

Joseph A. Konstan

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Curriculum Vitae

Education

Ph.D. in Computer Science	University of California, Berkeley	1993
M.S. in Computer Science	University of California, Berkeley	1990
A.B. in Computer Science	Harvard University	1987

Professional Experience

Associate Professor (with tenure)	University of Minnesota	1999-
Assistant Professor	University of Minnesota	1993-1999
Consulting Scientist	Net Perceptions, Inc.	1996-2000
Instructor	University of Minnesota	1992-1993
Research Assistant	University of California, Berkeley	1988-1992
Teaching Assistant	University of California, Berkeley	1988-1992
Instructor	Harvard Summer School	1987-1988
Teaching Assistant	Harvard University	1985-1987

Affiliations

Member of ACM, ACM SIGCHI, and ACM SIGMM (Multimedia)
Member of the SIGCHI Executive Committee (7/99 - present)
Member of the SIGMM Executive Committee (11/99 - present)
President (10/98 - 7/99), Treasurer (12/97 - 10/98), and co-Founder of TwinCHI -- Twin Cities chapter of SIGCHI

Research Interests

Human-computer interaction, collaborative information filtering, multimedia systems, scientific visualization, interface toolkits and frameworks, applications of Internet technology.

Awards & Honors

George Taylor Career Development Award	1999
National Science Foundation CAREER Grant	1998-2003
ACM Lecturer	1997-2003
Best Paper. Usenix Tcl/Tk Workshop	1996
National Science Foundation Research Initiation Award	1994-1998
Best Experience Paper, OOPSLA '91	1991
Bush Foundation Advanced Seminar on Teaching Excellence	1995
President's Distinguished Faculty Mentor	1994-1997
Bush Foundation Project for Teaching Excellence	1993-1994
Outstanding Graduate Student Instructor Award	1992
Demitri Angelakos Award (service to department)	1991
National Defense Science & Engineering Graduate Fellowship	1989-1992
California Fellowship in Microelectronics	1987-1988

Interdisciplinary Affiliations

Member of Graduate Faculties of Human Factors, Software Engineering (Director of Graduate Studies, 1999-2001)
Member of Center for Cognitive Sciences, Internet Studies Center

Professional Activities

Offices and Editorial Boards

Editor of *SIGCHI Bulletin* (7/99 - present)

Member of Editorial Board of the journal *User Modeling and User Adapted Interaction* (starting January 2002)

Member of Editorial Board of ACM/Springer Verlag journal *Multimedia Systems* (since 2001)

Member of Editorial Board of the *Journal of Computer-Mediated Communication* (since inception).

Conference Committees

Conference Chair, UIST 2003

Short-Papers co-Chair, CSCW 2002

Local Activities Chair, CHI 2002

Organizing Committee, Internet Research 2001 (Association of Internet Researchers)

Short Papers Associate Chair, CHI 2000

Panels Chair, UIST '99.

Technical Demonstrations Chair, ACM Multimedia '99.

Dissertation Symposium Chair, ACM Multimedia '99.

Exhibits co-Chair for CHI '96.

Program Committees

ACM Conference on Universal Usability 2000 (Associate Chair)

UIST 2000 and UIST '99

ACM Multimedia 2000 (program co-Chair), '99 and '98 (Associate Chair)

International Conference on Autonomous Agents 2000.

CHI 2000 Workshop on Social Navigation

CHI Basic Research Symposium (co-Chair 1998; member 1999, 1997, 1996)

ACM Symposium on Intelligent User Interfaces (IUI) 99.

Recommender systems workshops, 1998 (AAAI) and 1999 (CHI and SIGIR).

Usenix Tcl/Tk Workshop 1997 (co-Chair 1997; member 1996).

CHI Paper Review Committee (CHI '95, CHI '96, CHI '97, CHI '98, CHI '99, CHI 2000, CHI 2001, and CHI 2002).

Other Reviewing and Editing

Panels committee for CHI 2000.

Reviewer for short papers and posters, tutorials, etc. CHI '96, CHI '97, and CHI '98.

Guest editor of December 1996 issue of *JCMC* on Communication in Information Spaces.

Referee for *ACM Transactions on Programming Languages and Systems*, *ACM Transactions on Software Engineering*, *IEEE Computer*, *Communications of the ACM*, *ACM Transactions on Computer-Human Interaction*, *ACM Multimedia Systems*, *ACM Transactions on Information Systems*.

Reviewer for several conferences (including UIST '01, '98, '97, '96; IEEE Visualization '98 case studies).

Reviewer for NSF proposals (1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2002).

Research Grants

Federal Agencies

National Science Foundation: "CISE Research Resources: Being There: Mobile Devices for Community and Commerce" (with L. Terveen, J. Riedl, and S. Shekhar). Funded for \$120,000 for the period 9/1/02 through 8/31/04.

National Science Foundation: "Reading a Balance Diet: Foraging in Information Communities" (with J. Riedl). Funded for \$410,000 for the period 09/01/01 through 08/31/04.

National Institutes of Health: "Internet HIV Prevention for Internet-Using Latino MSM" (with S. Rosser and several other co-PIs). Funded for \$295,545 for the period 7/8/01 through 6/30/02 (with expected renewals).

National Institutes of Health: "NDS-R Fluoride Component" (with John Himes and other co-PIs). Funded for \$963,101 for the period 9/30/01 through 9/29/04.

National Institutes of Health: "A Fall Prevention Program for High-Risk Elderly Women" (with J. Wyman and several other co-PIs).

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Funded for \$2,971,282 for the period May 1, 2000 through February 28, 2005.

National Science Foundation: "Research Instrumentation: Cluster Computing for Knowledge Discovery in Diverse Data Sets" (with G. Karypis, J. Riedl, S. Shekhar, and M. Gini). Funded for \$74,516 for the period February 1, 2000 - January 31, 2003.

National Science Foundation: "Reflective GroupLens: Collaborative Filtering in Self-Aware Communities" (with J. Riedl). Funded for \$303,264 for the period September 15, 1999 - August 30, 2002.

REU Supplement of \$15,000 funded July 31, 2002.

National Institutes of Health: "Food and Nutrient Systems for Research" (with J. Himes and three other co-PIs in epidemiology). \$2,123,653 funded by National Heart, Lung, and Blood Institute for period December 1, 1998 through November 30, 2003.

National Science Foundation: "CAREER: Algorithmic Issues in Collaborative Filtering." Funded August 1, 1998 - July 31, 2003 for \$326,262.

REU Supplement of \$10,000 funded June 1, 1999

Industrial Collaboration Supplement of \$10,000 funded August 27, 1999.

