Geoff S. Sobering

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Selected Experience

Sr. Research Software Engineer **July 2005 – Current**
Tomotherapy, Madison, WI

Team-lead and contributor to various research projects in the areas of medical-physics, software-architecture, and visualization. Transitioned research developments to product-development engineers including working on combined research/PD teams. Created trade-show demonstrations and supported marketing during the introduction of new products. Part of the team introducing Agile/Scrum development methodologies into the organization. Some technologies used: Java, Swing, UML, DB2, CORBA, parallel-computing, Eclipse, Ant, JUnit, Silk-test, 64-bit Linux, Clearcase, and GIT.

Sr. Software Engineer **Aug. 2004 – July 2005**
Isthmus Group, Madison, WI

Developed an intranet application to interact with the *Midwest Independent Transmission System Operator* (MISO) for a regional power utility using Java, J2EE, SOAP, SWT, Oracle, and Hibernate. Mentored the adoption of Agile/XP methodology.

Sr. Software Engineer **Sept. 1999 – Aug. 2004**
Berbee, Madison, WI

Developed Internet, e-Commerce, and business-support intranet applications for a variety of clients including large mail-order/Internet companies, a national insurance company, and a regional medical institution. Technologies included Java, J2EE, DB2, MQ Series, AIX, Linux, Websphere, JBoss, Apache, Eclipse, UML, CVS, Ant, and JUnit. Mentored the adoption of Agile/XP methodology in numerous projects including: pair-programming, continuous-integration, automated testing, and test-driven design (TDD).

Sr. Scientist **May 1995 – Sept. 1999**
GE Healthcare, Waukesha, WI

Led an international, multidisciplinary team of scientists and engineers in identifying and correcting system stability problems during development of the first superconducting-magnet open-MRI system. Responsible for organizing the final integration and initial tests of the first prototype system including first-image and first human scan.
Lead Systems Engineer for clinical spectroscopy product development. Evaluated research for possible application as products and supported customer sites during development and evaluation of new products. Extensive training and experience with 6-Sigma, DFSS, and Lean-production techniques.

Director of Scientific Computing **Jan. 1989 – May 1995**
***In Vivo* NMR Research Center, National Institutes of Health, Bethesda, MD**

Designed, implemented, and managed extensive computing facility for use by Center researchers. Primary investigator and collaborator on diverse bio-medical research projects including: functional MRI (fMRI), spectroscopic imaging, and mathematical modeling. Member of numerous NIH committees charged with various scientific and technical tasks.

Research Assistant **Sept. 1984 – Jan. 1989**
Chemistry Department, University of Wisconsin-Madison

Maintained and upgraded various departmental instruments including hardware, software, and integration tasks. Instructed students on the theory and use of various instrumentation including: NMR, FT-IR, ESR, PES, and Raman spectrometers.

Education

Ph.D. in **Chemistry** **Jan. 1989**
University of Wisconsin-Madison Madison, WI

Developed, designed, and constructed the hardware and software for a novel Fourier-Transform visible/UV-wavelength spectrometer and microwave plasma torch. Project ultimately resulted in the formation of a new group and a total of three Ph.D. degrees.
Qualifying-exam research-proposal was the start of another project which resulted in three Ph.D. degrees.

Bachelor of Arts in **Chemistry** and **Mathematics/Computer Science** **May 1982**
Drew University Madison, NJ

Independent research project in Liquid Chromatography using liquid CO_2 as a mobile phase. Developed low-cost computer controllers for a number of undergraduate laboratory instruments.

Publications and Presentations

Author or co-author on 12 papers in peer-reviewed scientific journals and 34 presentations (including invited talks) at scientific and technical conferences in the fields of chemistry, physics, bio-medicine, medical-physics, and computer-science.

Co-inventor on two patents (one pending).

Provided data-analysis and visualization for the cover-illustration of the October 1990 *Science* magazine.

Contributing editor for *Midwest Flyer* Magazine. Regular contributor of articles and photos on aviation topics including numerous cover photographs.

References

References available on request.