

## Tracy Arras

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### Experience Summary

Year	Position	Employer
2003 – present	Instructor	Oregon State University, Corvallis
1994 - 1999	Assistant Professor	University of Alaska, Anchorage
1995 - 1998	Research Associate	University of Alaska, Anchorage, ICCHS
1994 - 1996	Consultant	Alaska GIS Services
1992 - 1993	Research Assistant	CSU, Fresno - GeoIPS
1991 - 1992	Research Assistant	CSU, Fresno - ERI
1988 - 1991	R&D Engineer	Brunswick Defense
1985 - 1988	Project Engineer	Rohr

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### Education

Master of Science, Civil Engineering - California State University, Fresno. 1993. Graduate GPA 4.0

Bachelor of Science, Engineering Technology - California State Polytechnic University, Pomona

### Employment History

**Instructor**, Oregon State University, Corvallis, Department of Civil, Construction and Environmental Engineering, Corvallis, OR. 2003 – present.

- Developing and strengthening lower division curriculum through
  - Active and cooperative learning
  - Integrated curriculum projects
  - Utilization of student laptops in a wireless classroom environment
- Teach undergraduate and graduate GIS in Water Resources course
- Teach lower division technology courses
  - GIS and Spatial Information (ARCGIS)
  - Engineering Graphics and Design (AutoCAD and Civil3D)
  - Problem Solving with Excel and VBA
- Advise undergraduate CE students 2005- 2006

*Principal Investigator for the following Research Projects:*

**Leveraging a Wireless Network with Active and Cooperative Learning, 2004-2005.**

**Assistant Professor**, University of Alaska, Anchorage, School of Engineering, Department of Geomatics, Anchorage, AK. August 1994 to 1999.

- Adept expertise in GIS , remote sensing and information technology
- Developed and strengthen Geomatic curriculum and GIS course material
- Supervised teacher aids, lab technicians, classrooms and laboratories
- Taught undergraduate and graduate students the following courses:
  1. Fundamentals of GIS
  2. Spatial Analysis and modeling
  3. Remote Sensing & GIS for Natural Resource Management
  4. Integration of Geomatics Technologies
  5. GIS Design and Management
- Provided support, guidance, mentoring, and motivation for students
- Collaborated and coordinated with other faculty, research institutes, state and federal agencies for program strengthening, research and application projects.
- Provided assistance in obtaining department accreditation from the Accreditation Board for Engineering and Technology (ABET).
- Established university-wide site license of ESRI GIS software.
- Served appointment by the Governor on the State Information Systems and Telecommunications Committee

Principal Investigator for the following Research Projects:

**UAA, GIS Master Plan**

For: University of Alaska, Anchorage.

Compiled and developed a GIS master plan for evaluation of current resources and future development planning.

**UAA, Facility Management GIS**

For: University of Alaska, Anchorage.

The project involved evaluation, design, testing and implementation of a Facility Management system for transportation, buildings, utilities (electric, water, gas & sewer) and parking.

**Spatial information science research for natural resource management**

For: Natural Resource Fund Grant.

Development of a fuel model using satellite images and GIS of forests damaged by spruce bark beetle on Kenai Peninsula, Alaska.

**Development of a professional short course in geographic information systems**

For: Faculty Development Grant.

Development of a short course on GIS using ArcView software.

**Research Associate/Affiliate Associate Professor**, University of Alaska Anchorage, Institute for Circumpolar Health Studies 4/95 to present.

Provided the Institute for Circumpolar Health Studies (ICHS) with GIS project development, management, and analysis.

**Consultant**, Alaska GIS Services, Eagle River, AK. 1994 - 1996.

Provided technical expertise in GIS and remote sensing/image analysis. Consultation was provided for natural resource, planning, and land use applications.

Selected projects:

**Timber Resource GIS in Northern Vietnam**

GIS database design, implementation and analysis of timber plantations in Northern Vietnam.

**Fish and Wildlife Refuge Automated Image processing System**

Designed and implemented an automated processing system for the digital mapping of refuges.

**Research Assistant**, Geographic Image Processing Systems (GeoIPS) CSU, Fresno, CA, 5/92-5/93.

- Performed image processing, image analysis of remotely sensed data and compiled into GIS for wetland and vegetation identification as part of JPL NASA research grant.
- Analyses utilizing SAR (radar) and Landsat multispectral Images.
- Conducted for evaluation and correlation of high disease incidence rates of malaria to ecological conditions (wetlands, rainfall, vector paths of mosquitoes, population proximity to watercourses).

**Research Assistant**, Engineering Research Institute (ERI), CSU - Fresno, CA. 9/91-5/92.

Performed and assisted in environmental water quality re-mediation study for the Lower Kings River, Ca. utilizing GIS and Image Processing.

**Research and Development Engineer**, Brunswick Defense, Marion, VA. 8/88 - 8/91.

- Designed, manufactured, tested and evaluated Department of Defense special security and non-security projects, related to missile and aircraft components.
- Assisted in trouble-shooting engineering and manufacturing on problems and provided solutions to product areas of non-conformance.
- Provided project interface with customers on engineering design, scheduling, quality testing and product evaluation.

**Project Engineer**, Rohr, Riverside, CA. 8/85-8/88.

- Provided project engineering on aerospace components
- Performed implementation of engineering changes, trouble shooting of production problems, scheduling and customer support.