National Science Foundation: "Collaborative, Distributed Database for Brain Viewing" (with J. Carlis, J. Riedl, and B. Elde). Funded August 1, 1997 - July 31, 1999 for \$519,992.

National Science Foundation: "GroupLens: Scalable Collaborative Filtering for the Internet" (with J. Riedl). Funded March 1, 1997 - February 29, 2000 for \$317,451.

REU Supplement of \$15,000 funded April 1, 1999.

National Science Foundation: "Graduate Research Traineeships: Human Interface Design for Access to Computers and Networked Information--Panning for Gold: Information Discovery on the Information Super-Highway" (with A. Sameh, J. Riedl, and J. Srivastava) Funded September 1995 - August 2000 for \$562,500.

United States Department of Transportation: "Agent-Based Distraction-Free Interfaces: Investigation." Funded August 16, 1995 - August 15, 1996 for \$40,322.

National Science Foundation: "RIA: User Interface Toolkit Architectures for Distributed Multimedia Applications" Funded July 1994 - July 1997 for \$99,865. Extended to July 1998 and supplemented twice to a total of \$110,744.

Industrial Grants

Aurora Technology: "Software Development for and Assessment of Multi-Screen Radiology Workstation." Funded June 1998 - January 1999 for \$40,000 (part of \$55,000 grant with R. Ritenour).

Net Perceptions, Inc: "GroupLens Research" (with J. Riedl). Funded September 1997 - September 2000 for \$60,000.

IBM: "Java Performance Monitoring and Visualization Tools" (with P. Yew and Z. Li). Funded February 1 1997 - January 31, 1998 for \$91,000 (PI of \$30,000 visualization component). Renewed (with P. Yew and D. Lilja) for March 1998 - December 1999 for \$90,000 (PI of \$36,000 visualization component).

Distributed Multimedia Research Center (Computing Devices International): "Commands as Media -- Implementation of Command Streams (renewed)" funded December 16, 1996 - December 15, 1997 for \$23,000.

Essex Consulting/NIH SBIR Subcontract: "Information System for Substance Abuse Practitioners." Funded September 1995 - March 1996 for \$18,578.

Distributed Multimedia Research Center (Computing Devices International): "Commands as Media -- Implementation of Command Streams" funded September 16, 1995 - September 15, 1996 for \$21,500.

University Programs

Planning Initiatives in Interdisciplinary Research, Scholarly and Creative Activities (IRSCA) program. "Interdisciplinary Education and Outreach in Internet Studies" (with L. Gurak and D. Burk). Funded July 1, 2001 - June 30, 2003 for \$20,000.

Six Undergraduate Research Opportunity Program (UROP) awards.

Academic Health Center: Pilot Study on using Voice Playback and Recognition Software as part of an Exercise Tracking System for Elderly Citizens (over age 75) (with J. Wyman, et. al.). Funded July 1, 1998 for approximately \$150,000.

University of Minnesota Academic Health Center: "Internet Self-Assessment in Pharmacology." (with L. Lichtblau, Univ. of Minnesota Department of Pharmacology) Funded June - November 1995 for \$2100.

Project MinneMAC: "Internet Self-Assessment in Pharmacology." (with L. Lichtblau) two equipment grants (Apple Macintosh equipment) funded 1995 and 1996.

University of Minnesota Graduate School: "Embeddable Applications: A New Abstraction for Multimedia Toolkits." Funded July 1, 1994 - December 15, 1995 for \$23,332.

University of Minnesota Graduate School: "Software Platforms for Collaborative, Distributed, Interactive Applications." Funded October 1993 - December 15, 1994 for \$14,067.

Royalty-Related Funding

Research share of University of Minnesota's interest in Net Perceptions, Inc. Managed as a quasi-endowment fund yielding between

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\$150,000 and \$200,000 per year to support research projects (with J. Riedl).

Other Funding Activity

Faculty participant in several additional funded proposals including an NSF Instructional Laboratory Instrumentation grant and an NSF Research Instrumentation grant.

Journal and Serial Papers

S. McNee*, Istvan Albert, Dan Cosley*, Prateep Gopalkrishnan*, Shyong K. Lam*, Al Mamunur Rashid*, Joe Konstan, and John Riedl. "On the Recommendation of Citations for Research Papers." *CHI Letters* 4(3), CSCW 2002, ACM Conference on Computer-Supported Cooperative Work."

J. Herlocker and J. Konstan. "Content-Independent, Task-Focused Recommendations." *IEEE Internet Computing* 5(6) Nov-Dec 2001, pp. 40-47.

J.B. Schafer*, J. Konstan, and J. Riedl. "Electronic Commerce Recommender Applications." *Data Mining and Knowledge Discovery*. Kluwer Academic Publishers. January 2001. Also appears as a chapter in R. Kohavi and F. Provost (eds.) *Applications of Data Mining to Electronic Commerce*. Kluwer Academic Publishers, February 2001.

J. Herlocker*, J. Konstan, and J. Riedl. "Explaining Collaborative Filtering Recommendations." *CHI Letters* 2(3), CSCW 2000, ACM Conference on Computer Supported Cooperative Work." (acceptance rate: 18%)

I. Kazi*, D. Jose*, B. Ben-Hamida*, C. Kwok*, C. Hescott*, J. Konstan, D. Lilja, and P-C. Yew. "JaViz: A Client/Server Java Profiling Tool," *IBM Systems Journal* 31:1, 2000.

E. Chi*, P. Barry, J. Riedl, and J. Konstan. "Principles for Information Visualization Spreadsheets," *IEEE Computer Graphics & Applications*, July 1998, pp. 30-38.

J. Konstan, L. Lichtblau, P. Sturm*, and J. McLeod*. "ISAP: A Web-Based Pharmacology Course and Study Environment," *Computers and Education* special issue on Multimedia, December 1997, pp. 63-71.

J. Konstan, B. Miller*, D. Maltz*, J. Herlocker*, L. Gordon*, and J. Riedl. "Applying Collaborative Filtering to Usenet News: The GroupLens System," *Communications of the ACM*, March 1997, pp. 77-87.

J. Schnepf*, J. Konstan, and D. Du. "Doing FLIPS: Flexible Interactive Presentation Synchronization," *IEEE Journal on Selected Areas in Communication*, January 1996, pp. 114-125. (an earlier version appeared in the 1995 IEEE Multimedia Conference)

J. Konstan. "State Problems in Programming Human-Controlled Devices," *IEEE Transactions on Consumer Electronics*, November 1994, pp. 812-820.

