accessible to Non-Experts, National Council on Measurements in Education Conference, Spring 2012, *talk delivered by Elijah Mayfield*

- Workshop Invited Talk, Analysis of Social Positioning in Interaction, Indo-US Workshop on Large Scale Data Analytics and Intelligent Services, IISc, Bangalore, Dec 18-20, 2011
- Invited Talk, Analysis of Social Positioning in Interaction, IBM Delhi, Spoken Web group, December 14, 2011.
- Invited Speaker and Panelist, Dialogue Systems that Support Group Work and Learning, at Young Researchers Round Table for Spoken Dialogue Systems 2011 (Academia Session)
- Invited panelist, Towards Monitoring Classroom Interactions Through Speech Processing, as part of the panel on Research on discursive teaching and learning: What have we learned and where are we heading, at the European Association for Research on Learning and Instruction 2011 conference
- Invited Discussant, Session on Dialogue in the Digital Age, Socializing Intelligence Through Academic Talk and Dialogue Conference, sponsored by the American Education Research Association, September 2011
- Invited paper presentation, What Sociolinguistics and Machine Learning Have to Say to One Another about Interaction Analysis, Socializing Intelligence Through Academic Talk and Dialogue Conference, sponsored by the American Education Research Association, September 2011
- Invited paper presentation, Modeling the Rhetoric of Human-Computer Interaction, HCI International 2011
- Conference Keynote talk, Supporting Group Work with Language Technologies, International Conference on Natural Language Processing, December 2010, IIT Kharagpur.
- Invited data analyst, CKI Communications Analysis Workshop, February 2010
- Invited panelist, Digital Library Usability Panel, 5th International Conference on Universal Digital Library, Pittsburgh, PA, November 8, 2009
- LearnLab India: Towards In Vivo International Comparative Education Research, 2009 Annual Science of Learning Centers Awardees Meeting, Washington DC
- Workshop Invited Talk, Engaging Collaborative Learners with Helping Agents, Learning companions and pedagogical agents workshop, organized by the Oxford Internet Institute, University of Oxford, Oxford, England, May 28, 2009
- Language Technologies for On-Line Learning the Developing World, Microsoft India, Bangalore, April 2009
- Similar talks given the same week at IEEE Society of Bangalore, IIIT in Hyderabad, and C-STEP in Bangalore
- GRASP: The Group learning Assessment Platform, 2009 Collaboration and Knowledge Interoperability Workshop, Orlando, FL, March 2009
- Symposium Invited Talk, Open Problems in Dynamic Collaborative Learning Support, Invited Symposium Talk (symposium organized by Nikol Rummel and Armin Weinberger), International Conference of the Learning Science, Utrecht, the Netherlands, June 2008.
- Supporting Simulation Based Learning, Invited talk, Worth Publishing, Ltd., New York, June 2007
- Workshop Keynote, Language Technologies for Supporting Productive Collaborative Learning Interactions for Science and Engineering Education, Technology-integrated Science and Engineering Education Workshop (TechSEE-II), National Taiwan Normal University, May 2007

- Conference Keynote, Towards Triggering Adaptive Collaboration Support Using Automatic Interaction Analysis, Kaleidoscope CSCL Rendez Vous, January 2007
- Workshop Keynote Talk, Towards Adaptive Collaboration Support, Workshop on Computer Supported Collaboration Scripts, Kaleidoscope CSCL Rendez Vous, January 2007
- Workshop Keynote Talk, TagHelper: Computer Support for Applying Coding Schemes, Workshop on Computer Based Analysis and Visualization of Collaborative Learning Activities, Kaleidoscope CSCL Rendez Vous, January 2007
- Workshop Keynote, Towards Adaptive Support for On-line Learning, Technology-integrated Science and Engineering Education Workshop (TechSEE), National Taiwan Normal University, May 2006
- Workshop Featured Talk, Making Authoring of Conversational Interfaces Accessible, Workshop on Authoring Tools for Advanced Learning Systems with Standards (organized by Arthur Graesser, The Advanced Distributed Learning Workforce Co-Lab at the University of Memphis), November 2005
- Invited Symposium Talk, Adapting to and from student goal orientation in guided exploratory learning, the Biennial Meeting of the European Association of Research on Learning and Instruction, Cyprus, August 2005

SEMINARS & COLLOQUIA

- Seminar talk, University of Haifa, Educational Technologies Graduate Program, May 2021
- Colloquium Talk, New York University, Steinhardt School of Education, November 2020
- Colloquium Talk, University of Oulu, Finland, February 2020
- Colloquium Talk, BoiInformatics Department, University of Pittsburgh, November 1, 2019
- Online AI seminar for Alelo, From AI-enabled CSCL in the classroom towards team based learning in the workplace, February 2019, <https://www.alelo.com/2019/02/from-ai-enabled-cscl-in-the-classroom-towards-team-based-learning-in-the-workplace/>
- Research seminar at IBM Research in Yorktown Heights, February 2019, <https://ibm.webex.com/ibm/lsr.php?RCID=092c2b48e1bb469caeb5b36b6ac21e11>, password dUJ4DW3T
- Seminar series as part of a University-wide learning initiative at the University of Notre Dame, Spring 2019
- Digital Humanities Seminar Series, co-presented with James Wynn and Hannah Ringler, November 2018
- Colloquium Talk, Speech and Language group at Johns Hopkins University, November 9, 2018
- Colloquium Talk, October 19, 2018, Penn State, School of Information Sciences and Technology
- Colloquium Talk, Psychology Department, University of Muenster, Muenster, Germany, June 2018
- Colloquium Talk, Supporting Learning in MOOCs with Language Technologies, UIUC Department of Computer Science, November 18, 2016

- Colloquium Talk, Linguistic Agency: Implications for Computational Models of Language in Social Contexts, LTI Colloquium, March 2016
- Invited Talk, Introduction to Machine Learning, Chemical Engineering Department, Enterprise Wide Optimization group, Carnegie Mellon University, March 4, 2016
- Invited Talk, Brown Bag Lunchtime Series, Rutgers University Graduate School of Education, October 28, 2015
- Invited Talk, University of Edinburgh School of Education and School of Informatics, August 2015
- Invited talk, The Open University of the UK, July 2015
- Dynamic Support for Computer Mediated Intercultural Collaboration, CMU Modern Languages Department Program in Second Language Acquisition Graduate Seminar, March 31, 2014 (aaweber@gmail.com)
- Cultivating the Seeds of Mentorship: Students as resources for creating a conducive online learning environment, colloquium talk, The Learning Innovation and Networked Knowledge Lab Fall Colloquium, University of Texas at Arlington, October 2014.
 - <https://echo360.uta.edu/ess/echo/presentation/5daca2f8-7b8f-49c2-8c47-a818760caa4a?ec=true>
- Linguistically Informed Automated Analysis of Collaborative Learning Processes, **Distinguished Lecture** in the Software and Information Systems Department at UNC Charlotte, April 2014
- Invited Talk/Visit, Lytics Lab, School of Education, Stanford University, March 13, 2014
- Supporting Discursive Instruction Online and in the Classroom with Intelligent Conversational Agents, Learning Sciences Colloquium, Arizona State University, October 2013
- SouFLé: A Three Dimensional Framework for Analysis of Social Positioning in Dyadic and Group Discussions, Rhetoric Colloquium, Department of English, Carnegie Mellon University, February, 2013
- Supporting Discursive Instruction Online and in the Classroom with Intelligent Conversational Agents, HCII Seminar, Carnegie Mellon University, November, 2012
- Automated Analysis of Social Positioning in Conversation, CUNY, April, 2012.
- What Sociolinguistics and Machine Learning Have to Say to One Another, MIT Media Lab Applied Machine Learning Series (delivered remotely), August 2011
- Supporting Academically Productive Talk with Computer Agents, Drexel Information School Seminar, Drexel University, February 2011
- Analysis of Perspectives in Interactive Settings, Tepper School of Business IS Seminar, November 19, 2010
- Displayed Bias as a Reflection of Both Speaker and Intended Hearer in Conversational Settings, LTI Colloquium, September 2010.
- Technologies for Automatic Analysis of On-Line Learning Discussions, Institute for Teaching & Learning – Nexus Research and Policy Center, May 2010
- Modeling Style of Conversational Interactions Using Text Mining Techniques, Seminar Talk, Worcester Polytechnic, January 2010

- Analysis of Transactivity in Group Discussions in On-Line and Face-to-Face Settings, Seminar Talk, i-school at Drexel University, January, 2010
- Engaging Collaborative Learners with Conversational Agents using Social Strategies, Seminar Talk, School of Informatics, University of California at Irvine, June 2010
- Analysis of Transactivity in Group Discussions in On-Line and Face-to-Face Settings, Seminar Talk, School of Education, University of California at Los Angeles, June 2010
- Engaging Collaborative Learners with Conversational Agents using Social Strategies, Seminar Talk, School of Education, University of California at Los Angeles, June 2010
- Language Technologies for Supporting Productive Collaborative Learning Interactions for Science and Engineering Education, Turing Seminar Talk, University of Washington, April 2007
- Evaluating the Instructional Value of Errors in Through Peer Tutoring Interactions, DeKalb University, September 2005
- Guided Exploratory Learning in a Simulation Environment for Thermodynamics, University of Muenster, July 2005
- Facilitating Reliable Content Analysis of Corpus Data with Automatic and Semi-Automatic Text Classification Technology, EPFL Switzerland, July 2005
- Cycletalk: Toward a Tutorial Dialogue Agent that Supports Negotiation Dialogues for Learning and Reflection, Karl-Franzens Universitaet in Graz, Austria, April 2004
- Overcoming the Knowledge Engineering Bottleneck for Understanding Student Language Input, University of Edinburgh, November 2003
- Tutorial Dialogue Systems: Where are we, and where are we going? DFKI, Saarbruecken Germany, November 2003

