

Tracy Arras

arrast@engr.orst.edu

(541) 737-9697

Experience Summary

Year	Position	Employer
2011 – Present	Senior Instructor	Oregon State University, Corvallis
2003 – 2011	Instructor	Oregon State University, Corvallis
1999 – 1999	Associate Professor	University of Alaska, Anchorage
1994 - 1999	Assistant Professor	University of Alaska, Anchorage
1995 - 1998	Research Associate	University of Alaska, Anchorage, ICHS
1994 - 1996	Consultant	Alaska GIS Services
1992 - 1993	Research Assistant	CSU, Fresno - GeolPS
1991 - 1992	Research Assistant	CSU, Fresno - ERI
1988 - 1991	R&D Engineer	Brunswick Defense

Education

Water Resources Engineering, Ph.D., Oregon State University. 2014.

Civil/Surveying Engineering. M.S., California State University, Fresno. 1993. LSIT.

Engineering Technology, B.S., California State Polytechnic University, Pomona. 1986.

Employment History

Senior Instructor, Oregon State University, School of Civil and Construction Engineering, Corvallis, OR.
2003 – present.

- Instructor for technology and water resource engineering courses
 - GIS in Water Resources
 - GIS and Spatial Information
 - Engineering Graphics and Design
 - Introduction to Virtual Design and Construction
 - Capstone CE Senior Design – Water Resource Engineering
 - Engineering Problem Solving
- OSU CCE ASCE Teacher of Year 2011

PI-Investigator

A GIS approach to estimating continuous hydraulic conductivity and equivalent hydraulic conductivity. 2012-2014

The study investigated the plausibility of using GIS to estimate continuous hydraulic conductivity values in Oak Creek watershed, Oregon. The effects of stream density and DEM resolution on conductivity values were investigated. Innovative methods for estimating equivalent conductivity values for the watershed were explored using GIS.

Co-Investigator

Developed a comprehensive GIS hydraulic model of the wastewater conveyance system for Seattle Public Utilities, Washington. 2008-2009.

Lead the OSU team in developing the GIS model of Seattle Public Utilities' wastewater conveyance system. This entailed networking conveyance systems, delineating sewersheds, attaching consumption data and creating prepared sewersheds models ready for EPA SWMM5 modeling.

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.

- Promoted to Associate Professor and received tenure, August 1999
- Expertise in Geomatics and spatial information technology
- Supervised teacher aids, lab technicians, classrooms and laboratories
- Collaborated and coordinated with other faculty, research institutes, state and federal agencies for program strengthening, research and application projects.
- Served appointment by the Governor on the State Information Systems and Telecommunications Committee

Principal Investigator for the following Research Projects:

UAA, GIS Master Plan

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

UAA, Facility Management GIS

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

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

Development of a short course on GIS using ArcView software.

Research Associate/Affiliate Associate Professor, University of Alaska Anchorage, Institute for Circumpolar Health Studies 4/95-6/99

Provided the Institute for Circumpolar Health Studies (ICHS) with GIS project development.

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.

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.

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 GPS, Surveying, 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.