Books

J. Riedl and J. Konstan. *Word of Mouse: The Marketing Power of Collaborative Filtering*. New York: Warner Books, 2002.

United States Patents

U.S. Patent #5,842,199. System, Method, and Article of Manufacture for Using Receiver Operating Curves to Evaluate Predictive Utility (with B. Miller and J. Riedl). Issued November 24, 1998.

U.S. Patent # 6,016,475. System, Method, and Article of Manufacture for Generating Implicit Ratings Based on Receiver Operating Curves (with B. Miller and J. Riedl). Issued January 18, 2000.

U.S. Patent #6,108,493. System, Method, and Article of Manufacture for Utilizing Implicit Ratings in Collaborative Filters (with B. Miller and J. Riedl). Issued August 22, 2000.

U.S. Patent #6,334,127. System, method and article of manufacture for making serendipity-weighted recommendations to a user (with P. Bieganski and J. Riedl). Issued December 25, 2001.

U.S. Patent #6,412,012. System, method, and article of manufacture for making a compatibility-aware recommendations to a user (with P. Bieganski, J. Rauser, and D. Frankowski). Issued June 25, 2002.

Additional patents pending.

Highly Selective Peer-Reviewed Conference Papers

J.B. Schafer, J.A. Konstan, and J. Riedl. "Meta-recommendation Systems: User-controlled Integration of Diverse Recommendations." *Proceedings of the 11th International Conference on Information and Knowledge Management*, McLean, VA, November 2002. (acceptance rate: 25%)

A.M. Rashid*, I. Albert, D. Cosley*, S.K. Lam*, S. McNee*, J.A. Konstan, & J. Riedl. "Getting to Know You: Learning New User Preferences in Recommender Systems." *Proceedings of the 2002 International Conference on Intelligent User Interfaces*, San Francisco, CA, January 2002, pp. 127-134. (acceptance rate: 30%)

B. Bailey*, J. Konstan, and J. Carlis. "DEMAIS: Designing Multimedia Applications with Interactive Storyboards." *Proceedings ACM Multimedia 2001*. (acceptance rate: 17%)

M. O'Connor*, D. Cosley*, J. Konstan, and J. Riedl. "PolyLens: A Recommender System for Groups of Users." *Proceedings of the European Conference on Computer-Supported Cooperative Work 2001*. (acceptance rate: 19%)

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- B. M. Sarwar*, G. Karypis, J. A. Konstan, and J. Riedl. "Item-based collaborative filtering recommendation algorithms." *Proceedings of the 10th International World Wide Web Conference (WWW10)*, Hong Kong, May 2001. (acceptance rate: 20%)
- B. Bailey*, J. Konstan, and J. Carlis. "The Effects of Interruptions on Task Performance, Annoyance, and Anxiety in the User Interface." *Proceedings of INTERACT 2001*. (acceptance rate: 33%)
- B. Sarwar*, G. Karypis, J. Konstan, and J. Riedl. "Analysis of Recommender Algorithms for E-Commerce," *Proceedings of the ACM Conference on Electronic Commerce (EC 2000)*. (acceptance rate: 18%)
- J.B. Schafer*, J. Konstan, and J. Riedl. "Recommender Systems in E-Commerce," *Proceedings of the ACM Conference on Electronic Commerce (EC '99)*. (acceptance rate: <30%)
- J. Herlocker*, J. Konstan, A. Borchers, and J. Riedl. "An Algorithmic Framework for Performing Collaborative Filtering," *Proceedings of the ACM Conference on Research and Development in Information Retrieval (SIGIR '99)*. (acceptance rate: 25%)
- N. Good*, J.B. Schafer*, J. Konstan, A. Borchers, B. Sarwar*, J. Herlocker*, and J. Riedl. "Combining Collaborative Filtering with Personal Agents for Better Recommendations," *Proceedings of AAAI-99*, AAAI Press. (acceptance rate: 25%)
- J. Carlis and J. Konstan. "Interactive Visualization of Serial Periodic Data," *Proceedings of ACM UIST 98*, San Francisco, November 1998, pp. 29-38. (acceptance rate: 25%)
- B. Sarwar*, J. Konstan, A. Borchers, J. Herlocker*, B. Miller*, and J. Riedl. "Using Filtering Agents to Improve Prediction Quality in the GroupLens Research Collaborative Filtering System," *Proceedings of ACM CSCW '98*, Seattle, November 1998, pp. 345-354. (acceptance rate: 19%)
- B. Bailey*, J. Konstan, R. Cooley*, and M. Dejong*. "Nsync - A Toolkit for Building Interactive Multimedia Presentations," *Proceedings of ACM Multimedia '98*, Bristol, UK, September 1998, pp. 257-266. (acceptance rate for full papers: 17%) Also appears in *Readings in Multimedia Computing and Networking* (K. Jeffay and H. Zhang, eds.) Morgan-Kaufmann, 2001, pp. 761-770.
- T. Gustafson*, J.B. Schafer*, and J. Konstan. "Agents in Their Midst: Evaluating User Adaptation to Agent-Assisted Interfaces," *Proceedings of the 1998 International Conference on Intelligent User Interfaces*, San Francisco: ACM, January 1998, pp. 163-170. (acceptance rate: 35%)
- B. Miller*, J. Riedl, and J. Konstan. "Experiences with GroupLens: Making Usenet Useful Again," *Proceedings of the Usenix 1997 Winter Technical Conference*, Anaheim, CA, January 1997, pp. 219-233. (acceptance rate: 31%)
- J. Herlocker* and J. Konstan. "Commands as Media: Design and Implementation of a Command Stream," *Proceedings of ACM Multimedia '95*, pp. 155-165. (acceptance rate: 22%)
- L. Rowe, J. Konstan* and B. Smith*. "The Picasso Application Framework," *Proceedings of ACM UIST '91*, Hilton Head, SC, November 1991, pp. 95-105. (acceptance rate: 23%)
- J. Konstan* and L. Rowe. "Developing a GUIDE Using Object-Oriented Programming," *Proceedings of the Sixth ACM Conference on Object-Oriented Programming: Systems, Languages, and Applications*, Phoenix, AZ, October 1991, pp. 75-88. (paper won best experience paper award) (acceptance rate: 12%)

