

# JOHN MAURER

Pacific Islands Ocean Observing System (PacIOOS) • University of Hawai'i at Mānoa  
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Honolulu, HI, USA (on the island of O'ahu)

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## EDUCATION

- **University of Colorado at Boulder:** M.A. in [Geography](#), May 2006. Advisor: [Dr. Konrad Steffen](#). Thesis topic: Local-scale snow accumulation variability on the Greenland ice sheet from ground-penetrating radar (GPR) ([click here for details](#)).
  - **University of Colorado at Boulder:** [Graduate Certificate in Remote Sensing](#), Program in Atmospheric and Oceanic Sciences (PAOS), Fall 2001 - May 2003.
  - **Stanford University**, Palo Alto, CA: B.A. Music, *with distinction*, June 1999. Specialization in "Music, Science and Technology" (MST) through the Center for Computer Research in Music and Acoustics (CCRMA): coursework in computer technology (programming; synthesis & analysis of sound; music software), recording technology, digital signal processing, and physics/acoustics ([click here for details](#)).
  - **Hopkins Marine Station (HMS)**, Stanford University, Monterey, CA. Winter 1998. Marine science and underwater acoustics ([click here for details](#)).
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## RELEVANT COURSEWORK

- **Remote Sensing:** Remote Sensing of Environment, Remote Sensing Image Analysis, Remote Sensing Field Methods, Remote Sensing Graduate Seminar, Remote Sensing of the Atmosphere and Oceans.
  - **Geography:** Climate Modeling, Readings in Climatology, History and Theory of Geography, Research Design in Physical Geography, Generic Mapping Tools (GMT), Earth System Science Databases.
  - **Computer Science:** Introduction to IDL, Programming Methodology, Programming Abstractions, Programming Paradigms, Introduction to Unix, Programming Perl, Web Database Applications, Advanced JavaScript, Software Construction Workshop, Perl Best Practices, Unidata Workshop (NetCDF and THREDDS)
  - **Physics:** Mechanics, Electricity, Magnetism.
  - **Calculus:** Calculus I, Calculus II.
  - **Statistics:** Graduate Statistics.
  - **Music, Science and Technology:** Computer Sound, Computer Algorithms, Research in Computer Music, Theory and Practice of Audio Recording, Psychoacoustics.
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## COMPUTER SKILLS

- **Geospatial:** Python Matplotlib, Matlab, ENVI, IDL, GMT, MapServer, GDAL/OGR, PostGIS, OpenEV, Google Earth, Google Maps API, KML, GeoJSON, OGC Services (WMS, WFS, WCS, SOS, CSW), THREDDS Data Server (TDS), NetCDF, OPeNDAP, Live Access Server (LAS), ERDDAP, Dapper/DChart, metadata standards (DIF, FGDC, ISO 19115, NetCDF CF).
  - **Languages:** Python, Perl, IDL, Matlab, SQL, HTML, CSS, JavaScript, JSON, AJAX, XML, XML Schema, XSLT; once upon a time: SAS/STAT, C, C++, Lisp.
  - **Software:** Dreamweaver, Word, Excel, PowerPoint, Photoshop, AMASS.
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## HONORS AND AWARDS

- Best Poster Paper Award, [IPY GeoNorth 2007](#): First International Circumpolar Conference on Geospatial Sciences and Applications, Yellowknife, Northwest Territories, Canada, 2007. [Click here to view poster](#); [click here to view paper](#).
- [CIRES 2007 Outstanding Performance Award](#), Cooperative Institute for Research in Environmental

Sciences (CIRES), University of Colorado at Boulder, 2007. 1 of 2 nominated and selected annually for the Service Award out of ~500 employees.

