CHRISTOPHER K. RIESBECK

CURRICULUM VITA

Work: Computer Science
Northwestern University
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Evanston, IL 60208
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Wilmette, IL 60091

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CURRENT POSITIONS:

Associate Professor, Computer Science
Associate Professor (courtesy), Learning Sciences
Director, MS program in Computer Science
Co-director, Center for Computer Science and Learning Sciences

Vice President, Acumenical, Inc.
Senior Technical Advisor, Socratic Arts, Inc.

EDUCATION:

PhD 1974, Stanford University, computer science
MA 1972, Stanford University, computer science
BA 1969, Alfred University, mathematics

AWARDS:

1993: Fellow of the American Association for Artificial Intelligence
1989/90: McCormick School of Engineering and Applied Sciences Faculty Honor Roll

PROFESSIONAL ORGANIZATIONS:

American Association for Artificial Intelligence
American Society for Engineering Education
Association for Computing Machinery
IEEE Computer Society

TEACHING EXPERIENCE:

Courses taught multiple times at Northwestern:
  Software Project Management
  Agile Software Development
  Rapid Software Prototyping
  Artificial Intelligence Programming
  NUvention Web+Media
  Introduction to Artificial Intelligence
  Data Structures and Data Management
  Introduction to Computer Systems
  Fundamentals of Computer Programming
  Design of Learning Environments
  Data Management and Information Processing

PRIOR POSITIONS HELD:

  2008-2009: Acting Director, Center for Technology and Social Behavior, Northwestern University
  1989–2000: Faculty Fellow, The Institute for the Learning Sciences, Northwestern University
  1984–1989: Senior Research Scientist, Computer Science Department, Yale University,
  1977–1984: Senior Research Associate, Computer Science Department, Yale University,
  1974–1977: Research Associate, Computer Science Department, Yale University, (including one term as Lecturer.)
  1973–1974: Research Scholar, Institute for the Study of Semantics and Cognition, Castagnola, Switzerland.

PH.D. STUDENTS:

  Kevin Livingston, Northwestern University, 2009
  Baba Kofi Weusijana, Northwestern, 2006.
  Lin Qiu, Northwestern, 2004.
  Christopher Wisdo, Northwestern, 1998.
  Wolff Dobson, Northwestern, 1998.
  David Foster, Northwestern, 1997.
  William Fitzgerald, Northwestern, 1995.
  Charles Martin, Yale, 1990
  Mark Burstein, Yale, 1985

CONFERENCE PROGRAM COMMITTEES AND REVIEWING (SINCE 2000)

  2019: Co-chair Inaugural Symposium on Computer Science and Learning Sciences
  2013: Reviewer: Intelligent User Interfaces Conference
  2013: Reviewer: Cognitive Science Conference
  2012: Reviewer: Cognitive Science Conference
  2010: Reviewer, International Conference on Engineering and Meta-Engineering
  2010: Reviewer, International Multi-Conference on Engineering and Technological Innovation
  2004: AAAI-04 Review Committee

BOOKS:

Inside Case-Based Explanation.
Written and edited by R. Schank, A. Kass, and C. Riesbeck.
Lawrence Erlbaum Associates. (1994).

Inside Case-Based Reasoning.
Written and edited by C. Riesbeck and R. Schank.
Lawrence Erlbaum Associates. (August, 1989).

Artificial Intelligence Programming, Second Edition.
E. Charniak, C. Riesbeck, D. McDermott, and J.R.Meehan.
Lawrence Erlbaum Associates, 1987.

Experience, Memory, and Reasoning.
Edited with Janet L. Kolodner.
Lawrence Erlbaum Associates, 1986.

Inside Computer Understanding.
Written and edited by R. Schank and C. Riesbeck.
Lawrence Erlbaum Associates, 1981.

Artificial Intelligence Programming.
E. Charniak, C. Riesbeck, and D. McDermott.
Lawrence Erlbaum Associates, 1980.

BOOK CHAPTERS:

Riesbeck, C. K. (2020). Critique-Driven Learning and Assessment. In S. D. Blum *Ungrading: Foundations, Models, Practices, Reflections.* West Virginia University Press.

Riesbeck, C. K. (1996). Case-based teaching and constructivism: Carpenters and tools. In B. G. Wilson (Ed.), Constructivist learning environments (pp. 49-61). Englewood Cliffs, NJ: Educational Technology Publications.

