

## Steven L. Rohall

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<https://slrohalla.com>

**Summary** Highly-experienced practitioner with a background in research, software development and architecture, development management, and consulting—employing computational methods in the analysis of found data, particularly unstructured text and network data, to solve critical business problems. Focus areas include data analytics and machine learning, recommender systems, expertise location, collaborative computing, and information visualization. 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. Looking to apply these skills to exploring solutions to important societal issues.

### Experience

#### Highlights

- 2014 – Present *NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, Cambridge, MA*  
*Associate Director, Informatics Systems*
- Discovered scientists' expertise by mining scientific databases and applying natural language processing techniques like named-entity recognition and unsupervised topic modeling.
  - Proposed and implemented a recommender system for suggesting related work to medicinal chemists based upon recent entries in their laboratory notebooks.
- 1998 – 2014 *IBM RESEARCH, Senior Technical Staff Member Cambridge, MA*
- Developed a real-time, streaming visualization of Twitter data, using topic modelling and sentiment analysis.
  - Led development of the *Reinventing Email (ReMail)* prototype and contributed code including novel visualizations of email data. Received an *IBM Outstanding Technical Accomplishment Award* recognizing a research contribution to IBM in excess of \$100 million.
  - Directed the research and development of a web-based collective intelligence system utilizing text and social analytics.
  - Used aspect-oriented programming to add real-time sharing to existing single-user applications.
  - Investigated the use of virtual world technologies for supporting enterprise collaboration.
  - Integrated Lotus *Sametime* awareness and instant messaging into Rational *Team Concert* development environment resulting in an *IBM Technical Accomplishment Award*.
- 1994 – 1998 *TASC, Senior Member of Technical Staff Reading, MA*
- 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.
  - Program Manager and development lead for a financial services company web site.
  - Designed and implemented a collaborative viewing tool for extremely large images.
- 1985 – 1994 *BELL COMMUNICATIONS RESEARCH, Member of Technical Staff Morristown, NJ*
- Implemented a system for building synchronous, multi-user applications. Built primitive graphical objects and specialized color and image-handling software.
  - Designed and implemented a network audio server and an API for programming it.
  - Implemented the user interface for a personalized information filtering system.

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### 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.

### Selected Technologies

Languages: JavaScript, Java, C/C++, Common Lisp/CLOS, Scheme, Python

Databases: Elasticsearch, MongoDB, CouchDB, relational (DB2, Oracle)

Platforms: NodeJS, Lotus Notes, Eclipse, ActionScript/Flash, Torque, X Window System

Toolkits: RDKit, Gensim, D3.js, Piccolo, Spring, Motif, Andrew Toolkit

Web: Tomcat, Apache HTTPD, Jetty, Jade, Jersey, JQuery, Java servlets, JSP, DOJO, CGI, HTML

Deployment: AWS, Chef, Jenkins

### Patents and Publications

Seventeen patents and five patents pending. Forty-three technical publications.

Available on personal website, <https://slrohall.com>.

### Professional Activities

MIT Educational Council

Member of the ACM and ACM SIGCHI

### References

Available upon request.