OTHER

- **Invited participant**, New Frontiers National Summit, Association of Science and Technology Centers, October 2020 (<https://www.astc.org/newfrontiers/>)
- **Press Coverage:** AAAS Leshner Fellows <https://www.aaas.org/news/aaas-selects-28-mass-media-fellows-bringing-scientists-newsrooms-around-country>
- **Press Coverage:** Pittsburgh Post Gazette: Can technology turn down the volume of online hate? Researchers at CMU are working to find an answer. <https://www.post-gazette.com/local/city/2019/10/21/tree-of-life-synagogue-pittsburgh-carnegie-mellon-online-hate-speech-technology-gab-8chan/stories/201909260105>
- **Press Coverage:** Recode, March 2019, Inside Twitter's ambitious plan to change the way we tweet
 - <https://www.recode.net/2019/3/8/18245536/exclusive-twitter-healthy-conversations-dunking-research-product-incentives>
- Invited to serve on the Japan Prize Nominating Committee for the 2020 prize
- **Press Coverage:** E-learning Inside: WGU and Carnegie Mellon University win grant to build AI Powered Professional Development Tool <https://news.elearninginside.com/wgu-and-carnegie-mellon-win-grant-to-build-ai-powered-professional-development-tool/>

- **Press Coverage:** Inside Higher Ed: Pushing the Boundaries of Learning With AI (September, 2018) <https://www.insidehighered.com/digital-learning/article/2018/09/26/academics-push-expand-use-ai-higher-ed-teaching-and-learning>
- **Press Coverage:** Chronical of Higher Ed: How Artificial Intelligence is Changing Teaching (August, 2018) https://www.chronicle.com/article/How-Artificial-Intelligence-Is/244231/?key=0bBzifsyPLcc_LIWrv4sjgX210vUwROigDNBQQ2X3vYi6TcAsbckA59o_UF-32UPeFIFMkJhbVNtZFIvUhnYWI3dmtNZ0k3aVZ1MDJKY1FQSWFLU3dUVWNEbw#.W3Qd2Fjh_m0.twitter
- **Press Coverage:** interview with Iridescent (December 2017)
 - <http://iridescentlearning.org/blog-2/>
- **Press Coverage:** interview with me published in the Chinese Modern Distance Education Research Journal, a CSSCI indexed journal (Interview from Summer 2017)
 - <http://www.xdyjyj.cn/2010/zaiyao.asp?aid=4306&articleid=4306>
- **Press Coverage:** article Inside Higher Ed (Fall 2017)
 - <https://www.insidehighered.com/news/2017/11/14/professors-have-mixed-reactions-blackboard-plan-offer-tool-grading-online>
- **Press Coverage:** article in Ed Surge
 - <https://www.edsurge.com/news/2016-09-28-online-classes-get-a-missing-piece-teamwork>
- Invited co-editor of the Handbook of Computer-Supported Collaborative Learning
- Invited Center Associate: Research Centre in Digital Education in the Moray House School of Education at the University of Edinburgh
 - <http://www.de.ed.ac.uk/>
- **Press Coverage:** Web interview for the blog of Open edX Universities Symposium, September 4, 2015, and other coverage of the event
 - <http://openedxuniversities.org/2015/09/04/qa-with-prof-carolyn-rose/>
 - <https://www.class-central.com/report/conversation-impacts-learning/>
 - <http://iblstudios.com/brightest-minds-in-higher-education-participated-in-the-first-open-edx-universities-symposium/>
 - <https://www.youtube.com/watch?v=PxfpjLOC3pM&feature=youtu.be&t=1h32m20s>
- External Expert for the UK Open University Digital Think Tank (Fall 2015)
- Invited participant, NSF funded CCC Computer-Aided Personalized Education Workshop, November 12-13, 2015 in Washington, DC
- **Press Coverage.** Announcement of new Gates grant, joint with University of Texas at Arlington.
 - <https://www.uta.edu/news/releases/2014/11/LINKLab-dLRN.php>
 - <http://hcii.cmu.edu/news/2014/rose-leads-cmu-efforts-16-million-digital-learning-research-network>
- **Press Coverage.** Announcement about NSF DIBBs: Mining Educational Data to Improve Learning, September 2014.
 - <http://www.hpcwire.com/off-the-wire/carnegie-mellon-leads-new-nsf-project-improve-learning/>

- **Press Coverage.** Announcement about Google Grant on MOOC research + discussion of my current directions in MOOC research, August 2014, Pittsburgh's NPR news station.
 - <http://wesa.fm/post/cmu-google-team-improve-online-education>
- Invited participant, Digital Learning Data as a Public Good: Forging First Principles and Protocols for Scientific Collaboration, Pacific Grove, CA, June 1-4, 2014, organized through the Office of the Vice Provost for Online Learning at Stanford University.
 - Working group to construct the equivalent of the Belmont Report for online learning data.
- Invited participant in NSF funded workshop on Big Data in Education, Arlington, VA, March 2014
- **Interactive TV appearance:** Interviews on Gates Foundation funded interactive TV series produced by In the Telling: "Massive and Open: What are we learning?", part of a larger series aired on Internet TV called e-literate TV (filmed in December 2013).
- **Press Coverage:** Profile Piece published in The New Learning Times, November 2013.
- **Press Coverage:** Announcement about joint grant with Penn State, October 2013:
 - <http://news.psu.edu/story/292862/2013/10/25/academics/ist-researcher-explores-student-online-collaboration>
- Invited NLP Expert, National Crisis Helpline Summit, MIT Media Lab, October 18, 2012
- Invited research partner in an international bid for the Open Research Area Plus for the Social Sciences program, jointly funded through ANR-DFG-ESRC-NWO and NSF. Title: Dialogic Education and Emotional Engagement (D3E), spearheaded by Rupert Higham and J. E. van-de-Pol at the University of Cambridge, UK.
- **Press Coverage** in The Hindu, August 25, 2011: The passion to find out?, talks about the Internship Program in Technology Supported Education, <http://www.thehindu.com/todays-paper/tp-features/tp-nxg/article2394460.ece>
- **Press Coverage** in Edu Tech, April 2012: A Winter of Content, talks about the Internship Program in Technology Supported Education, http://issuu.com/eduindia/docs/edu_issue-03_vol-04_april_2012
- **Press Coverage** on NPR, Education Week, and other sources about the ASAP automatic essay grading challenge, some of which specifically discuss LightSIDE's participation, April 2012:
 - <http://www.edweek.org/ew/articles/2012/04/25/29essays.h31.html?tkn=MXPFNp08fLNL7tUZgZJo9P23%2F4bGdVG%2FEJ1%2F&intc=es>
 - <http://stateimpact.npr.org/ohio/2012/04/12/computers-can-score-student-essays-as-well-as-humans-study-finds/>
 - <http://stateimpact.npr.org/ohio/2012/06/08/the-pros-and-cons-of-using-computers-to-teach-students-how-to-write/>
 - <http://marginalrevolution.com/marginalrevolution/2012/04/ahem-4.html>
<http://www.insidehighered.com/news/2012/04/13/large-study-shows-little-difference-between-human-and-robot-essay-graders>
 - <http://www.ohio.com/news/break-news/ua-dean-instrumental-in-automated-grading-study-1.294837>
 - http://www.uakron.edu/im/online-newsroom/news_details.dot?newsId=40920394-9e62-415d-b038-

[15fe2e72a677&pageTitle=Top%20Story%20Headline&crumbTitle=Man%20and%20%20machine:%20Better%20writers,%20better%20grades](#)

- http://blogs.edweek.org/edweek/edtechresearcher/2012/04/grading_automated_essay_scoring_programs-part_iii_classrooms.html
- http://www.cleveland.com/metro/index.ssf/2012/04/computers_as_good_as_humans_in.html
- <http://www.nytimes.com/2012/04/23/education/robo-readers-used-to-grade-test-essays.html>
- <http://www.usatoday.com/news/education/story/2012-04-23/essay-scoring-computer-software/54493662/1>
- http://www.huffingtonpost.com/tom-vander-ark/better-tests-more-writing_b_1450604.html
- **Press Coverage** in Science: In an Editor's Choice column, LightSIDE was singled out as having value for educators, June 2012
- **Press Coverage** on Education Week, feature story about my work on computer supported collaborative learning as part of an article about the role of technology in education, August 2012:
http://www.edweek.org/ew/articles/2012/08/08/37replace_ep.h31.html
- **Press Coverage** in a News Alert on EdNet (<http://www.ednetinsight.com/news-alerts/hellerresults.html>) in an article on Big Data in K-12 education, Nov 2012
- **Press Coverage** on the 2012 Winter School, in The Heart and Soul of Andhra Pradesh, the largest daily newspaper in the state of Andhra Pradesh, web access at www.eenadu.com, December 11 edition, 2012
- Faculty Affiliate of the University of Pittsburgh's Sara Fine Institute (an institute devoted to the study of inter-personal behavior and technology)
- Invited expert reviewer for the Ontario Research Fund (Canada), Ontario Ministry of Research and Innovation