Articles and Chapters

- J. Konstan and J. Riedl. "Recommender Systems for the Web." In *Visualizing the Semantic Web*, edited by V. Geroimenko and C. Chen. Springer Verlag, 2002.
- B. Bailey*, L. Gurak, and J.A. Konstan. "Trust in Cyberspace." In *Human Factors and Web Development*, edited by J. Ratner. New Jersey: Lawrence Erlbaum Associates, 2002.
- B. Miller*, J. Riedl, and J. Konstan. "GroupLens for Usenet: Experiences in Applying Collaborative Filtering to a Social Information System" in C. Leug and D. Fisher (eds.) *From Usenet to CoWebs: Interacting with Social Information Spaces*. Springer-Verlag, 2002 (in press).
- B. Bailey* and J. Konstan. "Authoring Interactive Media." Article in *Encyclopedia of Electrical and Electronics Engineering*. John Wiley & Sons, 2000.
- B. Sarwar*, J. Konstan, and J. Riedl. "Distributed Recommender Systems: New Opportunities for Internet Commerce," in *Internet Commerce and Software Agents: Cases, Technologies and Opportunities* (S. Rahman and R. Bignall, eds.). Idea Group Publishing, Hershey, PA, 2001.
- J. Konstan. "Web Resources" encyclopedia article in *1999 Yearbook of Science & Technology*. McGraw Hill, New York, 1999.
- A. Borchers, J. Herlocker*, J. Konstan, and J. Riedl. "Ganging Up on Information Overload," column in *IEEE Computer*, April 1998, pp. 106-108.
- S. Rafaei, F. Sudweeks*, J. Konstan, and E. Mabry. "ProjectH: A Collaborative Quantitative Study of Computer-Mediated Communication," in *Network & NetPlay: Virtual Groups on the Internet* (F. Sudweeks, M. McLaughlin, and S. Rafaei, editors). Cambridge, MA: AAAI Press and MIT Press, 1998, pp. 265-281.

Other Peer-Reviewed Conference Papers

- B. Bailey*, J. Konstan, and J. Carlis. "Supporting Multimedia Designers: Towards More Effective Design Tools." *Proceedings Multimedia Modeling, 2001*. (acceptance rate: 54%)

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- A. Safonov*, J. Konstan, and J. Carlis. "End-user Web Automation: Challenges, Experiences, Recommendations." *Proceedings of WebNet 2001*. (acceptance rate: currently unknown)
- B. Bailey*, J. Konstan, and J. Carlis. "An Examination of Trust Production in Computer-Mediated Exchange." *Proceedings of the 7th Conference on Human Factors and the Web*, 2001. (acceptance rate: 33%)
- A. Safonov*, J. Konstan, and J. Carlis. "Beyond Hard-to-Reach Pages: Interactive, Parametric Web Macros." *Proceedings of the 7th Conference on Human Factors and the Web*, 2001. (acceptance rate: 33%)
- B. Bailey*, J. Konstan, and J. Carlis. "Adjusting Windows - Balancing Information Awareness with Intrusion," *Proceedings of the Sixth Conference on Human Factors and the Web*, 2000. (acceptance rate: 42%)
- B. Sarwar*, G. Karypis, J. Konstan, and J. Riedl. "Application of Dimensionality Reduction in Recommender System--A Case Study." *Proceedings of the WebKDD 2000 Workshop*, August 2000. (acceptance rate: 41%)
- A. Safonov*, J. Konstan, and J. Carlis. "Toward Web Macros: A Model and a Prototype System for Automating Common Tasks on the Web," *Proceedings of the Fifth Conference on Human Factors and the Web*, June 1999. (acceptance rate: 40%)
- M. DeJong*, B. Bailey*, and J. Konstan. "Creating A Multimedia Extension for Tcl Using the Java Media Framework," *Proceedings of the 1998 Tcl/Tk Conference*, Usenix Association, San Diego, September 1998, pp. 155-162. (acceptance rate: 59%)
- E. Chi*, P. Barry, J. Riedl, and J. Konstan. "A Spreadsheet Approach to Information Visualization," in *Proceedings of the 1997 IEEE Symposium on Information Visualization*, October 1997, pp. 17-24 and 116. (acceptance rate: 59%)
- A. Safonov*, J. Konstan, J. Carlis, and B. Bailey*. "Extending Traces with OAT: An Object Attribute Trace Package for Tcl/Tk," *Proceedings of the Tcl/Tk Workshop 97*, Usenix Association, July 1997, pp. 81-88. (acceptance rate: 50%)
- B. Bailey* and J. Konstan. "Nsync -- A Constraint-Based Toolkit for Multimedia," *Proceedings of the Tcl/Tk Workshop 97*, Usenix Association, July 1997, pp. 107-114. (acceptance rate: 50%)
- J. Konstan, S. Herbst*, and A. Ellis. "Web-Based Delivery and Open-Architecture Database Support in the ITreS Counselor Information System," Special Issue of *Journal of the American Medical Informatics Association -- Proceedings of the AMLA Fall Symposium*, 1996, pp. 782-786. (acceptance rate: 55%)
- A. Safonov*, D. Perrin*, J. Konstan, and J. Carlis. "Lessons from the Neighborhood Viewer: Building Innovative Collaborative Applications in Tcl and Tk," *Proceedings of the Tcl/Tk Workshop '96*, Usenix Association, 1996, pp. 203-213. (paper won best paper award) (acceptance rate: 57%)
- J. Herlocker* and J. Konstan. "Tcl Commands as Media in a Distributed Multimedia Toolkit," *Proceedings of the Tcl/Tk Workshop 95*, Usenix Association, 1995, pp. 205-212. (acceptance rate: 79%)
- S. Iyengar* and J. Konstan. "TclProp: A Data-Propagation Formula Manager for Tcl and Tk," *Proceedings of the Tcl/Tk Workshop 95*, Usenix Association, 1995, pp. 25-30. (acceptance rate: 79%)

*student author

Other Reviewed Publications

- A. Safonov*, J. Konstan, and J. Carlis. (poster) "WebMacros - a Proxy-based System for Recording and Replaying User Interactions with the Web." *Poster Proceedings of the 10th International World Wide Web Conference*, 2001.
- B. Bailey*, J. Konstan, and J. Carlis. "Measuring the Effects of Interruptions on Task Performance in the User Interface," *Proceedings of the IEEE Conference on Systems, Man, and Cybernetics*, 2000.
- J. Konstan. "Research Resources for Collaborative Filtering." Position paper for CHI 99 Workshop on Recommender Systems. Presented at the workshop in May 1999.
- J. Konstan. "No Filter is an Island." Position paper for AAAI-98 Workshop on Recommender Systems. Presented at the workshop on July 26, 1998.
- S. Larson and J. Konstan. "Collaborative Filtering's Impact on Relationship Marketing" column in *DM News*, November 24, 1997.
- "A Spreadsheet Approach to Information Visualization" (with E. Chi, P. Barry, and J. Riedl). Peer-reviewed demonstration presented at the *10th Annual ACM Symposium on User Interface Software and Technology (UIST '97)*, Banff, AB, October, 1997. (Summary on page 79 of proceedings).
- "The GroupLens Research Project: Exploring Collaborative Filtering" (with J. Riedl and B. Miller) (position paper) *CHI '97 Basic Research Symposium*.
- "Creating Multimedia System Toolkits" (position paper) *CHI '97 Basic Research Symposium*.
- "Teaching the Design of Interactive Systems" (position paper) 1997 TeaDIS Workshop.
- "The Neighborhood Viewer: A Paradigm for Exploring Image Databases" (with J. Carlis, A. Safonov, and D. Perrin). Peer-reviewed demonstration presented at CHI 97; summary in the *CHI 97 Conference Companion*.
- Refereed demonstration of GroupLens collaborative filtering toolkit and applications at CSCW 96 (with B. Miller and J. Riedl) (Cambridge, MA, November 1996).
- Refereed demonstration of command stream and SynchMe synchronization toolkit at ACM Multimedia '96 (with B. Smith and L. Rowe) (Boston, MA, November 1996).

