

Grant B. Harris

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Education

Massachusetts Institute of Technology, Cambridge, Massachusetts

Bachelor of Science in Mechanical Engineering, 1981. Concentrations in thermodynamics, thermo-economics, energy systems, solar architecture, systems dynamics and control; programming, graphics and technology policy.

Experience

Marine Biological Laboratory, Woods Hole, MA (2001-present)

Scientific Informatics Analyst, Cellular Dynamics Program.

Instrumentation engineering for live-cell imaging using polarized light and fluorescence microscopy. Design and development of software for instrument control, image acquisition and processing, and data management using open-source bioimage informatics tools. Design of custom components for the Micro-Manager for instrument control and acquisition system and ImageJ for image processing. Systems and network support; Development of multimedia presentations and video library archiving. Design and machining work of hardware components.

(For details, see my [webpage at MBL](#).)

ImageJDev.org at the University of Wisconsin, Madison (2009-2011)

Project Co-Leader. Architect for the re-design of the open source image processing platform, ImageJ. Designed architecture of application framework emphasizing interface (API) design for backward-compatibility, modularity, interoperability, and extensibility. (www.ImageJDev.org)

Workframe, Inc., Cambridge, MA (1987 – 2001)

Founder and president. Software development and engineering consulting to clients in hardware/software product/system development, financial services, cosmetics, pharmaceuticals, industrial design, instrumentation, publishing, video production, manufacturing, healthcare, and legal services. Recruited and managed a team of software developers. Performed financial, marketing, sales, project management, client contact, development, contract, and intellectual property licensing activities.

Delivered consulting, facilitation, and training focused on improving coordination and collaboration in organizations through business process mapping and re-design, and information systems design. Focus on creative design and development processes, coordination, project/process management, role-definition, accountability and trust, and team building. Experienced in communication and teamwork training, group facilitation, and process consultation. Certified mediator. Clients included: Merrill Lynch & Co., Mercury Computer Systems, Thermo Jarrell-Ash, Pfizer, G.D. Searle Pharmaceuticals, The Center for Quality of Management, Design Continuum, Project Software & Development, Inc., SeaChange Technology, Teradyne, Hammer and Company, LaserData, Lancome, Inc. and CBS News. (For details, see [more about Workframe, Inc.](#))

Radnet, Inc., Cambridge, (May - Nov. 1997)

Product Manager for Strategic Alliances - responsible for technical marketing aspects of strategic partnerships and alliances, acting as liaison between the business development and software development groups; extensive research on internet and web-based groupware technologies, including email, discussion tools, workflow, document management, application-hosting, etc. Performed evaluation and analysis of competitive and complementary products, and helped in development of the strategic technical architecture of the WebShare product. Designed and delivered marketing presentations and product demonstrations to potential partners and at trade shows.

Publications

[Polarized Fluorescence Microscopy to Study Cytoskeleton Assembly and Organization in Live Cells](#), McQuilken, M., Mehta, S.B., Harris, G., Oldenbourg, R., and Gladfelter, A.S. 2015. *Curr. Protoc. Cell Biol.* 67:4.29.1-4.29.13.

Algorithms for Measuring Orientation of Single and Ensemble of Molecules with Real-Time Fluorescence Polarization Microscope. Verma, A., S. Mehta, A. Verma, G. Harris. R. Oldenbourg, T. Tani. IEEE International Symposium on Biomedical Imaging 2013.

[Escaping the Box: Using a New Process Model to Support Participation and Improve Coordination](#), co-authored with Steven S. Taylor, published in *The Center for Quality in Management Journal*, Vol. 6, No. 3, Winter 1997.

[Organizational Structuration: Interaction and Interrelation](#), co-authored with Steven S. Taylor, presented to EGOS 14th Colloquium (European Group on Organizational Studies), Maastricht, The Netherlands, 1998.

Teaching Experience

- ImageJ Developers Conference, designed and delivered *Micro-Manager* workshop, Luxemburg, 2012.
- AQLM at MBL. Workshop on object tracking using open source software. 2011, 2012.
- Teaching & Learning Lab at MIT. Design and delivery of communication and teamwork workshops for student project teams in engineering classes. 2000.
- The Center for Quality of Management. Delivered executive education courses, 'Conversation for Action' and Total Quality Management for Senior Executives: Planning and Implementation, focusing on interaction, coordination, collaboration, team building, and trust. Cambridge, 1998, 1999.
- Design and delivery of business process analysis and design training sessions, Workframe, Inc., 1995-1998.
- Cambridge Center For Adult Education. Instructed 10 week course on solar energy principles, 1979.
- Portsmouth Abbey School. Designed and instructed solar energy workshop, instructed students on PDP-8 computer and acted as counselor for summer high school program, Portsmouth, RI, 1979.

Professional Development

- *Analytical & Quantitative Light Microscopy*. Marine Biological Laboratory, Woods Hole, MA, 2006.
- *American Management Associations*, Two summer programs in management, marketing, organization and communications. Hamilton, NY. 1980.
- *Essential Facilitation* – Interaction Associates' program delivered by MIT Professional Learning Center, 2001.
- *Process Consultation, Dialogue and Organizational Culture* workshop with Edgar Schein, 1999, 2000 & 2001.
- *Mediator Transparency: An Alternative to Silence*, Program on Negotiation at Harvard Law School., 2000.
- *Inquiry As Intervention*, workshop with the Public Conversation Project, Cambridge, 2000.
- *Mediation @ MIT*, 37 hour program leading to certification in mediation, 2000.
- *Organizational Development Practicum*, 2-day program with *IBIS Consulting Group*, 2000.
- Professional development workshops at the International Society for the Psychoanalytic Study of Organizations Symposium, Toronto, 1999.
- Member of the *Greater Boston Organizational Development Network* and the *Mass. Bay OD Learning Group*.
- *Conversational Competence: The key to building high performance organizations* at The Center for Quality of Management. Cambridge, 1997.

Technical Expertise

- Business process analysis, workflow mapping and design, functional requirements gathering, data modeling, and systems design.
- Extensive experience with *Microsoft Office; MS Project*, information organization and visualization tools including *MindManager, Inspiration, Visio, and PaintShop*; variety of operating system platforms and networks, especially Windows.
- Software programming, architecture and object-oriented design, esp. in Java, including GUI design with Swing, concurrency/multi-threading, generics, annotations; Java Native Interface to utilize third-party libraries for hardware control and data interfacing. Familiar with development tools including Maven, Git, NetBeans IDE and Platform. Some experience with C#, C++, Python, PROLOG, PASCAL, FORTRAN, BASIC, and HTML, Lotus Notes and Framework.
- Internet/web technologies including browsers and servers, newsreaders, discussions, conferencing, and authoring systems; n-tier architectures. Web-application develop with FrontPage, Lotus Notes/Domino, and Drupal; E-mail, messaging and directory services, including Outlook/Exchange, Notes, SMTP, MHS, X400/500;
- Machining and fabrication; mechanical and electrical troubleshooting and repair; sailor, navigator.
- Optical microscopy, cellular and molecular biology, genomic bioinformatics.

Additional Information:

[Bibliography](#) from my research on: Management, Change and Organization Theory; Organizations and Information Technology; Project Management and Process Modeling; Business Process Redesign and Reengineering; Trust, Accountability & Commitment; Design Theory and Practice; Information Systems Design; Workflow and Groupware, Language and Communications.

[Proposal for the Establishment of the Learning College at MIT, 2000](#)