V. EXTERNAL PROFESSIONAL ACTIVITIES

ADVISORY BOARDS

- SIGDIAL Advisory Board member, 2 year term, invited in Summer 2021
- External Advisory Board for our NSF DR-K12 grant related Mapping, Clarifying, and Communicating Key Ideas about Collaborative Learning to STEM Audiences (Jeremy Roschell, PI, Digital Promise) May 2021
- Western Governors University Research Advisory Board (2020-)
- External Advisory Board for our NSF IUSE grant related to training teaching assistants for CS courses (Amy Cook, PI, University of Memphis) March 2021
- Western Governors University Research Advisory Board (2020-)
- Expert Advisor, Learning Sciences Lab in Peking University, Beijing, China, Prof. Junjie Shang
- Advisory Board Member, NSF, Big Data for Small Groups: Learning Analytics and Adaptive Support in Game-based Collaborative Learning (Grant started in 2016, PIs James Lester and Cindy Hmelo-Silver)
- Review Committee Member, Center for Research on Learning and Technology (CRLT)
- Advisory Board Member, Computer-Supported Math Discourse Among Teachers and Students Center, Drexel University, NSF DRK-12 Program (grant started Summer 2011)
- Advisory Board member, NSF/Cyberlearning funded SimBio/MIT project related to automated assessment (2013-)
- Advisory Board Member, NSF/HCC, Modeling and Supporting Creativity During STEM learning activities (2014-)
- Advisory Board Member, Designing for change in teachers' practices – towards implementing explorative mathematics instruction, Spenser Foundation (2014-) LightSIDE Labs Inaugural Research Advisory Board (2014-)
- Steering Committee Member, Educational Discourse, NSF BCC Capacity Building grant (2015)
- Design Advisory Panel member of Pearson's Dialogue for Language Learners (DLL) project, Fall 2015
- Advisory Board Member, NSF funded Project Learning with Automated, Networked Supports (PLANS), Spring 2016

CONFERENCE AND WORKSHOP COMMITTEES

- **Shared Task Co-Organizer:** CODI-CRAC Shared task on Anaphora Resolution in Dialogues, EMNLP 2021
- Workshop Organizer: Technology to advance learning: A Public Engagement Project (<https://alliancelss.com/#publicengagement>)
- Program Committee for SIGCHI 2021, EACL 2021, ISLS Annual Meeting 2021
- Program Committee for Learning Analytics and Knowledge 2020, ACM-SIGCHI 2020, EMNLP 2020, EACL 2020
- Associate Chair for ACM-SIGCHI 2019, Area on Learning and Families
- Senior Program Committee for CSCL 2019

- **Co-organizer** of Dagstuhl Seminar "BOTse: Bots in Software Engineering" to be held from Sunday, November 17 to Friday, November 22, 2019 at Schloss Dagstuhl, Wadern, Germany
- Representative of the International Society of the Learning Sciences on the Inter-Associations Committee of the Association for Smart Learning and Regional Development (ASLERD), SLERD 2018
- **Program Co-Chair** AI in Education 2018, London, Summer 2018
- **Co-Chair** International Conference of the Learning Sciences Doctoral Consortium 2018
- **Program Co-Chair** for Learning with MOOCs IV, Fall 2017
- Senior Program Committee for CSCL 2017, EDM 2017
- Program Committee for LAK 2017, ICALT 2017
- Program Committee for Learning With MOOCs III, Fall 2016
- Program Committee for SIGDIAL 2016
- Program Committee Member for ACM Learning@Scale 2016
- Program Committee for Educational Data Mining 2016
- Program Committee Member for ACL 2016 in the area of Dialogue and Interactive Systems
- Workshop Co-chair for the International Conference of the Learning Sciences (ICLS 2016)
- **Program Co-Chair** of Learning Analytics and Knowledge 2016
- Co-Organizer of Invited Session representing the International Society of the Learning Sciences at the 2015 Biennial Meeting of the European Association for Research on Learning and Instruction
- **Program Co-Chair (Discourse)** SIGDIAL 2015
- Program Committee for Learning@Scale 2015
- **Program Co-Chair** for the EMNLP 2014 Workshop on Modeling Large Scale Social Interaction in Massively Open Online Courses
- **Program Co-Chair** for 5th ACM International Conference on Collaboration Across Boundaries (CABS): Culture, Distance and Technology (Language Technologies Track) 2014
- Senior Program Committee for ICLS 2014
- Program Committee for WWW 2014, EACL 2014 (Session Chair), LAK 2014, ACM-SIGCHI 2014, and ACM Learning at Scale Conference (L@S) 2014, EDM 2014
- Senior Program Committee for AIED 2013
- Advisory Committee for 2nd Workshop on Intelligent Support for Learning in Groups (AIED 2013)
- **Area co-chair** for Discourse, Dialogue, and Pragmatics at EMNLP 2013
- Program committee for LAK 2013, CSCL 2013, EDM 2013, ACL 2013
- Associate Chair for Intelligent User Interfaces 2012
- Program Committee for HLT-NAACL 2012, ITS 2012, ICLS 2012, NAACL Student Research Workshop and Doctoral Consortium 2012, CHI 2012, Ce-Learning 2012, Sigdial 2012, EDM 2012
- Advisory Committee for the Young Researchers Round Table for Spoken Dialogue Systems (YRRSDS'11)
- Program committee for AIED2011, EDM 2011, CSCL 2011, WWW 2011 Doctoral Consortium

- Reviewer Board member for the STELLAR Computer Supported Collaborative Learning Community Alpine Rendez Vous, 2011.
- Review panel member for AERA 2011, Division C Section 11 (Learning & Instruction: Technology Research)
- Demo chair for HLT-NAACL 2010
- Panelist for HLT-NAACL 2010 Student Research Workshop
- Co-Chair for ITS 2010 Young Researcher's Track/ Doctoral Consortium
- Senior program committee for special issue of IEEE Transactions on Learning Technologies related to Intelligent and Innovative Support for CSCL 2010
- Treasurer for International Conference on Intercultural Collaboration (ICIC) 2010
- Program committee for EDM 2010, FLAIRS 2010, ITS 2010 (Winner of ITS Outstanding Reviewer Award, 2010)
- Panel reviewer for the American Association for Educational Research Division C Section 7 (Technology Research), 2010
- Faculty Advisor for the HLT-NAACL Student Research Workshop (doctoral consortium) 2009, in collaboration with Anoop Sarkar at Simon Fraser University
- Review Committee for ACL 2009, IUI 2009, CHI 2009, HRI 2009, IWIC 2009, CSCL 2009, AIED 2009, FLAIRS 2009
- Program Committee, ITS 2008, FLAIRS 2008, ICCE 2008, LREC 2008
- Program Committee, Educational Data Mining Conference, 2008
- Treasurer, International Workshop on Intercultural Collaboration (IWIC) 2008
- Senior Program Committee Member, AI in Education (AIED) 2007
 - Tutorial Co-Chair, overseeing tutorials with Roger Azevedo, AIED 2007
 - Mentor for AIED 2007 Young Researcher's Track
- Review Committee for Computer Supported Collaborative Learning (CSCL) 2007
- Review Committee for AAAI 2007
- Review Committee for Human Robot Interaction 2006
- Program Committee for FLAIRS 2006
- Program Committee for Intelligent Tutoring Systems (ITS) 2006
- Program Committee for AAAI 2006
- Scientific Committee for LREC 2006
- Program Committee for AIED 2005
- Program Committee for the Association for Computational Linguistics (ACL) 2005 Workshop on Educational Applications of NLP
- Program Committee for the ITS 2004 workshop on Tutorial Dialogue
- Program Committee for ScaNaLU: Workshop on Scalable Natural Language Understanding technology, 2004
- Co-Chair for AI in Education 2003 workshop on Tutorial Dialogue Systems: With A View Towards the Classroom
- Organizing Committee for HLT-NAACL 2003 workshop on Building Educational Applications Using Natural Language Processing
- Co-Chair for ITS Workshop on Empirical Methods for Tutorial Dialogue Systems, 2002
- Organizing Committee member for AIED 2001 workshop on Tutorial Dialogue Systems

- Co-Chair for AAAI Fall Symposium on Building Tutorial Dialogue Systems, 2000
- Thematic Session Co-Chair, 37th Annual Meeting of the Association for Computational Linguistics, 1999.
- Review Committee member, European Chapter of the Association for Computational Linguistics, 1999.
- Review Committee member, Student Session of the 35th Annual Meeting of the Association for Computational Linguistics, 1997.