Riesbeck, C. and Schank, R. (1991) "From Training to Teaching: Techniques for Case-based ITS." In *Intelligent Tutoring Systems: Evolutions in Design*, Burns, H. L., Parlett, J. W. and Luckhardt-Redfield, C. (eds.) Lawrence Erlbaum Associates.

Riesbeck, C.K. (1987) "Parsing, Expectation-Driven." In S. Shapiro (ed.) *Encyclopedia of Artificial Intelligence.* John Wiley & Sons, pp. 696-701.

Riesbeck, C.K. (1986) "From Conceptual Analyzer to Direct Memory Access Parsing: An Overview." In N. Sharkey (ed.) *Advances in Cognitive Science 1.* Ellis Horwood Ltd, Chichester, England.

Riesbeck, Christopher K. and Martin, Charles E. (1986) "Direct Memory Access Parsing."
In Kolodner and Riesbeck (eds.), *Experience, Memory, and Reasoning.*Lawrence Erlbaum Associates.

Riesbeck, C.K. (1982) "Realistic Language Comprehension." In Lehnert, W., and Ringle, M. (eds.) *Strategies in Natural Language Processing*, Lawrence Erlbaum Associates.
Portions selected and reprinted in Aitkenhead, A.M. and Slack, J.M. (eds.) *Issues in Cognitive Science*, Lawrence Erlbaum Associates (London), 1985.

JOURNAL ARTICLES (SINCE 2000)

Rees Lewis, D. G., Carlson, S. E., Riesbeck, C. K., Gerber, E. M., & Easterday, M. W. (2023). Encouraging engineering design teams to engage in expert iterative practices with tools to support coaching in problem-based learning. *Journal of Engineering Education*, 112(4), 1012–1031. https://doi.org/10.1002/jee.20554

Rees Lewis, D.G., Easterday, M.W., Harburg, E., Gerber, E.M., Riesbeck, C.K. (2017) "Overcoming barriers between volunteer professionals advising project-based learning teams with regulation tools." British Journal of Educational Technology, DOI: 10.1111/bjet.12550 .

Qiu, L., Riesbeck, C. K. (2008) "An Incremental Model for Developing Educational Critiquing Systems: Experiences with the Java Critiquer." Journal of Interactive Learning Research. 19 (1).

Riesbeck, Christopher K., Qiu, Lin, Weusijana, Baba Kofi, Walsh, Joseph T., and Parsek, Matthew. (2003) "Learning Technologies to Foster Critical Reasoning." IEEE Engineering in Medicine and Biology Magazine 22(4).

CONFERENCE PAPERS (SINCE 2000)

Lewis, D. R., Carlson, S., Riesbeck, C., Lu, K., Gerber, E., & Easterday, M. (2020). The Logic of Effective Iteration in Design-Based Research. In Gresalfi, M. and Horn, I. S. (Eds.), The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 2 (pp. 1149-1156). Nashville, Tennessee: International Society of the Learning Sciences.

Rees Lewis, D. G., Gorson, J., Maliakal, L. V., Carlson, S. E., Gerber, E. M., Riesbeck, C. K., & Easterday, M. W. (2018). Planning to iterate: Supporting iterative practices for real-world ill-structured problem-solving. *Proceedings of International Conference of the Learning Sciences, ICLS*, *1*(June), 9-16.

Livingston, K., and Riesbeck, C. K. (2009) Resolving References and Identifying Existing Knowledge in a Memory Based Parser. AAAI 2009 Spring Symposium on Learning by Reading and Learning to Read, Stanford University, California, USA, March 23-25.

Forbus, K. D., Riesbeck, C. K., Birnbaum, L., Livingston, K., Sharma, A., Ureel, L (2007) Integrating Natural Language, Knowledge Representation and Reasoning, and Analogical Processing to Learn by Reading. Twenty-Second Conference on Artificial Intelligence (AAAI-07), Vancouver, British Columbia, Canada, July 22-26.

Livingston, K., and Riesbeck, C. K. (2007) All Knowledge All the Time: A Cognitive Science Challenge for Machine Language Comprehension. AAAI 2007 Fall Symposium on Cognitive Approaches to NLP, Arlington, Virginia, USA, November 9-11.

Livingston, K., and Riesbeck, C. K. (2007) Using Episodic Memory in a Memory Based Parser to Assist Machine Reading. Working notes of the AAAI 2007 Spring Symposium on Machine Reading, Stanford University, March 26-28.