"Tcl and Tk in the Classroom: Lessons Learned" (panel and position paper) Proceedings of the Tcl/Tk Workshop '95, Usenix Association, 1995.

"Fulfilling the Promise of Multimedia: Intelligent and Usable Multimedia Applications" (position paper) CHI '95 Basic Research Symposium.

"State Problems in Programming Human-Controlled Devices" (extended abstract) Proceedings of the International Conference on Consumer Electronics, 1993.

"The Picasso Graphical User Interface Framework" (poster) 1991 Lisp Users and Vendors Conference.

Software Systems and Other Publications

DEMAIS design tool for multimedia. Released for general use.

MovieLens data sets and DBLens research collaborative filtering toolkit. Released for research use (and currently used by researchers at several universities and research labs, including Carnegie Mellon University and U.C. Berkeley).

GroupLens collaborative filtering toolkit. Licensed by University of Minnesota to Net Perceptions, Inc., July 1996. Commercial version is currently the leading collaborative filtering recommendation engine, with over 50 customers, mostly Internet sites.

MovieLens web-based movie recommendation site. Launched Fall 1997. Research system used to gather data and carry out experiments. Operates continuously with over 7000 users worldwide.

URL: <http://movielens.umn.edu/>

ISAP pharmacology education web site. Launched Spring 1996. As of July 1998, over 6800 registered users. Licensed to IdeaServices for commercial development in August 1998.

URL: <http://www.med.umn.edu/ISAP/>

TclProp data propagation constraint programming software releases. TclProp 1.0 and TkVP (video poker demonstration application) released August 1995. TclProp 1.1 released as part of Berkeley CMT distribution in November 1996. TclProp 2.0 and OAT (trace interface layer) released January 1997. Over 50 direct downloads.

An Event-Based Architecture for Graphical User-Interface Toolkits, Ph.D. Dissertation, University of California, Berkeley, 1993.

Berkeley IC-CIM Research (videotape), with L.A. Rowe, C. Hegarty, Y. Or, P. Schank, B. C. Smith, and S. Smoot. University of California, Berkeley, 1991.

Picasso Graphical User Interface Toolkit and Framework (software system) and accompanying *Picasso Reference Manual*, with L.A. Rowe, B.C. Smith, S. Seitz, C. Liu, and P. Schank. University of California, Berkeley, 1990.

Academic Courses Created

Computer Science 5110: User Interface Design, Implementation, and Evaluation

first offering 1993-94, annually thereafter

revised in 1999 to become CSci 5115 with new focus on real-world projects

Computer Science 5111: GUI Toolkits and Their Implementation

first offering 1995-96, biennially thereafter

revised in 1999 to become CSci 5116 with new focus on comparative evaluation of toolkits

Computer Science 8110: Human Computer Interaction and User Interface Technology

first offering 1996-97, biennially thereafter

revised for 2001 to become CSci 8115 with 50% additional material

Industrial Short Course: User Interfaces: A Hands-On Introduction

first offering Summer 1995, annually or more frequently thereafter

Laboratory-Based Introduction to Procedural Programming in C (CSci 3113)

first offering Fall 1995, offered quarterly by department faculty

Software Engineering 5115: User Interface Design and Evaluation

designed for MS in Software Engineering program

first offered Fall 1998, annually thereafter

Software Engineering 5116: Graphical User Interface Toolkits

designed for MS in Software Engineering program

first offered Spring 1999, periodically thereafter; will replace 5111 in Computer Science curriculum

Students Advised

Graduated: Brian Bailey (Ph.D. 2002, M.S. 1997)

Dissertation topic: DEMAIS: A sketching tool for multimedia design

Currently tenure-track faculty position at University of Illinois, Urbana-Champaign

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Jon Herlocker (Ph.D. 2000, M.S. 1998)
 Dissertation topic: Algorithmic and usage issues in collaborative filtering
 Currently tenure-track faculty position at Oregon State

Alex Safonov (Ph.D. 2002, M.S. 1998)
 Dissertation topics: Web macros
 Currently a postdoc at the University of Minnesota

Ben Schafer (Ph.D. 2001, M.S. 1999)
 Dissertation topic: Meta-Recommender Systems
 Currently tenure-track faculty position at the University of Northern Iowa

Patrick Baudisch (Ph.D. 2001)
 co-Advisor at the Technical University at Darmstadt, Germany
 Dissertation topic: Dynamic information filtering
 Currently researcher at Microsoft Research

Badis Ben-Hamida (M.S. 1999 -- Topic: visualization of Java program performance)

Natalie Bennett (MSSE 1999 -- Topic: usability testing of software engineering processes)

Chad Brown (MSSE 1999 -- Topic: PDA interface design and implementation)

Kun-Feng Chen (MSSE 1999 -- Topic: interface and infrastructure for filtering Java methods)

Brent Dahlen (M.S. 1998 -- Topic: Sanitized ratings in collaborative filtering)

David Doyle (M.S. 2000 -- Topic: Personalized computer-based education)

Kurtis Halvorson (MSSE 2000 -- Topic: Generic Visual Basic templates)

Susan Herbst (M.S. 1996 -- Topic: UI design for counselor information system)

Sunanda Iyengar (M.S. 1996 -- Topic: TclProp data propagation constraint system)

Anil Kashyap (M.S. 1996 -- Topic: UI prototype for physics laboratory CBT)

Chris Kwok (M.S. 1999 -- Topic: Java performance trace processing tools)

David Leppik (M.S. 1998 -- Topic: Partitioning in collaborative filtering)

Peksun Mak (MSSE 2000 -- Topic: XML for event calendars)