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

- The International Alliance for Learning in a Digital Era
 - **Founding Chair 2017-2018**
- The International Society of the Learning Sciences
 - **Inaugural Fellow (2017-Present)**
 - **President Elect (2014), President (2015), Past President (2016)**
 - **Elected Member of ISLS Board of Directors, 2013-2019**
 - **Elected Co-Chair of the CSCL Committee**, which is the governing board of directors for the CSCL community, 2013-2016
 - **Secretary-Treasurer** (and *ex officio* member of the Board of Directors) 2008-2014
 - **Secretary-Treasurer of the CSCL community** (Summer of 2010 – Summer of 2014)
 - Awarded a “medal of honor for service” at the 2010 ISLS Board Retreat
 - Served as committee member of the Web Publicity committee 2007-2010 (formally served as co-chair 2008-2009)
- Association for Computing Machinery (ACM)
 - ACM Learning @ Scale Steering Committee member 2014-2017
- The IEEE (Member since 2016, Senior Member since April 2018)
- The European Association for Research on Learning and Instruction (EARLI)
- The Association for Computational Linguistics (52feab82597c)
- The International Artificial Intelligence in Education Society
 - **Elected Executive Board Member**, Fall 2013-
- Charter member of the International Educational Data Mining Society

EDITORIAL BOARD MEMBERSHIPS

- Editorial Board Member (Associate Editor 2011-2016, Executive Editor 2016-2019, Co-Editor-in-Chief January 2020- January 2024) of the International Journal of Computer Supported Collaborative Learning, 2010-
- Founding Editorial Board Member for the Journal of Dialogue Systems 2006-
 - Became the Journal of Discourse and Dialogue Research in 2008
 - Became the Journal of Dialogue and Discourse in 2009
- Editorial Board Member of the Journal of Educational Data Mining, 2008-
- Editorial Board (Associate Editor) of the Journal of Human-Computer Studies, 2010-2012.

- Editorial Board Member (Associate Editor) IEEE Transactions on Learning Technologies (invited as an NLP expert), 2013-
 - Also Guest Editor of IEEE TLT Special Issue on Learning Analytics
- Editorial Board Member of the International Journal of Artificial Intelligence in Education, 2013-

OTHER

- Guest co-editor of a special issue of the Journal of Learning Analytics entitled: Convergence of Communities for Grounding, Implementation and Validation
- Co-Organizer of the Collaborative Learning and Web 2.0 workshop at the International Conference of the Learning Sciences, June 2016, Singapore
- Co-Organizer of the Mid-Career Workshop at Computer Supported Collaborative Learning 2015 (CSCL '15)
- Co-Organizer of Early Career Workshop at Computer Supported Collaborative Learning 2013 (CSCL '13)
- Co-Organizer of CSCL 2011 Tutorial on Leveraging tool support for the analysis of computer-mediated activities.
- (Lead) Co-organizer of the STELLAR Computer Supported Collaborative Learning Community Alpine Rendez-Vous workshop on Leveraging Researcher Multivocality for Insights on Collaborative Learning
- Co-organized CSCL 2011 tutorial “Leveraging Tool Support for Computer Mediated Activities” with Gregory Dyke.
- Hosted Dr. Vasudeva Varma for his short sabbatical at the Language Technologies Institute in Spring 2010
- Co-Organizer of ITS 2010 Workshop on Opportunities for intelligent and adaptive behavior in collaborative learning systems
- Co-Organizer for ICLS Workshop on Productive Multivocality in the Analysis of Collaborative Learning, June 2010
- Co-organizer for Kaleidoscope CSCL Rendez-Vous Workshop on Pivotal Moments in Collaboration, December 2009
- Co-organizer for CSCL 2009 Workshop: Common Objects for Productive Multivocality in Analysis
- Co-Organizer for the ICLS 2008 Workshop on Scaling Up Analysis of Interaction in Networked Learning Environments
- Co-Organizer for ICLS 2006 Workshop on Dynamic Support for CSCL: Conceptual Approaches and Technologies for Flexible Support of Collaborative Knowledge Construction
- Invited Expert External Reviewer for internal Call for Learning Center Project Proposals at Swiss Federal Institute of Technology in Lausanne (EPFL), Summer 2005
- Review Committee for the Journal of Natural Language Engineering Special Issue on Educational Applications
- Panel Organizer for ITS 2004 panel “Towards Encouraging a Learning Orientation Above a Performance Orientation”
- Has reviewed for the HCI Journal, the Information Retrieval Journal, the Journal of Natural Language Engineering, the Computational Linguistics journal, the Journal of Artificial Intelligence in Medicine, the Journal of AI Research, User Modeling and User-Adapted Interaction: The Journal of

Personalization Research, the Discourse Processes Journal, and the Iranian
Journal of Electrical and Computer Engineering

I. CONTRACT AND GRANT SUPPORT

CURRENT

Title: Narrative Modeling with StoryQ: Integrating Mathematics, Language Arts, and Computing to Create Pathways to Artificial Intelligence Careers

PI: Jie Chao at Concord Consortium (Rosé Co-PI)

Agency: NSF

Grant Number: DRL 1949110

Duration: 6/1/2020-5/31/2023

Amount: \$1,496,892

Support:

Title: SOLID: Injecting Learning into Work: Enhancing Career Advancement through Transformation of Professional Development in Technical Career Paths

PI: Carolyn Rosé

Agency: NSF

Grant Number: IIS 1917955

Duration: 6/30/2019-5/31/2022

Amount: 750K

Support:

Title: Simulating Challenging Social Situations with Intelligent Agents to Support Novice Computer Science Teachers in Self- and Social- Regulation Strategies

PI: Justin Reich at MIT (Rosé Co-PI)

Agency: NSF

Grant Number: IIS 1917668

Duration: 01/10/2019-6/30/2021

Amount: 750K

Support:

Title: Automating Analysis of Doctor-Patient Interactions (informal title)

PI: Carolyn Rosé (along with Jodi Forlizzi and John Zimmerman)

Agency: UPMC (Center for Machine Learning and Health)

Grant Number:

Duration: 1/1/2019-12/31/2019

Amount: 100K

Support:

Title: Personalizing Analysis of Customer Satisfaction from Social Media

PI: Carolyn Rosé

Agency: Dow Chemical

Grant Number:

Duration: 9/1/2018-8/31/2021

Amount: 300K (support for a student for 3 years)
Support:

Title: Collaborative Research: Human-Technology Partnership Supporting Career Path Exploration and Navigation

PI: Carolyn Rosé

Agency: NSF

Grant Number: IIS 1822831

Duration: 9/1/2018-8/31/2021

Amount: 550K for CMU (lead) + 200K for WGU in a collaborative proposal

Support:

Title: CORA: Cardiac Outcomes Risk Assessment

PI: Carolyn Rosé (in collaboration with James Antaki at Cornell)

Agency: NIH

Grant Number: 5R01HL122639-03

Duration: 1/1/2018 – 12/31/18

Amount: \$189,437

Support:

Title: EAGER: Synthesizing Notes from Electronic Health Records to Make Them Actionable for Heart Failure Patients

PI: Jodi Forlizzi

Agency: NSF

Grant Number: 1723454

Duration: 7/15/2017 – 5/31/2019

Amount: 300K

Support: .5 month

Title: Google Faculty Grant: Collaborative Physics: Working Towards a Google Study Buddy Network

PI: Carolyn Rosé

Agency: NSF

Grant Number:

Duration: 2/1/2018-1/31/2019

Amount: 85K

Support: only student support

Title: STEM+C: Study of a Cyber-enabled Social Computing Framework for Improving Practice in Online Computing Communities

PI: Carolyn P Rosé

Agency: National Science Foundation

Grant Number: STEM+C (submitted to BigData) IIS 1546393

Duration: 01/01/16 – 12/31/19

Amount: 1.6M (CMU portion, UT Arlington got an additional 400K)

Support:

Title: Automated Assessment of Student Writing
PI: Carolyn Rosé
Agency: Schmidt Foundation
Grant Number:
Duration: 01/01/2018 – 1/1/2020
Amount: 200K
Support: only student/postdoc support

Title: CIF21 DIBBs: Building a Scalable Infrastructure for Data-Driven Discovery and Innovation in Education
PI: Kenneth Koedinger
Agency: National Science Foundation
Grant Number: DATANET 1443068
National Science Foundation award (ACI-1443068)
Duration: 01/01/15 – 12/31/19
Amount: \$4,830,819.00
Support:

PAST

Title: DIP: Connecting Idea Threads across Communities for Sustained Knowledge Building
PI: Carolyn Rosé (of CMU subcontract to SUNY Albany)
Agency: National Science Foundation
Grant Number: NSF Cyberlearning 1441479
Duration: 9/1/2014-8/31/2018
Amount: 110K
Support: only student support

Title: Next Generation Courseware
PI: Carolyn Rosé (subcontract from Smart Sparrow and UT Arlington)
Agency: Gates Foundation
Grant Number:
Duration: 10/1/2014 to 9/31/2017
Amount: 80K (subcontract on a 4.5 million dollar development grant where 350K total was earmarked for research)
Support: 1.33 month (total over 3 years)

Title: Data Fusion in Networked Time Series Data
PI: Carolyn Rosé
Agency: Navy Research Lab
Grant Number:
Duration: 2/1/2015 to 5/31/2017
Amount: 250K
Support: 1 month

Title: InSpark: Digital Learning Research Network (dLRN)

