Curriculum vitae of Dana A. Freiburger

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Research Interests

Wide-ranging research interests in history of science and history of technology.

Education

Ph.D., History of Science, Medicine, and Technology. University of Wisconsin-Madison. Dissertation title: *The Place of Science in Nineteenth-Century American Catholic Higher Education*. Advisors: Ronald L. Numbers and Susan E. Lederer (2022).

M.A., History of Science. University of Wisconsin-Madison. Thesis: *"We shall be able to beat those yattya hottya [pompous] people" – Building a Japanese Research Tradition in Physics: Hantarō Nagaoka and the Spectroscope*. Advisor: Richard Staley (2002).

M.Sc., History of Science: Instruments, Museums, Science, Technology. University of Oxford. Dissertation: *18th-Century Surveying Instruments of John Thompson*. Advisor: Stephen Johnston (1999).

M.E., Technical Japanese. University of Wisconsin-Madison (2005).
M.S., Engineering Management. Santa Clara University, California (1994).
B.S., Computer Science. California Polytechnic State University, San Luis Obispo (1979).

Recent (and not so recent) Publications

"'Richardson's "GPUs,' circa 1922" in the *CONNECT* e-newsletter of SIGHPC, August 2026 (online).

"High-Performance Tabulating in the Late 19th Century" in the *CONNECT* e-newsletter of SIGHPC, May/June 2025 13:1.

"Taking a Special Interest in Supercomputers in the 1980s" in the *CONNECT* e-newsletter of SIGHPC, September 2024 12:2.

"Cattell's Catholics: Who were these American Men (and Woman) of Science?", *American Catholic Studies* 134:4 (Winter 2023), 47-78. DOI: 10.1353/acs.2023.a916587

"Computer Benchmarks: 50 Years Ago and Now" in *CONNECT* e-newsletter of SIGHPC, October 2023 11:2. DOI: 10.1145/3632261.3632267

"Processing & Production of Scientific Data: An historical marriage, now in a permanent divorce?" in the *CONNECT* e-newsletter of SIGHPC, May 2023 11:1.
DOI: 10.1145/3632250.3632254

"One hundred years ago..." in *CONNECT* e-newsletter of SIGHPC, December 2022 10:4.

"'To Any Degree': Jesuit Medical Schools in the Nineteenth-Century United States" in Kyle B. Roberts and Stephen R. Schloesser, eds., *Crossings and Dwellings: Restored Jesuits, Women Religious, American Experience, 1814-2014* (Leiden: Brill, 2017), 220-255.
DOI: 10.1163/9789004340299_007

"A History of Scientific Instruments at Stonyhurst College, Lancashire, England," *Bulletin of the Scientific Instrument Society* 106 (September 2010), 20-30.

長岡半太郎の新資料について [The New Addition to the Hantaro Nagaoka Papers], Okamoto Takuji, Osako Masahiro, Suzuki Kasuyoshi, and Dana A. Freiburger, *Bulletin of the National Science Museum, Tokyo, Series E* 29 (2006), 7-13.

"Report on some Scientific Instrument Collections in Japan," *Bulletin of the Scientific Instrument Society* 83 (December 2004), 30-32.

"Scientific Instruments and Early Plant Ecology in the U.S.A.," *Rittenhouse* 17:1 (2003), 9-25.

"Building a Japanese Research Tradition in Physics: Hantarō Nagaoka and the Spectroscope," *Nuncius* 17:2 (2002), 673-689. DOI: 10.1163/182539102X00171

Web Sightings and Reviews, a feature that explored Internet web sites linked to themes of scientific instruments and the history of science. *Rittenhouse* issues 49, 50, 51, 52, 53, 54, and 55 (June 1999 to June 2002).

Book Reviews

Review of Wershler, Darren; Emerson, Lori; Parikka, Jussi, *The Lab Book: Situated Practices in Media Studies*. H-Sci-Med-Tech, H-Net Reviews. January 2023.
URL: https://www.h-net.org/reviews/showrev.php?id=58238

Review of Peter Heering; Roland Wittje: *Learning by Doing: Experiments and Instruments in the History of Science Teaching*, *Isis* 103:4 (2012), 767-769.
DOI: 10.1086/670076

Review of Peter M. J. Hess; Paul L. Allen: *Catholicism and Science*, and Don O'Leary: *Roman Catholicism and Modern Science: A History*, Dana A. Freiburger and Ronald L. Numbers, *Isis* 100:3 (2009), 636-638.
DOI: 10.1086/649148

Invited Talks

"Teaching Astronomy and Nineteenth-century American Catholic Higher Education," an online talk presented to members of the Madison Astronomical Society (March 2021).

"Practicing what they Preach: The Bachelor of Science degree in Nineteenth-Century American Catholic Higher Education," History Department colloquium (Sept. 2019).

Selected Papers Presented

"When multitasking became social and what did supercomputers have to do with it?", a talk presented at the annual SHOT conference held online (October 2026).

"The center is where you make it: The spectroscopic research of Japanese Physicist Hori Takeo," given at the XLV SIC Symposium, Neuchâtel, Switzerland (September 2026).

"*Digital Stars as seen through their Software Artifacts*," presented at the 16th Biennial History of Astronomy Workshop at Notre Dame University (June 2025).

"Exploring the Impact of Weight Scales Used to Appraise Children's Health in Early Twentieth-Century America," given at the XLIII SIC Symposium, Ottawa, Canada (September 2024).

