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## EDUCATION:

### Trent University, Canada

B.Sc., 1980. Joint Major: Psychology & Anthropology.  
Honors B.Sc., 1981. Cognitive Psychology.

### Carnegie-Mellon University, Pittsburgh, PA.

M.S., 1982, Cognitive Psychology.  
Ph.D., 1985, Cognitive Psychology.

## RESEARCH INTERESTS:

Theories and models of human information interaction. Socially mediated sense making. Information Foraging Theory. Models of information scent. Web usability. Theories and models of complex cognition, knowledge, and learning, and associated theories of measurement. Information visualization.

## PROFESSIONAL EXPERIENCE:

2005-present: Research Fellow, User Interface Research, Palo Alto Research Center  
2008-present: Associate Editor *Human Computer Interaction*  
1998-2005: Principal Scientist, User Interface Research, Xerox Palo Alto Research Center  
1992-1998: Research Staff, User Interface Research, Xerox Palo Alto Research Center  
1991-1994: Associate Professor, School of Education, University of California, Berkeley.  
1991-1992: Associate Director, UC Berkeley Cognitive Science Program.  
1991-1992: Undergraduate Advisor, Cognitive Science Majors  
1985-1991: Assistant Professor, School of Education, University of California, Berkeley.  
1990-1993: Editor, *Instructional Science*.  
1985-1991: Affiliate, Xerox Palo Alto Research Center  
1985-1991: Affiliate, Institute for Research on Learning.  
1986-1990: Editorial board, *Technology & Education*.

## FELLOWSHIPS AND ACADEMIC HONORS

2007: Fellow of the Association for Psychological Science  
2006: Fellow of the CHI Academy  
2004: Fellow of the American Association for the Advancement of Science  
1987: Invited Fellow, Center for Advanced Study in the Behavioral Sciences  
1986: Fellow of the National Academy of Education  
1983: IBM Research Fellowship.  
1981: Trent University Psychology Award  
1979: Trent University Faryon Award for outstanding freshman achievement.

**PUBLICATIONS (REFEREED):**

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- Convertino, G., Hong, L., Nelson, L., Pirolli, P., & Chi, E. H. (2009). Activity Awareness and Social Sensemaking 2.0: Design of a Task Force Workspace. *Proceedings of the 5th International Conference on Foundations of Augmented Cognition. Neuroergonomics and Operational Neuroscience: Held as Part of HCI International 2009*.
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- Suh, B., Convertino, G., Chi, E. H., & Pirolli, P. (2009). The singularity is not near: slowing growth of Wikipedia. *Proceedings of the 5th International Symposium on Wikis and Open Collaboration, (WikiSym 2009)*.
- Pirolli, P. (2009). Powers of 10: Modeling complex information-seeking systems at multiple scales. *IEEE Computer*, 42(3), 33-40.
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- Budiu, R., Pirolli, P., Hong, L. (2009) Remembrance of things tagged: How tagging effort affects tag production and human memory. *CHI 2009, ACM Conference on Human Factors in Computing Systems*, (pp. 615-624). Boston: Association for Computing Machinery.
- Evans, B.M., Kairam, S., & Pirolli, P. (2009). Exploring the cognitive consequences of social search. *CHI 2009, ACM Conference on Human Factors in Computing Systems*, pp. 3377-3382). Boston: Association for Computing Machinery. **[Second Place - Best Student Paper]**
- Kammerer, Y., Nairn, R., Pirolli, P., & Chi, E.H. (2009). Signpost from the masses: Learning effects in an exploratory social tag search browser. *CHI 2009, ACM Conference on Human Factors in Computing Systems*, pp. 625-634). Boston: Association for Computing Machinery.
- Nelson, L., Held, C., Pirolli, P., Hong, L., Schiano, D.J., & Chi, E.H. (2009) With a little help from my friends: Examining the impact of social annotations in sensemaking tasks. *CHI 2009, ACM Conference on Human Factors in Computing Systems*, pp. 1795-1798). Boston: Association for Computing Machinery.
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- Hong, L., Chi, E.H. , Budiu, R., Pirolli, P., & Nelson, L. (2008). SparTag.us: A low cost system for foraging of web content. AVI '08, *Proceedings of the working conference on Advanced Visual Interfaces*. (pp. 65-72). Naples, Italy: Association for Computing Machinery.
- Russell, D.M. Furnas, G., Stefik, M., Card, S.K., Pirolli, P. (2008). Sensemaking, In the CHI '08, *Extended Abstracts of Human Factors in Computing Systems* (pp. 3981-3984).
- Sharit, J., Hernandez, M.A., Czaja, S.J., & Pirolli, P. (2008). Investigating the roles of knowledge and cognitive abilities in older adult information seeking on the Web. *ACM Transactions on Computer-Human Interaction*, 15(1), Article No. 3.
- Gugerty, L., Billman, D., Pirolli, P., and Elliott, A. (2007). An exploratory study of the effect of domain knowledge on Internet search behavior: The case of diabetes. In the *Proceedings of the 51st Annual Conference of the Human Factors and Ergonomics Society*.
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- Teo, L., John, B.E., & Pirolli, (2007). Towards a tool for predicting user exploration. In *the CHI '07 Extended Abstracts of Human Factors in Computing Systems* (pp. 2687-2692). San Jose, CA: Association for Computing Machinery.
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- Pirolli, P., Card, S.K., and Van Der Wege, M. (2003). The effects of information scent on visual search in the Hyperbolic Tree Browser. *ACM Transactions on Computer-Human Interaction*, 10, 20-53.
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- Pirolli, P. (1991). Computer-aided instructional design. In H. L. Burns, J. Parlett & C. Luckhardt (Eds.). *Intelligent tutoring systems: Evolutions in design* (pp. 105-125). Hillsdale, NJ: Lawrence Erlbaum.
- Pirolli, P. and Russell, D. M. (1990). The instructional design environment: Technology to support design problem solving. *Instructional Science, 19*, 121-144.
- Pirolli, P. (1989). On the art of building: Putting a new instructional design into practice. *Proceedings of the 2nd Intelligent Tutoring Systems Research Forum* (pp. 129-141).
- Pirolli, P.L. and Bielaczyc, K. (1989). Empirical analyses of self-explanation and transfer in learning to program. *Proceedings of the Annual Conference of the Cognitive Science Society* (pp. 450-457). Hillsdale, NJ: Lawrence Erlbaum.