PI: George Siemens at UT Arlington (Carolyn Rosé is PI on subcontract to CMU)
Agency: Gates Foundation
Grant Number:
Duration: 11/1/2015 to 11/30/2017
Amount: 150K (subcontract on a larger grant)
Support:

Title: Toward Adaptive Interactive Learning Experiences in MOOCs
PI: Justine Cassell
Agency: Google
Grant Number:
Duration: 5/1/2014 to 5/1/2016
Amount: 600K
Support: 80K student support per year (3 years total)

Title: HCC: Medium: Personalized Information Access for Online Deliberation Systems
PI: James Herbsleb
Agency: National Science Foundation
Grant Number: IIS-1302522
Duration: 8/1/2013 to 7/31/2017
Amount: \$1,122,000
Support: 1 month

Title: EXP: Collaborative Research: Fostering Ecologies of Online Learners through Technology Augmented Human Facilitation
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: IIS-1320064
Duration: 9/15/2013 to 2/29/2016
Amount: \$278,861
Support: 0.5 month

Title: Using textual notes as light supervision for time series models of sensor data for medical alarms
PI: Carolyn Rosé
Agency: Navy Research Lab
Grant Number:
Duration: 5/1/2014 to 12/1/2014
Amount: 50K
Support: 1 month

Title: Extracting Social Meaning from Linguistic Structures in African Languages
PI: Lori Levin
Agency: Howard University / ARL
Grant Number: 000665610000034354; W911NF-11-2-0042
Duration: 6/10/2011 to 6/9/2016
Amount: \$710,602
Support: 1 month

Title: Pittsburgh Sciences of Learning Center Renewal

PI: Kenneth Koedinger
Agency: National Science Foundation
Grant Number: OMA-0836012
Duration: 2/15/2010 to 1/31/2015
Amount: \$925,000
Support: 0.5 month

Title: CSCL 2013: Learning across Levels of Space, Time, and Scale Doctoral Consortium and Early Career Workshops
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: IIS-1331135
Duration: 6/1/2013 to 5/31/2014
Amount: \$40,000

Title: Towards Optimization of Macrocognitive Processes: Automating Analysis of the Emergence of Leadership in Ad Hoc Teams
PI: Carolyn P. Rosé
Agency: Office of Naval Research
Grant Number: N00014-11-1-0221
Duration: 1/1/2011 to 12/31/2013
Amount: \$909,029
Support: 2 months

Title: Enabling Resilient Massive Scale Open Online Learning Communities through Models of Social Emergence
PI: Carolyn P. Rosé
Agency: Athabasca University Gates Foundation
Duration: 9/1/2013 to 3/31/2014
Amount: \$25,000
Support: 0.5 month

Title: Collaborative Research: Conversational Dynamics in Online Support Groups
PI: Robert Kraut
Agency: National Science Foundation
Grant Number: IIS-0968485
Duration: 9/15/2010 to 8/31/2014
Amount: \$635,444
Support: 0.25 month

Title: Collaborative Research: Networked Collaboration Modules for Integrating Mathematics and Engineering Education Using Intelligent Agents
PI: Jack Beuth
Agency: National Science Foundation
Grant Number: DUE-1022958
Duration: 9/1/2010 to 8/31/2013
Amount: \$264,998
Support: 0.75 month

Title: ICES: Group Cognition: Learning in Engineering Project Terms

PI: Susan Finger & Daniel Siewiorek
Agency: National Science Foundation
Grant Number: EEC-0935127
Duration: 9/1/2009 to 8/31/2013
Amount: \$399,928
Support: 0.5 month

Title: ENGAGE: Learning to Solve Problems, Solving Problems to Learn
PI: Vincent Alevin
Agency: DARPA
Grant Number: N0001412C0284
Duration: 6/15/2011 to 7/31/2013
Amount: \$1,897,106
Support: 1 month

Title: Dynamic Support for Virtual Math Teams
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: DRL-0835426
Duration: 8/1/2009 to 7/31/2013
Amount: \$306,132
Support: 0.25 month

Title: HCC-Medium: Collaborative Research: Dynamic Support for Computer-Mediated Intercultural Communication
PI: Carolyn P. Rosé
Agency: Cornell University / National Science Foundation
Grant Number: 573848866; IIS-0803482
Duration: 12/15/2008 to 11/30/2012
Amount: \$676,043
Support: 1 month

Title: Theories and Models of Group Cognition
PI: Carolyn P. Rosé
Agency: Drexel University / Office of Naval Research
Grant Number: 204092-3629; N00014-10-1-0277
Duration: 11/12/2009 to 9/30/2012
Amount: \$242,500
Support: 2 months

Title: SLC Center: Pittsburgh Science of Learning Center: Studying Robust Learning with Learning Experiments in Real Classrooms
PI: Kenneth Koedinger
Agency: National Science Foundation
Grant Number: SBE-0836012
Duration: 10/1/2004 to 9/30/2012
Amount: \$321,000
Support: 2 months

Title: Collaborative Research: Agent-Monitored Tutorials to Enable On-Line Collaborative Learning in Computer-Aided Design and Analysis

PI: Jack Beuth
Agency: National Science Foundation
Grant Number: EEC-0935145
Duration: 9/1/2009 to 8/31/2012
Amount: \$349,968
Support: 0.5 month

Title: ADEPT: Assessing Design Engineering Project Classes with Multi-Disciplinary Teams
PI: Daniel Siewiorek
Agency: National Science Foundation
Grant Number: EEC-0648487
Duration: 6/1/2007 to 5/31/2012
Amount: \$579,205
Support: 1 month

Title: TFLex: Expanding the Accessibility and Impact of Language Technologies for Supporting Education
PI: Carolyn P. Rosé
Agency: Office of Naval Research
Grant Number: N00014-08-1-1033
Duration: 5/19/2008 to 11/30/2011
Amount: \$111,997
Support: 2 months

Title: First-Year Computer-Aided Engineering and Outreach Using Agent-Monitored, Collaborative Tutorials
PI: Jack Beuth
Agency: National Science Foundation
Grant Number: DUE-0837661
Duration: 3/1/2009 to 2/28/2011
Amount: \$149,854

Title: Student Support for the Tenth International Conference on Intelligent Tutoring Systems
PI: Jack Mostow
Agency: National Science Foundation
Grant Number: IIS-1014092
Duration: 2/1/2010 to 1/31/2011
Amount: \$25,000

Title: IERI: Learning-Oriented Dialogs in Cognitive Tutors: Toward a Scalable Solution to Performance Orientation
PI: Vincent Aleven
Agency: National Science Foundation
Grant Number: DRL-0437794
Duration: 10/1/2004 to 9/30/2010
Amount: \$1,270,000
Support: 2.5 months

Title: Student Research Workshop in Computational Linguistics at the North American Association for Computational Linguistics and Human Language Technologies 2009 Conference
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: IIS-0907847
Duration: 5/1/2009 to 4/30/2010
Amount: \$20,200

Title: CycleTalk: Further Exploring the Pedagogical Value of Tutorial Dialogue in Simulation Based Learning
PI: Carolyn P. Rosé
Agency: Office of Naval Research
Grant Number: N00014-07-1-0017
Duration: 10/1/2006 to 9/30/2009
Amount: \$360,241
Support: 2 months

Title: A Shared Resource for Robust Semantic Interpretation for Both Linguists and Non-Linguists
PI: Carolyn P. Rosé
Agency: Office of Naval Research
Grant Number: N00014-05-1-0043
Duration: 11/8/2004 to 3/1/2009
Amount: \$300,721
Support: 1.8 months

Title: ITR: Tutoring Scientific Explanations via Natural Language Dialogue
PI: Kurt Van Lehn
Agency: National Science Foundation
Grant Number: IIS-0325054
Duration: 1/1/2004 to 1/31/2009
Amount: \$2,500,000
Support: 0.8 month

Title: Exploring Adaptive Support for Virtual Math Teams
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: DRL-0723580
Duration: 8/1/2007 to 7/31/2008
Amount: \$49,999
Support: 0.5 month

Title: Verilogue Gift
PI: Carolyn P. Rosé
Agency: Verilogue, Inc.
Grant Number:
Duration: 1/1/2008 to 6/30/2008
Amount: \$35,000

Title: Worth Publishers Gift

PI: Carolyn P. Rosé
Agency: Worth Publishers
Grant Number:
Duration: 12/1/2007 to 5/31/2008
Amount: \$40,000

Title: Facilitating Accountability for Standards-Based Math at All Levels
PI: Kenneth Koedinger
Agency: GE Foundation
Grant Number:
Duration: 1/1/2005 to 12/31/2007
Amount: \$356,129
Support: 2 months

Title: CycleTalk: A Tutorial Dialogue System that Supports Negotiation in a Design Context
PI: Carolyn P. Rosé
Agency: Office of Naval Research
Grant Number: N00014-04-1-0107
Duration: 11/17/2003 to 9/30/2006
Amount: \$453,489
Support: 1.8 months

Title: Calculategy: Exploring the Impact of Tutorial Dialogue Strategy in Shaping Student Behavior in Effective Tutorial Dialogue for Calculus
PI: Carolyn P. Rosé
Agency: National Science Foundation
Grant Number: DRL-0411483
Duration: 2/1/2004 to 1/31/2006
Amount: \$96,627
Support: 1 month