- [CU Art in Science | Science in Art](#) juried exhibition, University of Colorado, 2007. 1 of 30 images selected for a traveling museum exhibit. [Click here to view image.](#)
- [Robert M. Golden Medal for Excellence in Humanities and Creative Arts](#), Stanford University, 1999. Awarded to top 10% of Stanford undergraduate honors projects in the creative arts.
- Stanford Undergraduate Research Opportunities Major Grant recipient (\$2000), for Computer-Automated Music Composition Honors project, 1998-1999.
- Stanford Undergraduate Research Opportunities Small Grant recipient (\$500), for Underwater Acoustics research at Hopkins Marine Station, Monterey, CA, Winter 1998.
- [Deans' Award for Academic Accomplishment](#), Stanford University, 1997. 1 of 11 selected out of 6500 undergraduates.

## PROFESSIONAL EXPERIENCE

*Click on a job title below for an overview of the position and career milestones:*

- **Pacific Islands Ocean Observing System (PacIOOS)**, [University of Hawai'i at Mānoa](#), Honolulu, HI, USA. July 16, 2009 - present:
  - [PacIOOS Data System Engineer](#)
- **National Snow and Ice Data Center (NSIDC)**, [University of Colorado](#), Boulder, CO, USA. March 1, 2001 - June 1, 2009:
  - [Web/Database Applications Engineer](#), September 13, 2004 - June 1, 2009.
  - [User Services Representative](#), July 1, 2003 - September 10, 2004.
  - [Operations Technician II](#), May 1, 2002 - June 30, 2003.
  - [Operations Technician I](#), March 1, 2001 - April 30, 2002.

## PUBLICATIONS

- Maurer, J. (2007), A Summer on Ice: Research on the Greenland Ice Sheet. In B.W. Pipkin, D.D. Trent, R. Hazlett, and P. Bierman. *Geology and the Environment*. 5th ed. (2 pp.) Belmont, CA: Brooks/Cole.
- Maurer, J., J.A. (2006), Local-scale snow accumulation variability on the Greenland ice sheet from ground-penetrating radar (GPR). Master's thesis, University of Colorado at Boulder. Available from <http://www2.hawaii.edu/~jmaurer/gpr/>.
- Maurer, J. (2004), An Introduction to the EOSDIS Core System (ECS) at NSIDC. NSIDC Special Report 12. Boulder, CO, USA: National Snow and Ice Data Center. Digital media. <http://nsidc.org/pubs/special/12/index.html>

## PRESENTATIONS

*Talks:*

- Maurer, J. and R. Coughlin (2012), [PacIOOS GIS Workshop: Open Source Applications in Web Mapping](#). *Hawaii Pacific GIS Conference*. March 8, 2012, Honolulu, HI, USA. [[Click here to view Google Maps API presentation](#) (132 KB).]
- Potemra, J. T., J. Maurer, R. Coughlin, R. Buzzetti and S. DeCarlo (2010), [Data services for Pacific Island communities: Developing the Pacific Integrated Ocean Observing System](#). *IMDIS-2010 Proceedings, IFREMER/SISMER*, M. Fichaut and V. Tosello, Editors, 224 pp.
- Maurer, J. and K. Steffen (2007), Local-scale snow accumulation variability on the Greenland ice sheet from ground-penetrating radar (GPR). Presentation #NS14A-06. *American Geophysical Union (AGU) Fall Meeting*. December 10-14, 2007, San Francisco, CA, USA. [[Click here to view abstract](#); [click here to view presentation](#) (5.1 MB).]
- Maurer, J., K. Steffen, and R. Huff (2006), Local-scale snow accumulation variability on the Greenland ice sheet from ground-penetrating radar (GPR). *36th International Arctic Workshop*. March 16-18, 2006, Boulder, CO, USA. [[Click here to view abstract](#).]