"*Work So Difficult that It Could Give the Computer a Headache*," presented at the 15th Biennial History of Astronomy Workshop at Notre Dame University (June 2023).

"'Such an important and widespread influence on our society today': Teaching Computer Science at the University of Wisconsin–Madison in the 1960s," an online talk presented at the *Pedagogy, Popularization, and the Public Understanding of Science* conference organized by the Science History Institute in Philadelphia (October 2020).

"The B.S. degree: A New Objective in Nineteenth-Century American Catholic Higher Education," a paper given at the HSS meeting, Utrecht, The Netherlands (July 2019).

"What Hath God Taught – Teaching Telegraphy at Notre Dame in the 1870s," a flash talk presented at the 2018 SHOT conference held in St. Louis, Missouri (October 2018).

"The many universes of Seddie Bingham / Sister Aloysia (1873-1899)," a 'picture-in-1000-words' presentation at the Tenth Triennial Conference on the History of Women Religious at Santa Clara University, California (June 2016).

"Sweater Girl Chickens – The rise and fall of the Chicken Breast Meter" given at the Scientific Instrument Commission meeting held at the 24th International Congress of History of Science and Technology, Manchester, England (July 2013).

Outreach

"Science in Catholic Colleges in the 19th Century" - 30-minute radio interview on WLCR 1040 AM (Louisville, KY) for their *Science and Catholicism* local talk show. Interviewed by Christopher Graney, Professor of Physics, Jefferson Community & Technical College, Louisville, KY. Aired July 17, 2013, with an encore airing October 22, 2014.

Organized a public showing of the documentary *Living through March 11: Words that remember the Great East Japan Earthquake* by Kenji Aoike (2012), followed by panel discussion with Toshihiro Higuchi, History of Science dept. ACLS/Mellon scholar, and Sharyl Kato, The Rainbow Project, Madison. This event took place on 10 March 2014, on the University of Wisconsin-Madison campus and we were fortunate to have a group of visiting Fukushima University students in the audience.

Research and Travel Grants Received

Summer Award for Upper Division and Graduate Students from the Charles Redd Center for Western Studies at Brigham Young University, Utah, for dissertation-related research into St. Mary's Academy in Salt Lake City, ca. 1875-1900 (May 2020).

Lemelson Center Travel to Collections Award, Smithsonian Institution. To learn how and why American chicken producers turned to science in the mid-twentieth century, I studied collection materials held in the Division of Work & Industry related to John E. Weidlich, an accomplished West Virginia chicken breeder, and specifically his trio of scientific instruments developed in pursuit of a better bird (April 2013).

National Science Foundation "Summer in Japan" program. Research into the history of Japanese spectroscopy during Meiji and Taishō periods, hosted by Prof. Okamoto Takuji at the University of Tokyo (Summer 2005, Award 0513081).

Travel Grant enabling me to participate in "The Making of the Spectroscope" workshop at the Deutsches Museum in Munich, Germany. Workshop support from the Scientific Instrument Commission and the Hans R. Jenemann Foundation (September 2001).

National Science Foundation "Summer in Japan" program. I spent six weeks working at the Information Systems Center of Japan Information Center of Science and Technology (JICST), Tokyo, where my assigned project was the evaluation of two computer systems used for document scanning and handling, culminating in a report and presentation titled "Evaluating Two Japanese Language Full Text Retrieval Systems" (Summer 1994, NSF Award INT-9406111).

Exhibits

"Lines of Faith," a student exhibit at the Museum of the History of Science in Oxford on Instruments and Religious Practice in Islam, open from March – June 1998. A collective effort on the part of the seven students following the M.Sc. course based at this museum. URL: http://www.mhs.ox.ac.uk/students/97to98/exhibits/index.htm

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Professional Societies

Association for Computing Machinery (ACM), Society for the History of Technology (SHOT), History of Science Society (HSS), Scientific Instrument Commission (SIC).

Professional Service

I have reviewed submitted articles for the *British Journal of the History of Science* and *Berichte zur Wissenschaftsgeschichte*.

Work Experiences

January 2024 – July 2025: Member of the Local Organizing Committee and assistant to the two Programme Committee co-chairs for the 27th International Congress of History of Science and Technology held at the University of Otago, Dunedin, New Zealand.

July – November 2023: Provided historical research and artifact display support at the SC23 Supercomputer Conference held in Denver, Colorado, as a member of their 35th Anniversary Committee.

January 2000 – June 2022: Program Assistant for the History of Cartography Project, University of Wisconsin-Madison, holding the position of Illustrations Editor. It was my responsibility to order and process images from libraries and archives world-wide for essays submitted for the *History of Cartography* series of volumes.

August – November 2018: Research Assistant serving as the Artifact Display lead for the 30th Anniversary Committee in support of the SC18 Supercomputer Conference held in Dallas, Texas.

May 2015 – July 2017: Secretary for International Programme Committee Program Chair Ronald Numbers at the 25th International Congress of History of Science and Technology held in Rio de Janeiro, Brazil.

January 2008 – May 2008: Graduate Teaching Assistant for "History of Science 202: The Making of Modern Science" where I led four discussion sections for this 3-unit course.

1976 – January 2000: Computer professional working in operating system development, system benchmarking, software design and test, and software configuration management. My closing position was with Amdahl Corporation, Sunnyvale, California, as a Principal Software Engineer.