Sumit Mishra (M.S. 2000 -- Topic: Phone-based system for elderly exercise intervention)

Matthew Moore (MSSE 2000 -- Topic: Dermatology exam reporting interface)

Joe Morin (MSSE 1999 -- Topic: interfaces and databases for a recommender system web site)

Vajira Nissanka (M.S. 2002 -- Topic: Better web search through query modifications)

Mark O'Connor (M.S. 2000 -- Topic: Multi-user recommendation interfaces)

Mile Petrov (M.S. 1998 -- Topic: Vocabulary size in speech recognition)

Ann Phillippi (M.S. 1995 -- Topic: Walkthrough usability analysis techniques)

Kien Quan (MSSE 1999 -- Topic: interfaces and databases for a recommender system web site)

Ramya Ramachandran (M.S. 1998 -- Topic: Neural net analysis of UI surveys)

Hany Ramadan (M.S. 1999 -- Topic: Enhancements to starfield/dynamic query interfaces)

Milinda Rambel-Stone (MSSE 1999 -- Topic: usability testing of software engineering processes)

Royce Shin (M.S. 1995 -- Topic: Database and interface design for ISAP)

Mark Swan (M.S. 1998 -- Topic: Managing computation in scientific visualization)

Larry Temple (M.S. 1998 -- Topic: Unix micro-kernel file system & instructional design)

Hongguo Tian (M.S. 2000 -- Topic: Search and indexing for news filtering services)

Sai Tong (M.S. 1994 -- Topic: Study of gopher usage patterns)

Duo Wang (MSSE 2000 -- Topic: Electronic data access interfaces)

Tom Zielund (M.S. 1997 -- Topic: Confidence displays in recommender systems)

Current Ph.D.: Dan Cosley (Current topic: Recommender systems)
 Prateep Gopalakrishnan (Current topic: Recommender systems)
 Sean McNee (Current topic: Integrating content and collaborative filtering)

Former UG: Gabriel Aguirre (NSF REU -- Topic: Explanation interfaces for recommender systems)
 George Atendido (UROP -- Topic: Collaborative filtering)
 Mo DeJong (NSF REU -- Topic: Multimedia toolkits and authoring)
 Kem Ferguson (MSDP -- Topic: Web site design)
 Mary Bernadette Garza (MSDP -- Topic: UI for recommender systems)
 Nathaniel Good (UROP & NSF REU -- Topic: Collaborative filtering & agents)
 Ammon Hall (Honors research program -- Topic: Collaborative filtering)
 Hae Young Kim (UROP -- Topic: Interactive web site design)
 (NSF REU -- Topic: Statistical techniques for improving recommender systems)
 Tony Lam (NSF REU & UROP -- Topic: Interface and experimental design for recommender systems)

Tim Lee (NSF REU & UROP -- Topic: Critique and community interfaces for recommender systems)J.J.
Plude (IBMSF project -- Topic: Interactive visualization of trace trees)
Paul Sturm (UROP -- Topic: Interaction and interface design for ISAP)
Alan Wivell (IDIM -- Major: New Media Engineering)
(additional UG students conducted directed study)

Publicity and Media Coverage

Appearances on television and radio:

Minnesota Public Radio 9/94 (Internet)
WMNN News Radio 9/97 (MovieLens)
PBS 1/97 (Information Overload)
USA Radio Network (Daybreak USA) 9/02 (Word of Mouse book)
WBZ-AM (Boston) 9/02 (Word of Mouse book)
KYW-AM (Philadelphia) 9/02 (Word of Mouse book)
KTOK-AM (Oklahoma City) 9/02 (Word of Mouse book)
WBIX-AM (Boston Business Journal) 9/02 (Word of Mouse book)
Langer Broadcasting (AM Chronicles) 9/02 (Word of Mouse book)
WLW-AM (Cincinnati) 9/02 (Word of Mouse book)
Cable Radio Network (Cabletalk) 9/02 (Word of Mouse book)
Powernomics Radio Network (Powernomics) 9/02 (Word of Mouse book)
KCCA-AM (Minneapolis) 9/02 (Word of Mouse book)

Coverage of research projects:

Inventing Tomorrow (Brain Database Project)
Inventing Tomorrow (GroupLens Project)
Pioneer Press, USA Today, Yahoo! (MovieLens Site)
Los Angeles Times (GroupLens Project)
The New Yorker (GroupLens Project)
NBC Nightly News (GroupLens Project)
ABC News *Nightline* (GroupLens Project)
also, extensive coverage of commercialized GroupLens and Net Perceptions

Technology Transfer

Founder, Net Perceptions, Inc.

Co-founder and consulting scientist at Net Perceptions, a company founded to commercialize the GroupLens collaborative filtering project. Company was founded in July 1996 and has grown to become the industry leader. Net Perceptions employs approximately one hundred and fifty employees with headquarters in Minnesota and sales offices around the world.

Technical Advisory Board, Sistina Software, Inc.

Serve as technical advisor to a company specializing in global file systems and the administrative tools for configuring them.

Advisory Board, i5 Digital, LLC

Serve as advisor to Internet start-up incubator that owns several small companies.

Principal Consulting Scientist, Essex Consulting, Inc.

Consultant to a small business that is developing a counselor information system for substance abuse counselors. Collaborated on NIH grants (including a subcontract through the U of M) and providing general technical and business guidance.

IBM San Francisco Project

Project with P. Yew and D. Lilja developing advanced Java performance tracing and visualization tools. Tools will be distributed to IBM business partners in June 1999.

Aurora Technology

Project with R. Ritenour to jointly develop and test next-generation radiology workstation. Focus is on multiple monochrome displays with detailed image control capabilities.

HA Technical Solutions

Initially served as expert witness in software copyright case. Currently consultant for firm that is developing and marketing high availability software solutions for workstations and servers.

IdeaServices

Founded by L. Lichtblau to commercialize ISAP pharmacology education web site. Site operates at <http://www.university.com/ISAP> (free for academic use). No involvement other than initial development of ISAP (licensed to IdeaServices in exchange for perpetual use license for U of M students).

Tcl Consortium.

Founding Member of Board of Directors

Other Consulting and Advisory Roles

Serve as consultant to several small and mid-sized companies in Minnesota, including Internet Broadcasting Systems, National Computer Systems, and Anlon Systems. Also have taught short courses to several larger local companies including National Computer Systems and Lockheed Martin.