*Posters:*

- Maurer, J., C. G. Meyer, and E. Burns (2014), Near Real-Time Tiger Shark Monitoring Around Maui. Abstract #13386, Poster #2088. Ocean Sciences Meeting. February 23-28, 2014, Honolulu, HI, USA. [[Click here to view](#) (4.7 MB).]
- Iwamoto, M., J. Maurer, and D. Brown (2014), Using Real-Time Data in the Classroom with the Pacific Islands Ocean Observing System (PacIOOS) Voyager. Abstract #14030, Poster #1729. Ocean Sciences Meeting. February 23-28, 2014, Honolulu, HI, USA. [[Click here to view](#) (5.2 MB).]
- Maurer, J., J. T. Potemra, and R. Coughlin (2012), Data Services for IOOS Regional Association for the Pacific, PacIOOS. Poster #IN41A-1472. American Geophysical Union (AGU) Fall Meeting. December 3-7, 2012, San Francisco, CA, USA. [[Click here to view](#) (4.46 MB).]
- Maurer, J., J. Bohlander, T. Haran, T. Scambos, and R. Bauer (2008), Geo-spatial browse and distribution of NSF-OPP's Antarctic ice and climate data via the Web: Antarctic Cryosphere Access Portal (A-CAP). Poster #IN33A-1163. *American Geophysical Union (AGU) Fall Meeting*. December 15-19, 2008, San Francisco, CA, USA. [[Click here to view](#) (381 KB).]
- Maurer, J. (2007), Atlas of the Cryosphere: Mapping the Earth's Frozen Regions on the Internet. Poster/Paper. *IPY GeoNorth 2007*. August 20-24, 2007, Yellowknife, NWT, Canada. [[Click here to view poster](#) (0.7 MB); [click here to view paper](#) (0.3 MB).]
- Maurer, J. (2007), Atlas of the Cryosphere: A Web Map Service for the Earth's Frozen Regions. Poster #3-5. *Geoinformatics*. May 17-18, 2007, San Diego, CA, USA. [[Click here to view](#) (0.7 MB).]
- Maurer, J. and E. M. Sheffield (2006), Atlas of the Cryosphere: A Dynamic Web Mapping Tool for Exploring the Cryosphere. Poster #ED23B-1241. *American Geophysical Union (AGU) Fall Meeting*. December 11-15, 2006, San Francisco, CA, USA. [[Click here to view](#) (0.7 MB).]
- Maurer, J., R. Swick, and V. J. Troisi (2006), Dynamic Access to Cryospheric Data at the National Snow and Ice Data Center (NSIDC). Poster #IN43C-0913. *American Geophysical Union (AGU) Fall Meeting*. December 11-15, 2006, San Francisco, CA, USA. [[Click here to view](#) (0.6 MB).]
- Maurer, J., M. Marquis, and M. Savoie (2004), Tools for working with the Geoscience Laser Altimeter System (GLAS) Data Products from the Ice, Cloud, and land Elevation Satellite (ICESat) Mission. Poster #C33B-0354. *American Geophysical Union (AGU) Fall Meeting*. December 13-17, 2004, San Francisco, CA, USA. [[Click here to view](#) (0.3 MB).]
- Maurer, J., M. Marquis, and M. Savoie (2004), Tools for working with the Geoscience Laser Altimeter System (GLAS) Data Products from the Ice, Cloud, and land Elevation Satellite (ICESat) Mission. Poster. *Workshop on NASA Earth Observing System (EOS) Snow and Ice Products*. November 16-17, 2004, Landover, MD, USA. [[Click here to view](#) (0.3 MB).]
- Maurer, J., S. J. S. Khalsa, M. Marquis, and M. Smith (2003), Advanced Microwave Scanning Radiometer - Earth Observing System (AMSR-E) product overview. Poster #H32B-0550. *American Geophysical Union (AGU) Fall Meeting*. December 8-12, 2003, San Francisco, CA, USA. [[Click here to view](#) (0.9 MB).]
- Schumacher, H. V., S. S. Khalsa, M. C. Marquis, J. A. Maurer, and M. H. Savoie (2003), Data Products from the Ice, Cloud, and Land Elevation Satellite (ICESat) Geoscience Laser Altimeter System (GLAS) at the National Snow and Ice Data Center (NSIDC) Distributed Active Archive Center (DAAC). Poster #C32A-0423. *American Geophysical Union (AGU) Fall Meeting*. December 8-12, 2003, San Francisco, CA, USA. [[Click here to view](#) (1.6 MB).]