Title: Developing Usable Mixed-Initiative Planning Systems
PI: Robert Kraut
Agency: National Aeronautics & Space Administration
Grant Number: NNA04CK15A
Duration: 6/1/2004 to 5/31/2005
Amount: \$93,457

VI. EVIDENCE OF TEACHING PERFORMANCE

COURSES TAUGHT AT CARNEGIE MELLON

- **11-719 Computational Models of Discourse Analysis**
- **11-899 Summarization and Personal Information Management**
 - **Name changed to Summarization of Documents and Interaction in Fall 2014**
- **11-780 Research Design and Writing**
- **11-718 Conversational Interfaces**
- **11-791 Software Engineering for Information Systems (Co-instructor)**
- **11-344 Machine Learning in Practice (11-633,05-834, 05-434)**
- **05-899 Special Topics: Computer Supported Collaborative Learning**
- **11-722 Grammar Formalisms (Co-instructor)**
- **85-748 Research Methods for the Learning Sciences (Co-instructor)**
- **11-725 Meaning in Language (and Meaning in Language self-paced lab)**
- **11-346 Text Mining in Practice (CMU-Q)**

VII. CONTRIBUTIONS TO EDUCATION

CURRICULUM DESIGN

- **11-718 Conversational Interfaces**
- **11-344 Machine Learning in Practice (05-834, 05-434)**
 - **Redesigned for online instruction Summer/Fall 2020**
- **11-346 Text Mining in Practice (offered as a Micro course at CMU-Q in Spring 2020)**
- **05-899 Special Topics: Computer Supported Collaborative Learning**
- **11-899 Summarization and Personal Information Management**
 - **Renamed Summarization of Documents and Interaction in Fall 2014**
- **11-780 Research Design and Writing**
- **11-719 Computational Models of Discourse Analysis**
- **11-725 Meaning in Language**
(Computational Track, newly designed in Fall 2009)
- **99-101 Computing at Carnegie Mellon**
(Information Literacy Unit, offered to all CMU Freshman beginning in Fall 2010)
- **85-748 Research Methods for the Learning Sciences**
(Co-developer of unit on Video and Verbal Protocol Analysis, also co-developed OLI version of that unit in Summer 2011)
- **11-346 Text Mining in Practice (CMU-Q)**

OTHER

- Contributed analysis, design recommendations, or interventions to the following MOOCs: Coursera: Accountable Talk Conversation that Works (University of Pittsburgh, Fall 2013), DALMOOC (University of Texas at Arlington, Fall 2014), edX: Big Data in Education (Columbia, Fall 2015), Medicinal Chemistry (Davidson College, Fall 2015, Spring 2016), edX: The Rise of the Superhero (The Smithsonian Institute, Fall 2015, Spring 2016)
- Co-Instructor of an EdX MOOC on Data, Analytics, and Learning
- Invited contributor of a unit on “Learning Analytics and Educational Data Mining of Discourse Data” for inclusion in a collection of resources disseminated through the ISLS Network of Academic Programs in the Learning Sciences (NAPLES), to be delivered as an online short course
- In collaboration with the Eberly Center for Teaching Excellence, ran a workshop on using CSCL technologies for teaching at CMU, October 2012
- Ran a 2 day text mining workshop at Howard University, co-sponsored by NSF and ARO/ARL, March 12th and 13th, 2012
- Was invited to “Apple Pie with Alpha Chi”, an Alpha Pi Omega Nu event that honors “professors who have made a profound impact on our academic lives”
- Working with the HCII Learning Science faculty on the development of a new professional master’s program in Learning Sciences and Technology

- Organized and ran a 2 week Winter School at IIIT in December of 2009 (in Hyderabad), 2010 (in Hyderabad), and 2011 (in Delhi) as part of an effort to develop an internship program and build a LearnLab in India, as an international extension of the Pittsburgh Science of Learning Center, secured financial sponsorship from Microsoft Research India and the Pittsburgh Science of Learning Center (<http://www.cs.cmu.edu/~cprose/winterschool/index.html>, <http://www.cs.cmu.edu/~cprose/winterschool2010/index.html>). A steadily increasing number of students have applied from year to year (100 in year 1, 200 in year 2, 350 in year 3). 9 interns came to CMU for the summer of 2010, and 9 were accepted for 2011, but a couple could not get visas. The program was covered in The Hindu in Summer 2011 <http://www.thehindu.com/todays-paper/tp-features/tp-nxg/article2394460.ece> and Edu Tech magazine in April 2012: http://issuu.com/eduindia/docs/edu_issue-03_vol-04_april_2012
- Worked to produce an on-line version of the PSLC summerschool, including video lectures and comprehensive documentation for PSLC course development tools (<http://www.cs.cmu.edu/~cprose/Summer09.html>)
- Worked with Eric Nyberg and Anatole Gershman on developing a distance education program at LTI
- Worked with Eric Nyberg on the development of a series of professional development minis or full courses for LTI focused on Teaching, Writing, and Experimental Design/Data Analysis. The first of these is currently offered each fall as a 12 unit course entitled Research Design and Writing
- Designed a unit on user research for Eric Nyberg's Software Engineering for Information Systems course.
- Helped lead a research workshop on machine learning at OurCS in Fall, 2007, run through Women in CS with Bob Kraut and Moira Burke (repeated in Spring of 2011, Fall 2015)
- Gave an invited talk on Project Management at the iSLC conference, Spring 2008
- Organizer of AIED 2007 tutorial "TagHelper Tools: Tools for Supporting the Analysis of Verbal Data"
- Organized and ran a 2 week Math Camp for under-prepared middle school students in Summer 2006 with Ariane Watson at Propel Charter School in Homestead as part of a research project on supporting math communication. As a follow up, organized an afterschool program at the same school for Spring 2007.
- Invited instructor at the PSLC/ITS summer school Ken Koedinger and Vincent Alevan organized in Summer 2004 and again in 2006, 2007, 2008, 2009, 2010, 2011, 2012, and so on
- Offered a full-day tutorial on TagHelper tools at CMU on June 19, 2007. 15 people came for the full day, including several from out of state, in addition to 12 more participants from the PSLC/ITS summer school who participated either for part of the time or the whole time, depending on their area of concentration within the summer school. Another one was conducted in 2008 resulting in a number of ongoing collaborations.

VIII. STUDENT ADVISING

COMPLETED PHD STUDENTS

Rohit Kumar (Researcher at Spotify, formerly Researcher at BBN)

- Year Entered: 2005
- Thesis Title: *Conversational Agents in Multi-Party Interactive Situations*, Defended Fall 2011

Gahgene Gweon (Assistant Professor at Seoul National University, formerly Assistant Professor at KAIST)

- Year Entered: 2005
- Thesis Title: *Assessment and Support of the Idea Co-Construction Process in Face-to-Face Engineering Project Groups*, Defended Spring 2012

Guang Xiang (Co-advised with Jason Hong, CEO of startup in China, formerly Research Engineer at Twitter)

- Year Entered: 2007
- Thesis Title: *Fighting Phish in all Frontiers: A Holistic Anti-phishing Solution*, Defended Spring 2013

Mahesh Joshi (Co-advised with William Cohen starting in Fall 2010, now a Research Engineer at E-Bay)

- Year Entered: 2006
- Thesis Title: *Generalizing Classification Models Across Subpopulations in Data*, due to defend in Spring 2013

Iris Howley (Assistant Professor at Williams College, formerly Postdoc at Stanford University)

- Year Entered: 2008, PIER Fellowship Awardee
- Area of Study: Motivation/Computer Supported Collaborative Learning

Miaomiao Wen (Data Scientist, Coursera)

- Year Entered: 2011
- Area of Study: Computational Sociolinguistics
- Graduated August 2016

Hye-Ju Jang (Post-Doc at University of British Columbia)

- Year Entered PhD program (formerly MLT advised by Jack Mostow): 2012
- Area of Study: Discourse Analysis. Representation of Stylistic Choices.
- Graduated Fall 2017

Xu Wang (Assistant Professor at University of Michigan)

- Year Entered PhD program 2014
- Area of Study: Learner Sourcing
- Graduated Fall 2020

PHD STUDENTS ON LEAVE

David Adamson (ABS, co-founder of LightSIDE Labs, Engineer at TurnItIn)

- Year Entered: 2010 (began working with me in Summer 2011)
- Area of Study: Dialogue Agents and Discourse Analysis

CURRENT PHD STUDENTS

Sreecharan Sankaranarayanan (LTI)

- Year Entered PhD program 2015
- Area of Study: Learning in MOOCs

Qinlan Shen (LTI)

- Year Entered PhD program 2015
- Presidential Fellowship/NSF Fellowship/ D&L Gates Fellowship
- Area of Study: Social Media Analysis

Michael Miller Yoder (LTI)

- Year Entered: 2015
- Area of Study: Multilingual Discourse
- NSF Fellowship

James Fiacco (LTI)

- Year Entered: 2016
- Area of Study: Social Media and Deep Learning

Aakanksha Naik (LTI)

- Year Entered: 2016
- Area of Study: Social Media/Medical Applications

Marisa (Luke) Breitfeller (LTI)