- Pirolli, P. and Russell, D. (1988). Towards theory and technology for the design of intelligent tutoring systems. In *Proceedings of the International Conference on Intelligent Tutoring Systems* (pp. 350-356).
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- Pirolli, P. (2007). Cognitive models of human-information interaction. In F.T. Durso (Ed.) *Handbook of applied cognition* (2<sup>nd</sup> ed.). (pp. 443-470) West Sussex, England: John Wiley and Sons.
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#### **PATENTS (U.S.)**

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#### **GRANTS AND CONTRACTS AWARDED:**

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- Pirolli, P. (1991). *The psychological role of sketching in design problem solving*. Proposal to the Office of Naval Research. Funded for 1991.
- Wilson, M. & Pirolli, P. (1991). *Strategies of skill acquisition: A mixture model approach to measurement in the context of intelligent tutoring systems*. Proposal to the Office of Naval Research that received funding for 1991-1994.
- Russell, D. M., & Pirolli, P. (1989) *Computer-assisted instructional design for computer-based instruction*. Proposal funded by the National Center for Vocational Education.
- Pirolli, P. (1989). *Strategies and mechanisms for the construction and refinement of programming knowledge: A unified computational model of learning*. Proposal to NSF Directorate for Computer and Information Sciences, Funded 1990-1993.
- Pirolli, P. (1987). *Knowledge and processes for design*. Proposal to the Office of Naval Research for project that received funding for 1987-1991.

#### **UNPUBLISHED PAPER PRESENTATIONS – 2005 TO 2010:**

- Pirolli, P. (2009, October). *Making sense of sensemaking in the digital world*. Keynote address to the EC-TEL 2009 Conference, Nice, France.
- Pirolli, P. (2008, April). *Social information foraging and sensemaking*. Paper presented to the Computer Human Interaction Workshop on Sensemaking, Florence, Italy.
- Pirolli, P. (2008, March). *A probabilistic model of semantic in social information foraging*. Paper presented to the American Association for Artificial Intelligence Spring Symposium of Social Information Processing, Stanford, CA.
- Pirolli, P. (2008, February). *LATEST: A system for active learning about emerging science and technology*. Presentation to the Annual Meeting of the Human-Computer Interaction Consortium. Denver, CO

- Pirolli, P. (2007, August). *Information foraging and sensemaking theory: Playing both sides of the street*. Paper presented at the 115<sup>th</sup> Annual Convention of the American Psychological Association. San Francisco, CA.
- Pirolli, P. (2007, February). *Beyond information foraging to ecologies of sense making*. Keynote Presentation to the Annual Meeting of the Human-Computer Interaction Consortium. Denver, CO.
- Pirolli, P. (2007, August). *Information foraging theory*. Paper presented at the 115<sup>th</sup> Annual Convention of the American Psychological Association. San Francisco, CA.
- Pirolli, P. (2006, August). *Analysis of the task environment of sense making*. Paper presented at the 29<sup>th</sup> Annual International ACM SIGIR Conference. Seattle, WA.
- Pirolli, P. (2005, May). *The cognitive structure of sensemaking*. Keynote paper presented at the Seventh International Workshop of the EU Network of Excellence DELOS on Audio-Visual Content and Information Visualization in Digital Libraries (AVIVDiLib'05), Cortona, Italy.
- Pirolli, P. (2005, April). *Leverage points for sensemaking technologies identified through cognitive task analysis*. Paper presented at the Sensemaking Workshop, Portland, OR.

#### **TEACHING EXPERIENCE AND TUTORIALS:**

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|------------|--|
| 2007       | SIGCHI Tutorial on Information Foraging Theory.  |
| 2002-2003  | SIGCHI, University of Tuebingen Summer School, User Experience 2003 (Nielsen Norman Group). Tutorials on Information Foraging (with Stuart K. Card).   |
| 1985-1995: | University of California, Berkeley: Introductory cognitive science, artificial intelligence, unified theories of cognition, intelligent tutoring systems, cognitive modelling, human and machine learning, computer systems design, introduction to computers. |
| 1982-1985: | Psychology Department, Carnegie-Mellon University. Co-taught courses with John R. Anderson on psychology, artificial intelligence, and intelligent tutoring systems.   |

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