School Of Graduate Studies and Research

Invites faculty, staff, and students to attend

Faculty Research Colloquium

Presented by

Dr. Robert Arthur

Humanities and Social Sciences Department
School of Arts and Sciences

"GIS: Definition and Applications"

Wednesday, December 4, 2013, at 3:00 PM
Conference Room - Building D

Abstract

GIS has rapidly expanded since its inception to become a global enterprise providing a major source of employment. As an academic subject it has grown into a multidisciplinary science used for research and teaching in over 80 academic disciplines. GIS training in universities incorporates subjects from varied disciplines such as statistics, geography, computer science, and engineering. This has caused many to rebrand GIS from Geographic Information Systems to Geographic Information Science. GIS is an intuitive methodology for storing, managing, manipulating and displaying spatial data. As so much of our environment, whether natural or built, is spatial in nature, the benefit of GIS is invaluable to government and industry alike. As an educational tool, GIS provides a controlled problem solving environment in which students can pursue many interests. Problem based learning is invaluable in providing the necessary skills required in today's businesses. Visual representation of data within GIS often presents dramatic images. Tables and graphs can easily be generated and included, further emphasizing numeracy skills required by university graduates. This talk will introduce the audience to the general concepts of GIS and then move rapidly into highlighting many different applications. A focus will be given to the majors already taught in AURAK; engineering, business and biology as well as applications that serve the community at large. The use of GIS in academia will be covered in the later part of the talk, explaining how GIS can be incorporated into curriculum in such a way as it benefits existing programs, assists researchers, how it can be used as an educational tool, and to manage the university's physical plant and student records.

About the Speaker

Dr. Dr. Arthur was awarded his PhD in Geography from the University of Calgary, Canada in 2002. He received his MSc in 1996 and his Bachelors (1st. Class Honours) in Geography with a minor in Urban Studies in 1994, both also from the University of Calgary. He taught at several institutions in Calgary during his PhD candidacy followed by positions at North Dakota State University, the University of the South Pacific in Fiji, and the UAEU before joining AURAK this year. His PhD research examined the spatial and temporal dimensions of traffic collisions which involved GIS. This research has expanded to include the social aspects of driver behavior. He has worked on regional studies of the Liwa Oasis area involving analysis of agricultural production and marketing and is currently assisting a team of researchers for Warsaw University who are producing a book on the region. He is currently developing a research project to model and map the effects of seal level rise and the consequent coastline inundation of the RAK coast. This builds upon previous research completed examining the same problem for the city of Abu Dhabi.