Presentations since June 1994

Keynotes and Invited Plenary Presentations

Computer Society of South Africa -- invited Keynote " Human factors in collaborative filtering/recommender systems" -- 2/02

CHI SouthIndia 2002 Conference -- invited Keynote Tutorial on User Interface Design -- 1/02

Rio de Janeiro Workshop on Human-Computer Interaction Research -- invited Keynote "The GroupLens Research Project" -- 8/01

Eighth International Conference on User Modeling -- invited speaker: "Heavyweight Applications of Lightweight User Model" -- 7/01

SIGIR 99 Recommender Systems Workshop -- Invited Keynote: "Recommender Systems: Opportunities and Obstacles" -- 8/99

Fifth DELOS Workshop on Collaborative Filtering -- distinguished speaker -- GroupLens Experience and Research Issues on Collaborative Filtering -- 11/97

Invited Talks to Academia and Industry

U of M MIS Research Center (Collaborative Filtering) 9/02

University of York, England (Interfaces to Alleviate Information Overload) 5/02

University of Sunderland, England (GroupLens Research) 5/02

Napier University, Scotland (Interfaces to Alleviate Information Overload) 5/02

University of Glasgow, Scotland (Interfaces to Alleviate Information Overload) 5/02

University College, London, England (Interfaces to Alleviate Information Overload) 5/02

Cambridge University, England (Interfaces to Alleviate Information Overload) 5/02

University of Limerick, Ireland (Interfaces to Alleviate Information Overload) 5/02

Edina Rotary (Applications of Collaborative Filtering) 4/02

Carleton College (ACM Lecture -- GroupLens Research) 4/02

Kinesiology 5720 (Human Factors Issues with User Interface Design) 4/02

Sony Computer Science Laboratories, Japan (Interfaces to Alleviate Information Overload) 3/02

Osaka University, Japan (Interfaces to Alleviate Information Overload) 3/02

ATR, Japan (GroupLens Research) 3/02

University of Tsukuba, Japan (Interfaces to Alleviate Information Overload) 3/02

UNISA, South Africa (GroupLens Research) 2/02

University of Pretoria, South Africa (Multimedia Authoring) 2/02

University of Port Elizabeth, South Africa (Interfaces to Alleviate Information Overload) 2/02

University of Aarhus, Denmark (GroupLens Research) 2/02

Academy of Economical Studies, Romania (GroupLens Research) 2/02

University Lucian Blaga, Romania (Multimedia Authoring) 2/02

Allegheny College (ACM Lecture -- GroupLens Research) 2/02

Microsoft Research Asia, China (GroupLens Research) 1/02

City University of Hong Kong (GroupLens Research) 1/02

Hong Kong University of Science and Technology (GroupLens Research) 1/02

Kent Ridge Digital Laboratories, Singapore (GroupLens Research) 1/02

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National University of Singapore (GroupLens Research) 1/02
CHI North India (GroupLens Research) 1/02
IBM India Research Lab (GroupLens Research) 1/02
Cognizant Corp, India (User Interface Design) 1/02
Namahn, Belgium (Multimedia Authoring) 12/01
CERTI, Belgium (GroupLens Research) 12/01
University of Limberg and BelCHI, Belgium (GroupLens Research) 12/01
Eurecom, France (GroupLens Research) 12/01
Xerox Research Center Europe, France (GroupLens Research) 11/01
INRIA Rhône-Alpes, France (Multimedia Authoring) 11/01
Eurisco and SIGCHI Toulouse, France (GroupLens Research) 11/01
University of California, Berkeley, Human-Centered Computing Seminar (GroupLens Research) 11/01
Vrije Universiteit and SIGCHI.NL, Amsterdam, Netherlands (GroupLens Research) 11/01
University of Oldenburg, Local ACM Chapter and GI Chapter, Germany (GroupLens Research) 10/01
Fraunhofer Gesellschaft (former GMD) Bonn, Germany (GroupLens Research) 10/01
SIGCHI Austria and Center for Usability Research and Engineering, Austria (GroupLens Research) 10/01
Kinesiology 5505 -- Introduction to Human-Centered Design (HCI Overview) 10/01
MERL -- Mitsubishi Electric Research Laboratories (GroupLens Research) 10/01
University of Massachusetts, Lowell (ACM Lecture -- GroupLens Research) 10/01
MITRE Corporation (GroupLens Research) 10/01
KTH (Royal Institute of Technology), Sweden (Interfaces to Alleviate Information Overload) 9/01
University of Linköping, Sweden (GroupLens Research) 9/01
Cell Networks, Sweden (Future of HCI) 9/01
STIMDI (Swedish HCI Society), Sweden (Future of HCI) 9/01
Swedish Institute of Computer Science, Sweden (GroupLens Research) 9/01
Federal University of Rio Grande do Norte, Brazil (GroupLens Research) 8/01
State University of São Paulo, São Carlos, Brazil (GroupLens Research) 8/01
Federal University of São Carlos, Brazil (GroupLens Research and Distance Learning) 8/01
Federal University of Santa Catarina, Brazil (GroupLens Research) 8/01
Universidade do Sul de Santa Catarina, Brazil (GroupLens Research) 8/01
State University of Maringá, Brazil (GroupLens Research) 8/01
University of Tampere, Finland (GroupLens Research) 7/01
GMD IPSI, Darmstadt, Germany (GroupLens Research) 3/01
Accenture Center for Strategic Technology Research (GroupLens Research) 1/01
North Dakota State University (ACM Lecture: GroupLens Research) 5/00
University of Central Florida (ACM Lecture: GroupLens Research) 3/00
INCOSE (Systems Engineers Association) (Introductory talk on User Interfaces) 3/00
TwinSPIN (Twin Cities software process improvement network) (Introductory talk on User Interfaces) 5/99
Carlson School of Management (GroupLens Research) 4/99
Allegheny College (ACM Lecture: GroupLens Research) 12/98
UMN Computer Science Colloquium (spiral visualization, with J. Carlis) 11/98
IT 1001 (freshman seminar) (Introductory talk on User Interfaces) 11/98
UMN MSE Seminar (Internet, World Wide Web, and HCI) 10/98
MITRE (GroupLens Research) 8/98
Information Advantage (GroupLens Research) 7/98
Donaldson Company (Introductory talk on User Interfaces) 6/98
Columbia University (GroupLens Research) 5/98
UMN Health Informatics Colloquium (Introductory talk on User Interfaces) 4/98
Twin Cities Chapters ASIS/SLA (Introductory talk on User Interfaces) 3/98
University of Maryland Baltimore County (GroupLens Research) 2/98