Livingston, K. and Riesbeck, C.K. (2007) "Knowledge acquisition from simplified text." Proceedings of the 12th International Conference On Intelligent User Interfaces. Honolulu, Hawaii.

Qiu, L. and Riesbeck, C.K. (2006) "Authoring Knowledge-based Educational Software: A Use-Driven Feedback-based Approach." Proceedings of the 10th Annual Global Chinese Conference on Computers in Education (GCCCE).

Qiu, L. and Riesbeck, C.K. (2005) "Designing Web-based interactive learning environments for problem-based learning." Fifth IEEE International Conference on Advanced Learning Technologies (ICALT).

Qiu, L., Riesbeck, C. K. (2005) "The Design for Authoring and Deploying Web-based Interactive Learning Environments." Proceedings of World Conference on Educational Multimedia, Hypermedia & Telecommunications (ED-MEDIA).

Qiu, L. and Riesbeck, C.K. (2004) "An Incremental Model for Developing Educational Critiquing Systems: Experiences with the Java Critiquer." Proceedings of World Conference on Educational Multimedia, Hypermedia & Telecommunications (ED-MEDIA), Switzerland, June.

Qiu, L. and Riesbeck, C.K. (2004) "Incremental Authoring of Computer-based Interactive Learning Environments for Problem-based Learning." Proceedings of the 4th IEEE International Conference on Advanced Learning Technologies (ICALT), Finland.

Qiu, L. and Riesbeck, C.K. (2004) "A Web-based Interactive Learn-by-doing Environment for Problem-based Learning." Annual Conference of the American Educational Researchers Association (AERA), San Diego, CA.

Qiu, L. and Riesbeck, C. K. (2004) "Making critiquing practical: incremental development of educational critiquing systems." Proceedings of the 9th international Conference on Intelligent User Interfaces (IUI '04) Madeira, Portugal.

Weusijana, Baba Kofi A., Christopher K. Riesbeck, Joseph T. Walsh, Jr. (2004) "Fostering Reflection with Socratic Tutoring Software: Results of Using Inquiry Teaching Strategies with Web-Based HCI Techniques". International Conference for the Learning Sciences (ICLS), Santa Monica, CA.

Qiu, L. and Riesbeck, C. K. (2003) "Facilitating Critiquing in Education: The Design and Implementation of the Java Critiquer." Proceedings of the International Conference on Computers in Education (ICCE), Hong Kong, December.

Riesbeck, Christopher K., Qiu, Lin, Weusijana, Baba Kofi, Walsh, Joseph T., and Parsek, Matthew. (2003) "Learning Technologies to Foster Critical Reasoning: Focusing on Challenge-Based Learning Activities That Are Effective for Long-Term Learning." IEEE Engineering in Medicine and Biology Society, New York, NY (July/August)

McKenna, A., Parsek, M., Birol, G., & Riesbeck, C. (2003). Cross-disciplinary approach to developing challenge-based instruction. ASEE Annual Conference Proceedings, 8775-8788. Qiu, L., Riesbeck, C.K., and Parsek, M. (2003) "The Design and Implementation of an Engine and Authoring Tool for Web-based Learn-by-doing Environments." ED-MEDIA 2003--World Conference on Educational Multimedia, Hypermedia & Telecommunications.

Weusijana, B.K., Riesbeck, C.K., and Walsh, J. (2003) "Analysis of Results of Using a Socratic Web-Based Tutor in an Engineering Laboratory" Annual Conference of the American Society for Engineering Education.

Weusijana, B.K., Riesbeck, C.K., and Walsh, J. (2002) "The SASK Mentor Project." EdMedia Conference, Denver.

Weusijana, B.K., Riesbeck, C.K., and Walsh, J. (2002) "Enriching Students' Laboratory Experience: Using Software and Socratic Methods." Annual Conference of the American Society for Engineering Education, Montreal.

Qiu, L. and Riesbeck, C. K. (2002) "Open Goal-Based Scenarios: An Architecture for Hybrid Learning Environments." Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education (E-Learn), Montreal, Canada, October.

Qiu, L., Riesbeck, C.K., and Parsek, M. (2002) "Indie: A Software Tool for Investigate and Decide Simulations." (poster) Annual Conference of the American Educational Research Association, New Orleans.

Weusijana, B.K., Riesbeck, C.K., and Walsh, J. (2002) "Designing A Socratic Tutor for a Bioengineering Lab." Annual Conference of the American Educational Research Association, New Orleans.