- Year Entered: 2017
- Area of Study: Social Media and Health

Ritam Dutt (LTI)

- Year Entered: 2019
- Area of Study: Modeling Social Aspects of Communication

CURRENT MASTER OF LANGUAGE TECHNOLOGIES STUDENTS

Sopan Khosla

- Year Entered: 2019
- Area of Study: Modeling Social Aspects of Communication

Meredith Riggs

- Year Entered: 2019
- Area of Study: Discourse for Learning

Yansen Wang

- Year Entered: 2019
- Area of Study: Dialogue Agents/ Collaboration in Physical Spaces

Joseph Masom

- Year Entered: 2020
- Area of Study: Modeling Language from a Social Perspective

Justin Lovelace

- Year Entered: 2020
- Area of Study: Medical NLP

M.S. OR PH.D. THESIS COMMITTEE SERVICE**Darren Gergle (PhD)**

- *The Value of Shared Visual Information for Task Oriented Collaboration*, defended Spring 2006

Rashmi Gangadharaiah (MLT)

- *Pattern Induction and Spectral Clustering for EBM*, defended Spring 2007

Ananlada Chotimongkul (PhD)

- *Learning the Structure of Task-Oriented Conversations from the Corpus of In-Domain Dialogs*, defended Spring 2008

Alicia Tribble (PhD)

- *Textual Inference for Retrieving Labeled Object Descriptions*, defended Spring 2010

Brian Langner (PhD)

- *Data-driven Natural Language Generation: Making Machines Talk Like Humans Using Natural Corpora*, defended January 2010

Satajeev Bannerjee (PhD)

- *Extracting and Using Implicit Supervision to Automatically Improve Meeting-Understanding*, defended September 2010.

Erin Walker (PhD)

- *Automated Adaptive Support for Peer Tutoring*, defended Summer 2010

Ian McCulloh (PhD)

- *Detecting Changes in a Dynamic Social Network*, defended Spring 2009

Sharad Oberoi (PhD)

- *DesignWebs to Support Engineering Design Student Projects*, defended December 2011

Jana Diesner (PhD)

- *Uncovering and Managing the Impact of Methodological Choices for the Computational Construction of Socio-Technical Networks from Texts*, defended Spring 2012

Shilpa Arora (PhD)

- *Opinion Mining and Interactive Annotation Learning*, defended August 2012

Namtarn Chaipah (PhD)

- *PURRS: A Personal Email Organization System using User Response Behaviors and Social Networks*, defended Fall 2011

Yajuan Wang (PhD)

- *Decision Guidance System for Personalized Mechanical Circulatory Assistance*, defended Dec 2011

Ruth Wilie (PhD)

- *ESL –Examining the Generality of Self-Explanation to Second Language Grammar Learning*, defended in August 2011

Xiaoqian Jiang (PhD)

- *Adaptive Learning in Temporal Structural Correlated Environments*, defended Fall 2010

Eric Daimler (PhD)

- *On the persistence of pragmatic relationships with quantitative data using Classification Trees and Regression Trees*, proposed Spring 2012, defended Spring 2013, completed Fall 2013

Natasha Loghmanpour (PhD)

- *Designing Clinical Decision Support Tools for End-Stage Heart Failure*
- Completed 2015

Robert Fisher (PhD)

- Context Awareness and Personalization in Dialogue Planning
- Defended in April 2016

Ben Towne (PhD)

- Design considerations for online deliberation systems
- Defended Fall 2016

Brandon Taylor (PhD)

- Automated transcription of ASL
- Defended in 2018

Tong Zhang (PhD)

- Chemical Engineering
- Text analytics and machine learning techniques for chemical process data management
- Defended Spring 2019

Qian Yang (PhD)

- HCII
- Design and ML
- Defended Spring 2020

Youngjoo Son (PhD)

- Architecture

Kiwon Haan (PhD)

- Tepper

Sara Kingsley (PhD)

- HCII

OTHER

- **Heinz School LARK program, PhD students from Singapore Management University advised**
 - Ying Ding (2014/2015)
- **Professional Master's Students Advised**
 - METALS Program: Yujun Song (2013/2014), Martina Pavelko (2013/2014), Danny Koh (Fall 2014), Chien-Yu Chang (2014/2015), David Hwang (2014/2015), Shaileja Relwani (2015/2016), Junyu Huang (2016/2017), Nick Lewis (2016/2017), Tianmi Fang (2017/2018), Srinivasa Teja Talluri (2017/2018), Kexin Yang (2018/2019), Duoduo Zhang (2018/2019), Kim Larson (2018/2019), Chuyao (Chelsea) Hua (2019/2020), Yue (Carol) Jiang(2019/2020), Shiyang (Sabrina) Lyu(2019/2020), Guodong Zhao (2019/2020), Daniel de Angula (2020/2021)
 - Master's of Intelligent Information Systems: Pulkit Bhuwalk (2013/2014), Jinsub Hong (2014/2015), Bowen Zhu (2014/2015), Zhengyang Ruan (2014/2015), Haitian Gong (2015-2016), Anusha Bagalkotkar (2016/2017), Shivani Poddar (2016/2017, co-advised with Alan Black), Arpita Reddy (Spring 2017), Alexander Coda

(2017/2018), Ipsita Prakash (2017/2018), Anusha Kamath (2017/2018), Arvind Srikantan (2017/2018), Srividya Potharaju (2017/2018), Hariharan Muralidharan (2018/2019), Huiming Jin (2018/2019), Shefali Garg (2018/2019), Prashant Gupta (2018/2019), Ethan Xuanyue Yang (2018/2019), Yingqi Zhou (2018/2019), Feng-Guang Su (2020/2021)

- **Undergraduate Research through SRC-URO Program**
 - Laura Brown, discourse analysis and dialogue agents, Spring 2012-present
 - Margaret Schervish worked on sociolinguistics through speech datamining, Spring 2011-Spring 2012
- **Undergraduate Research through DRU Program (Distributed Research for Undergrads, sponsored through Texas A&M)**
 - Kristine Johnson from Wesleyan University did an internship here related to analysis of code-switching in social media in Summer 2011 (co-advised with Lori Levin)
 - Laura Willson from Barnard College did an internship here related to analysis of code-switching in social media in Summer 2011 (co-advised with Lori Levin)
- **Undergraduate Theses/Senior Projects Supervised**
 - Benjamin Klixbull (Tepper) working on opinion mining from a marketing standpoint, co-advised with Kinshuk Jerath, August 2009 – May 2010
 - Cary Yang (HCII) (Co-advised with Kayvon Fatahalian), supporting threaded discussions in online learning
- **LTI Minor Project Advising**
 - Aditya Mukherji, working on an application related to reviewing local businesses, January 2011-May 2011
 - Chandrakumari Suvarna, computational modeling of student writing to trigger feedback, January 2019-May 2019
- **Post Docs Supervised**
 - Hua Ai, working on dialogue systems and CSCL, October 2009 – September 2010
 - Now a research scientist at Georgia Tech: <http://www.cc.gatech.edu/~hai7/>
 - Gregory Dyke, working on analysis of CSCL data, November 2010 – May 2012
 - Now a Post-doc at Institut Français de l'Education
 - Seza Drugoz, visiting post-doc at LTI from Tilburg University, Tilburg School of Humanities, Spring/Fall 2013, working on social interpretation of code switching
 - Einat Metzuyanin, visiting post-doc at LRDC (Fall 2013-Summer 2015) co-advised with Lauren Resnick from The Technion, Haifa, Israel, working on automated analysis of classroom discourse

- Oliver Ferschke, working on large scale deployment of language technologies in MOOCs, Fall 2014-Fall 2016 (Now a research engineer at M*Modal)
- Shiyang Jiang, Summer 2018-Summer 2019 (Now an Assistant Professor at NC State)
- Lisa Carey-Lohmueller, Fall 2017-Fall 2019 (Now a product manager at M*Modal)
- Shikhar Vashishth, Feb 2020-Jan 2021 (Assistant Professor)

- **Students from Abroad Hosted and/or Advised Remotely**
 - Christof Wecker (PhD) from Frank Fischer's group at Ludwig-Maximilians Universitat in Munich visited my group for 6 weeks in Spring 2007 to participate in my CSCL course and learn how to use TagHelper tools
 - Vikram Chatterji (undergraduate) did an internship with me in Summer 2009, working on infrastructure for LearnLab India, and worked with me in collaboration with Dr. Pradeep Yammiyavar from the Design department at IIT Guwahati on his B-tech project related to modeling search behavior and personalized support for information seeking. He will start as an MHCI student in Fall 2010.
 - Marietta Sionti (PhD), Linguistics PhD student from the University of Athens, visited me for 6 months to work on her dissertation starting in Summer 2009
 - Abhishek Anand (undergraduate) from the Computer Science and Engineering department of IIT Guwahati invited me to be a co-advisor of his B-tech project in collaboration with Hemangee Kapoor in the area of machine learning applied to operating systems optimization. This was after he participated in my on-line machine learning class in Spring of 2009.
 - Kiran GVR (undergraduate) and Ravi Shankar Reddy (undergraduate), both from IIIT-Hyderabad did an internship with me through the Internship Program in Technology Supported Education (IPTSE) in summer of 2010. They worked with MLT student Nitin Agarwal on the SciSumm multi-document summarization system for Scientific Articles. That work was accepted as a demo at ACL and workshop paper at an ACL workshop about summarization for different genres. Both papers were first authored by Nitin.
 - Pulkit Agarwal (undergraduate) and Mikesh Udani (undergraduate) from IIT Kanpur were interns co-advised by Bhiksha Raj and I through IPTSE in Summer of 2010, working on detection of transactivity in speech. They worked with PhD student Gahgene Gweon. That work was published in a full paper at CSCL 2011, with Gahgene as first author, and won a best student paper award.
 - Tushar Suresh (undergraduate) from NIT Surathkal was an intern, co-advised by me and Bob Kraut through IPTSE on analysis of social media in Summer 2011.
 - Amol Verma (undergraduate) from IIIT Delhi was an intern in my group working on SMS based collaboration in Summer 2012. Continued

working with my group during the 2012/2013 school year for his B-Tech project.

