

Steven L. Rohall

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Summary

Highly-experienced practitioner with a background in industrial research, software development and architecture, development management, and consulting. Focus areas include collaborative computing, data analytics and machine learning, recommender systems, expertise location, and information visualization. Have developed and deployed systems for enterprise and consumer use. Experience with a variety of programming languages, toolkits, and operating systems and able to pick up new technologies as needed. Responsible for writing proposals and reviewing projects with customers and sponsors. Other activities include: writing and reviewing academic papers and patent disclosures, mentoring junior staff and interns, and assisting business development by performing due diligence.

Education

1983 – 1988 *MASSACHUSETTS INSTITUTE OF TECHNOLOGY* *Cambridge, MA*
Master of Science in Electrical Engineering and Computer Science (concentrating in computer science) and Bachelor of Science in Computer Science and Engineering. Undergraduate GPA: 4.7; graduate GPA: 5.0 (scale of 5.0). Sigma Xi, Tau Beta Pi, and Eta Kappa Nu Honor Societies.

Experience

2014 – Present *NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH,* *Cambridge, MA*
Associate Director, Informatics Systems

- Implemented *Chem Recommender*, a system for suggesting related work to medicinal chemists based upon recent entries in their lab notebooks. (*NodeJS, Elasticsearch, Python, RDKit*)
- Augmented scientists' expertise profiles by mining scientific databases, combined with named-entity recognition and unsupervised topic modeling. (*NodeJS, Elasticsearch, Python, Gensim*)
- Team member developing the *BioSample Ordering* application to allow scientists to order genomic reagents for use in assays. (*Java, Jersey, Spring, MongoDB, Chef, Jenkins*)

1998 – 2014 *IBM RESEARCH, Senior Technical Staff Member* *Cambridge, MA*

- Created novel visualizations of operational risk data and of predictive workforce analytics. (*Java servlets, JavaScript, D3.js, JQuery, Jade, Tomcat*)
- Developed a real-time, streaming visualization of Twitter data for public use. (*Java servlets, JavaScript, Dojo, Tomcat*)
- Led development of the *Reinventing Email (ReMail)* prototype. Contributed code including visualizations of email data. Transferred code to product. Received an *IBM Outstanding Technical Accomplishment Award* recognizing a research contribution to IBM in excess of \$100 million. (*Java, Eclipse, Lotus Notes, DB2*)
- Directed the research and development of *Beyond Discussions*, a web-based collective intelligence system utilizing text and social analytics. System used by teams of thousands of people. (*Java servlets, JavaScript, JSP, Dojo, Apache HTTPD, Tomcat, DB2*)
- Managed the development and deployment of *LiveDeck*, a web-based shared slide editing and note-taking tool. (*ActionScript/Flash, Java servlets, Tomcat*)
- Led the *Zipper* project investigating the use of aspect-oriented programming to add real-time sharing to text-based editors in Eclipse without modifying the underlying applications. (*Java, AOP, ODF*)
- Investigated the use of virtual world technologies for supporting enterprise collaboration. (*C++, Java servlets, Torque, ActionScript/Flash, Jetty, CouchDB*)
- Integrated Lotus Sametime into Rational Team Concert Jazz to provide awareness and chat capabilities within the IDE. Received *IBM Technical Accomplishment Award* for product impact. (*Java, Eclipse*)

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- Wrote a *collaborative visualization framework* that allowed for visualization state to be shared synchronously and “bookmarked” for asynchronous sharing. (*Java, Piccolo, Lotus Sametime*)
- Developed *OverViews* for Lotus Notes—visualizations to be used in place of conventional, list-oriented Notes views for document navigation. (*Java applets, Lotus Notes*)

1994 – 1998 *TASC, Senior Member of Technical Staff* *Reading, MA*

- Program Manager and development lead for a financial services company web site. Constructed database of financial data, deployed secure web server, and developed programs for accessing the database, providing subscription services, generating user interface including charts and graphs, and handling electronic commerce. (*C, CGI, HTML, Netscape Enterprise Server, Oracle*)
- Designed and implemented *ImageShare*, a collaborative viewing tool for extremely large images. (*C++, Motif, TIFF*)
- Program Manager for the *Visual Information Environment Prototype*, investigating the combined use of collaborative computing and novel, gesture-based input technologies to support next-generation command and control systems. (*C++, Motif, TIFF*)
- Explored novel multimedia presentations by creating *Neighborhood USA*, a prototypical small-town information service including electronic yellow pages. (*C, CGI, HTML, Netscape Enterprise Server*)

1985 – 1994 *BELL COMMUNICATIONS RESEARCH, Member of Technical Staff* *Morristown, NJ*

- Implemented the *Rendezvous* system for building synchronous, multi-user applications. Built primitive graphical objects and specialized color and image-handling software. (*Common Lisp, CLOS, X Window System*)
- Designed and implemented *Sonix*, a network-transparent audio server along with an API for programming it. Instructed others in the use of *Sonix* for practical applications such as a screensaver utilizing speaker identity verification. (*C, sockets*)
- Implemented the user interface of the *Personalized Information Grazing Service*, a system for filtering the flood of electronic information. (*C, Andrew Toolkit, Oracle*)
- Devised methods for incorporating diverse terminal capabilities into *Touring Machine*, a prototype software platform for supporting multimedia communications. (*C, sockets*)
- Investigated the use of ISDN and other low-bandwidth networks for collaborative applications.

Professional Activities MIT Educational Council
Member of the ACM and ACM SIGCHI

Patents and Publications Seventeen patents and five patents pending. Forty-three technical publications. Available on personal website.

References Available upon request.