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University of Maryland College Park (GroupLens Research) 2/98
UMN Cognitive Science Colloquium (Internet, World Wide Web, and HCI) 1/98
DEC Systems Research Center (GroupLens Research) 7/97
Xerox PARC (GroupLens Research) 7/97
Sun Microsystems Laboratories (GroupLens Research) 7/97
IBM Almaden Research Center (GroupLens Research) 7/97
Mitsubishi Electric Research Lab (GroupLens Research) 7/97
UMN Cognitive Science Proseminar (GroupLens Research) 5/97
Metropolitan State University (Multimedia Systems: Command Streams, Authoring, Synchronization) 3/97
UMN Undergraduate Computer Science Colloquium (Web architectures for interaction) 3/97
UMN Computer Science Colloquium (algorithmic issues in collaborative filtering) 2/97
UMN Pharmacology Seminar (ISAP) 10/96
Hazelden Chemical Dependency Clinic (ITreS presentation) 6/96
DataCard (Advanced talk on User Interface Design/Evaluation) 5/96
Instrument Society of America (Internet, World Wide Web, and HCI) 5/96
Xerox PARC (Multimedia Systems: Command Streams, Authoring, Synchronization) 3/96
Sun Microsystems Laboratories (Multimedia Systems: Command Streams, Authoring, Synchronization) 3/96
Loral (Introductory talk on User Interfaces) 1/96
UMN Computer Science Colloquium (multimedia command streams) 1/96
IT Alumni Association (Internet, World Wide Web, and HCI) 1/96
Stanford University (GroupLens Research) 11/95
Harvard University (Multimedia Systems: Command Streams, Authoring, Synchronization) 11/95
University of Toronto (Multimedia Systems: Command Streams, Authoring, Synchronization) 7/95
DataCard (Introductory talk on User Interfaces) 4/95
U.W. Milwaukee (Multimedia Systems: Command Streams, Authoring, Synchronization) 3/95
UMN Center for Learning, Perception and Cognition (Introductory talk on User Interfaces) 2/95
Honeywell Technology Center (Internet, World Wide Web, and HCI) 2/95
UMN Computer Science Colloquium (human interfaces to prediction systems) 1/95
U.C. Berkeley (Multimedia Systems: Command Streams, Authoring, Synchronization) 10/94

Conference and Workshop Presentations

ECSCW 2001 -- "PolyLens: A Recommender System for Groups of Users" -- 9/01
AAAI 99 -- "Combining Collaborative Filtering with Personal Agents for Better Recommendations" -- 7/99
CHI 99 Recommender Systems Workshop -- "Toward Research Resources for Recommender Systems" -- 5/99
CSCW 98 -- "Filterbots in GroupLens" (with J. Riedl) -- 11/98
UIST '98 -- "Interactive Visualization of Serial Periodic Data" (with J. Carlis) -- 11/98
AAAI Workshop on Recommender Systems -- "No Filter is an Island" -- 7/98
Software Publishers' Association 13th Annual Conference -- "The Web Value Chain" -- 9/97
IFIP WG 13.1 Workshop on Teaching Design of Interactive Systems -- "The Overnight Staff" -- 5/97
CHI 97 Basic Research Symposium -- "Creating Multimedia System Toolkits" and
"The GroupLens Research Project: Exploring Collaborative Filtering" -- 3/97
Usenix Annual Technical Conference -- "Experiences with GroupLens: Making Usenet Useful Again" -- 1/97
AMIA Fall Symposium -- "Web-Based Delivery and Open-Architecture Database Support in the
ITreS Counselor Information System" -- 10/96
Collaborative Filtering Workshop at U.C. Berkeley -- "GroupLens Collaborative Filtering System" -- 3/96
Tcl/Tk Workshop -- "TclProp: A Data-Propagation Formula Manager for Tcl and Tk." -- 7/95
Tcl/Tk Workshop -- "Tcl Commands as Media in a Distributed Multimedia Toolkit." -- 7/95
CHI 95 Basic Research Symposium -- "Fulfilling the Promise of Multimedia: Intelligent and Usable Multimedia Applications" -- 4/95
1994 International Conference on Consumer Electronics -- "State Problems in Human-Controlled Devices" -- 6/94

Demonstrations and Laboratory Tours

Agents '98 laboratory tour (GroupLens project) 5/98
IT Week laboratory tour (GroupLens project) 5/98 and 5/01
IT Week laboratory tour (Multimedia projects) 5/97 and 5/96
CSCW 96 -- "GroupLens Collaborative Filtering System" (refereed demonstration) -- 11/96

Short Courses and Tutorials

AAAI 2002 -- full-day tutorial on Recommender Systems 7/02
CHI SouthIndia 2002 Conference -- invited Keynote Tutorial on User Interface Design 1/02
FH Joanneum (Graz, Austria) -- one-credit short course on Collaborative Filtering and User Interface Design (15 hours) 10/01
ACM CSCW 2000 Conference -- full-day tutorial on Recommender Systems 12/00
ACM E-Commerce Conference 2000 -- half day tutorial on Recommender Systems for E-Commerce 10/00
National Computer Systems (full-day short course on UI design for the Web) 11/99
ASIS MN 1999 Continuing Education Class (user interfaces, information overload, internet) 3/99
Tcl/Tk Workshop -- 1/2 day tutorial on constraint programming -- 7/97
Tutorial at Tcl/Tk 1997 (constraint programming) 7/97
Plymouth Schools Young Science Program (communication through the Internet) 4/97
Tutorial at Usenix Winter Technical Conference (introduction to user interfaces) 1/97
UMN "Hot Topics" half-day course (Internet, HCI, Object-Oriented Programming with J. Riedl) 6/96
Loral (Lockheed Martin) (20 hour course on UI design) 6/96

Panels and Other Talks

User Modeling 2001 -- "Industry Panel" (Panelist) -- 7/01
CHI 2001 -- "Start-up or Ph.D." (Panelist) -- 4/01
RASTEC (Rhetoric student group) Panel on 2000 Presidential Election -- 11/00
Mount Zion Brotherhood -- "Starting an Internet Company: From Idea to IPO" -- 2/00
Saint Paul JCC (GroupLens Research) 12/99
Minnesota Digital Technology Summit -- Session Chair and Panel Organizer -- 10/97
NSF Interactive Systems Grantees Workshop -- Panel Chair and Moderator -- 8/97
AMIA Fall Symposium -- "Computer Technology, The Internet, and Mental Health Care Informatics" (Panel) -- 10/96
Tcl/Tk Workshop -- "The Future of Tcl/Tk" (Panel) -- 7/96
ACM Multimedia Conference -- "Multimedia Education" (Panel) -- 11/95
Tcl/Tk Workshop -- "Tcl/Tk in the Classroom" (Panel) -- 7/95
Minority Round Table (research in Computer Science) 7/94