- Shaik Ismail (undergraduate) from NIT Rourkela was an intern in my group working on modeling dialect switching in Twitter in Summer 2012.
- Ying Ding (PhD), exchange program with Singapore Management University, co-advised locally at CMU in 2014/2015 with advisor from SMU.
- **Outside Reader**
 - Andrew Marriott, December 2006, Curtin University of Technology, Perth, Western Australia
 - Ilda Ladeira, December 2012, University of Cape Town, South Africa
 - Shafiq Rayhan Joty, May/June 2013, University of British Columbia, Canada
 - Jenny McDonald, September 2013, University of Otago, New Zealand
 - Oliver Ferschke, Spring 2014, Technische Universitaet Darmstat, Germany
 - Li Wang, Summer 2014, University of Melbourn, Australia
 - Bodong Chen, Summer 2014, University of Toronto, School of Education, Canada
 - Served for 2 years on Anita Delahay's committee (CMU Psychology dept.) to support training in Machine Learning in support of early research ideas.
- **Outside Committee Member**
 - David N. Prata from the Federal University of Alagoas in Maceio, Brazil visited for six months in Spring/Summer 2008 to work on his dissertation in my group under my supervision. I am serving as one of his committee members with Evandro Costa from the Federal University of Alagoas as his advisor.
 - Mihai Rotaru, Computer Science Department, University of Pittsburgh
 - Praveen Garimella, Center for Educational Technology and Learning Sciences, International Institute for Information Technologies in Hyderabad
 - Karthik Dinakar, Massachusetts Institute of Technology (Master's thesis related to analysis of social media/Cyber Bullying, now serving on his PhD dissertation committee)
- **Completed MLTs:**
 - Jaime Arguello (now an assistant professor at UNC), Rohit Kumar (Now a Researcher at BBN), Yi-Chia Wang (PhD student in LTI), Mahesh Joshi (PhD student at LTI), Sourish Chaudhuri (PhD student at LTI), Moonyoung Kang (PhD student at Northeastern, was a Research programmer at BBN), Naman Gupta (Engineer at Amazon), Dong Nguyen (PhD student at the University of Twente), Elijah Mayfield (PhD student at LTI), Nitin Agarwal (Research programmer at BBN), David Adamson (Research programmer at LTI), Philip Gianfortoni (Engineer at Google), Manaj Srivastava (Research programmer at BBN), Mahaveer

Jain (Engineer at Facebook), Phani Gadde (IBM Watson), Zeyu Zheng (Google Pittsburgh), Ryan Carlson (Carnegie Learning), Abhimanyu Kumar (Research Scientist, Gageln, Inc.), Mario Piergallini (Research staff, Howard University), Diyi Yang (LTI PhD student), Gaurv Tomar (August 2016, Google), Keith Maki (August 2016, LTI PhD student), Yohan Jo (August 2016, LTI PhD student), Leah Nicolich-Henkin (August 2016, Amazon), Michael Miller Yoder (August 2017, LTI PhD), Aaksha Meghawat (August 2017, LTI PhD – deferred, working at Apple), Shrimai Prabhumoye (August 2017, LTI PhD), Shivani Poddar (August 2018, Facebook), Aakanksha Naik (August 2018, LTI PhD), James Fiacco (August 2018, LTI PhD), Samridhi Chaoudhary (August 2018, seeking an industry position), Luke Breitfeller (August 2019, LTI PhD), Xinru Yan (August 2020, seeking an industry position)

- **Qualifying Exam Committee Member**
 - Sharad Oberoi, CEE, Carnegie Mellon University
 - Zan Wang, CEE, Carnegie Mellon University

- **Capstone Projects Supervised**
 - Zhiqi Li et al. (VLIS, Stock Prediction Project)

- **Independent Studies Supervised**
 - Gahgene Gweon (MHCI)
 - Satanjeev Banerjee (LTI PhD)
 - Chih-yu Chao (LTI Masters)
 - Adele Weitz (Heinz undergrad)
 - Stephanie Rosenthal (CSD undergrad)
 - Shilpa Arora (LTI Masters student)
 - José Gonzales (LTI Masters student)
 - Ranjitha Kulkarni (MSIT-VLIS student)

IX. UNIVERSITY SERVICE

UNIVERSITY SERVICE AND COMMITTEE WORK

- Strategic Planning Committee for Education and the Student Experience under Indira Nair for the 2008 CMU reaccreditation
- Organized the “Innovation with Impact” poster session as part of Graduate Student Appreciation Week with Indira Nair and others, Spring 2008. This was so successful that it has become a yearly event as part of graduate student appreciation week, although I am no longer organizing it.
- University Education Council for 2008-2014
 - Faculty Senate Representative for 2008-2009
 - Faculty Senate Representative for 2010-2011
- Faculty Senate Nominating Committee for 2009-2010
- Steering Committee for C@CM (Computing at Carnegie Mellon, a course that all of the Freshman take), Fall 2010-
 - Serving as content expert on a unit on Information Literacy that was included in the revamped C@CM course starting in Fall 2010
- University Libraries Advisory Committee for 2011-2012
- Serving on the Experience Design Network (Learning Media Research Group) 2013-
- University Committee on Special Appointments (Fall 2013- Summer 2015)
- Planning committee for the 2014 meeting of the Global Learning Council (Simon DataLab)
- Leader of the Technologies sub-committee of the Simon Initiative/TEL Writing/Comm Committee
- Serving a term as an Expedited reviewer on the Institutional Review Board (Summer 2016 – Summer 2021)

SCHOOL AND DEPARTMENT SERVICE AND COMMITTEE WORK

- LTI Hiring Committee 2020/2021
- SCS College Council Dec 2019 – Dec 2021
 - Also served on two subcommittees for COVID 19 planning in Summer 2020
- Co-Organizer of Fall 2019 LTI Student Research Symposium
- LTI PhD/MLT Admissions Chair 2018/2019
- SCS R&P Committee, 2018-2019
- Student Teaching Awards Committee 2017
- Chair of LTI Hiring Committee, 2016-2017
- LTI Governance Committee – 2015-2016
- Co-organizer of LTI Open House, Spring 2016
- Organized a workshop on The Future of MOCs for the HCII Anniversary Celebration, November 2014
- Organizing Committee Member, Home for Learning Sciences at CMU, Spring 2013 – Present
- LTI Education Committee Member (and Chair 2009-2014), Fall 2009 – Spring 2015

- HCII Hiring Committee (for joint HCII-ETC position), Fall 2012/Spring 2013
- LTI Distance Education Task Force Leader, Fall 2009 - 2010
- MHCI Admissions Committee, 2005, 2006
- LTI Admissions Committee, 2004, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, helped with LTI-HCII applications in 2016, chair for 2018
- MIIS Admissions Committee 2014, 2016, 2017, 2019, 2020
- METALS Admissions committee 2015, 2016, 2017, 2018, 2019
- METALS Curriculum Committee 2015 - present
- HCII PhD Admissions Committee, 2007, 2009, 2012, 2013
- HCII Curriculum Committee Member Fall 2006- Spring 2009
- LTI Faculty Senator 2007-2009
- HCII Faculty Senator 2009-2011
- Organizer of LTI 2007 Faculty Retreat 2007
- Organizer for the LTI 2007 New Collaborations Competition
- Organizer of 2007 and 2008 LTI Student Research Symposium
 - Offering “behind the scenes” support for the 2009, 2010, 2011 and 2012, 2015 Student Research Symposiums

OTHER

- Spoke on Professional Development Panel in Jan 2016 for HCII Jr Faculty
- Served as a Mentor for the 2010 Get Your Act Together Workshop organized by Nancy Klancher
- Executive Committee member of the Pittsburgh Science of Learning Center and Co-Thrust Leader for its Social and Communicative Factors in Learning Thrust 2009-2015
- Pittsburgh Science of Learning Center Seminar Series Coordinator 2005-2007
- Facilitator for Collaborative Learning Reading and Discussion Group 2005-2006
- Facilitator for a Pragmatics reading group, Fall 2007
- Facilitator of the HCI in the Developing World reading group, Fall 2007, Spring 2008, Fall 2008
- Facilitator of the LearnLab India on-line reading group, Fall 2009 – Spring 2010