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## SOFTWARE/TOOLS DEVELOPMENT

- **PacIOOS Voyager.** A Google Maps API for dynamically viewing and downloading maps and data related to Hawai'i and other U.S.-affiliated Pacific Islands as part of the Pacific Islands Ocean Observing System (PacIOOS). <http://pacioos.org/voyager/>.
- **PacIOOS Voyager Mobile.** A mobile-friendly version of my PacIOOS Voyager mapping site. <http://pacioos.org/voyager/mobile/> and [iOS App Store](#)
- **Hawai'i Tiger Shark Tracking.** Animates the movements of several tiger sharks in near real-time who were fitted with satellite tags near Maui in late 2013. <http://pacioos.org/projects/sharks/>.
- **PacIOOS Data Search.** A user-friendly search interface for finding geospatial datasets at PacIOOS, powered by pycsw and PostGIS to utilize OGC Catalog Service for the Web (CSW) search standards. <http://pacioos.org/search/>.
- **PacIOOS Metadata.** Web-accessible folders (WAF) for FGDC and ISO 19115 XML geospatial metadata records including XSLT stylesheets for HTML presentation. <http://pacioos.org/metadata/>.
- **A-CAP: The Antarctic Cryosphere Access Portal.** A dynamic web map server for Antarctic snow-and-ice related parameters and more. <http://nsidc.org/agdc/acap/>.
- **Atlas of the Cryosphere.** A dynamic web map server for viewing information from global to local

scales related to snow, sea ice, glaciers, ice sheets, permafrost, and more. <http://nsidc.org/data/atlas/>.

- **GPR IDL Tools.** IDL and ENVI software tools for opening, viewing, filtering, and analyzing Malå Geoscience RAMAC™ ground-penetrating radar (GPR) data. <http://gpr-idl-tools.sourceforge.net>.
  - **Trak.** A web/database interface for tracking and searching user support requests at the National Snow and Ice Data Center (NSIDC). Also includes a rolodex of user contact information and a utility for generating custom mailing lists.
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### CONFERENCES ATTENDED

- [Ocean Sciences Meeting](#), February 23-28, 2014, Honolulu, HI, USA.
  - [Hawaii Pacific GIS Conference](#), March 5-7, 2012, Honolulu, HI, USA.
  - U.S. Integrated Ocean Observing System (IOOS) Regional Data Management Workshop, April 27-28, 2011, Silver Spring, MD, USA.
  - U.S. Integrated Ocean Observing System (IOOS) [Regional Product Developers Workshop](#), May 17-19, 2010, Ann Arbor, MI, USA.
  - [Unidata Training Workshop](#), NetCDF and THREDDS Data Server (TDS), August 3-6, 2009, Boulder, CO, USA.
  - American Geophysical Union (AGU) Fall Meeting, December 10-14, 2007, San Francisco, CA, USA.
  - Geoinformatics (GSA), May 17-18, 2007, San Diego, CA, USA.
  - American Geophysical Union (AGU) Fall Meeting, December 11-15, 2006, San Francisco, CA, USA.
  - Virtual Globes Scientific Users Conference, 1st Annual, July 10-12, 2006, Boulder, CO, USA.
  - International Arctic Workshop, 36th Annual, Institute of Arctic and Alpine Research (INSTAAR), March 16-18, 2006, Boulder, CO, USA.
  - Federation of Earth Science Information Partners (ESIP) 2006 Winter Conference, January 4-6, 2006, Washington D.C., USA.
  - International Arctic Workshop, 34th Annual, Institute of Arctic and Alpine Research (INSTAAR), March 11-13, 2004, Boulder, CO, USA.
  - American Association for the Advancement of Science (AAAS) Annual Meeting, February 12-16, 2004, Seattle, WA, USA.
  - American Geophysical Union (AGU) Fall Meeting, December 8-12, 2003, San Francisco, CA, USA.
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