



## New geomatics lab among the finest in Canada

If a picture is worth a thousand words, the new geomatics computer lab at the University of Regina speaks volumes. Geomatics is a set of technology-based disciplines focusing on the gathering, analysis, dissemination and management of geographic information. The new lab is called TERRA—The Environmental Research and Response Applications lab and has GIS (geographic information system), remote sensing and advanced statistical capabilities. It gives students and instructors in the Department of Geography access to a geomatics lab that is second to none in the country, according to geography professor Joe Piwowar.

So, what does it all mean?  
"Geomatics is the power of a picture enhanced with volumes of embedded information," explains Ben Cecil, who heads the Department of Geography at the U of R. "We can take many sets of spatial data, combine them, and make them more easily understandable in a map image. Each layer in the map is a data set," he adds, "and each layer can speak a thousand words."

The U of R is a geomatics leader on the Prairies, and was the first post-secondary institution in Saskatchewan to establish such a program. However, in more recent times, the University's equipment fell behind the technological curve. About two years ago Cecil and Piwowar decided it was time to renew an emphasis on geomatics.

"Geomatics technologies and services are one of the fastest growing industries in Canada," says Cecil. "It's essential training for anyone working in geography."

The lab features state-of-the-art computers, software and printing equipment purchased in part with a \$138,000 grant from Western

Economic Diversification Canada. The lab also has extensive digital, print/plotting and file storage infrastructure.

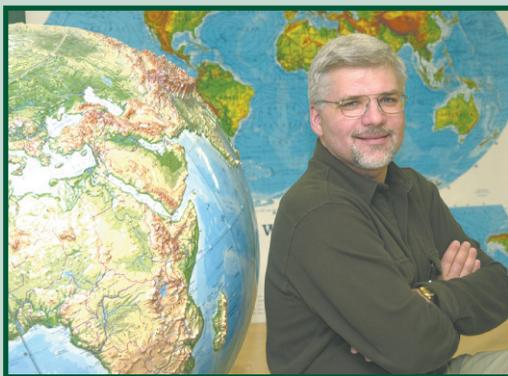
"There's nothing on campus with this kind of computational power," says Cecil. In fact, in the past, he sometimes booked time on a computer in Ontario to process the complex calculations required by his research, which focuses on social and economic material.

Senior undergraduate and graduate students and researchers are using TERRA to address a range of environmental and social issues. For example, the lab could map areas of excess water supply or excess demand to help formulate water management and agricultural policies. By mapping shifts in school-age populations within amalgamating school divisions, the lab could assist in establishing and revising school busing policies and transportation routes. These examples, Cecil points out, underline the importance of the word "response" in the TERRA acronym.

"We're not just a think-tank room. Our research is directed to help find answers to environmental and social issues," he says.

For example, Piwowar is using large amounts of data from remote sensing images collected from satellites orbiting the earth to analyze possible impacts of climate change. By looking at physical changes on the earth over time, he is able to learn more about earth's climate.

"Besides looking at particular areas, the time element is integral to the analysis," says Piwowar. "The historical record is limited because remote sensing has only been around for 30 years, but those years are the most important that we have when it comes to climate change. What I'm looking at tags on



Department of Geography faculty member Joe Piwowar says the University's new geomatics lab is one of the best in Canada.

U of R photo by AV Services

to the end of the time series of my colleagues Dave Sauchyn (a U of R researcher who analyses tree rings) and Peter Levitt (biology department researcher who studies lake sediments) to analyse climate change."

Both Cecil and Piwowar are gratified by the increase in student interest created by TERRA lab. Students from all disciplines are expressing interest in GIS courses, Piwowar notes. Enrollment at the master's of science

level, adds Cecil, is up more than 40 per cent over last year, and he expects the number of graduate students will increase by about the same amount next year. In addition, the U of R now has a Canada Research Chair (CRC) in geomatics and sustainability, although who will fill the chair will not be decided until next spring.

"The TERRA lab was foundational to attract and sustain research from the CRC

## Allied Health Centre serves entire community

The opening of the new Centre for Kinesiology, Health and Sport (CKHS) also opened up the possibility of many new programs and services on campus. One such possibility—the recently formed Allied Health Centre (AHC)—is now a reality.

The AHC brings together health and wellness-related programs and services that had been scattered around the U of R campus, and adds chiropractic and massage services for the first time. The centre also offers collaborative and clinical opportunities for researchers.

The various programs and services—student health, family medicine and massage therapy clinics, physiotherapy, chiropractic and the Dr. Paul Schwann Centre—are available to the University community and to the general public.

Many members of the community will

recognize the Dr. Paul Schwann Applied Health and Research Centre (DPSC) because of its work in rehabilitating people with coronary artery disease and designing personalized rehabilitation programs for clients with chronic or musculoskeletal (involving both muscles and the skeleton) injuries. The DPSC, in collaboration with the Regina Qu'Appelle Health Region, offer a cardiac rehabilitation, risk reduction, and maintenance program. After a heart attack, many people have a fear of exercise, explains Paul Richard, a consultant in cardiac rehabilitation and chronic disease prevention at the centre. "We help them exercise in a safe, supervised environment." Besides exercise three days a week, the DPSC offers clients who have suffered heart attacks access to classes about diet, medications and advice on exercising.

The centre, located on the second floor of the CKHS, also provides testing and training services for athletes at all levels of sport. "We design programs that will help rehabilitate a client or train an athlete to the best functional state possible," says Patrick Ash, who coordinates exercise therapy and high performance services for the DPSC. "This involves designing conditioning programs that meet the specific needs of each client or athlete."

The corporate wellness service develops exercise and educational programs for workplaces. Some companies request that the centre do an assessment of their needs, explains workplace health and research coordinator Nancy Lighthart, while others come with requests to address specific needs. The DPSC also approaches potential clients that might benefit from the

corporate wellness services it offers.

All of the professionals working in the AHC are eager to show off the state-of-the-art equipment and facilities it offers. "Consolidating and amalgamating health services on campus is more convenient for our clients and staff," says Health Pro operations manager Yvonne Slobodian. "It's also a better way to let the community know about the range of services that exist here."

There are a couple of other welcome features, now that winter has arrived. The Centre for Kinesiology, Health and Sport and the AHC are linked to the new residence towers, so students can reach it without going outside. There is underground parking below the building, which is particularly welcome for off-campus clients.

More information is available at: [www.uregina.ca/kinesiology](http://www.uregina.ca/kinesiology) or call 306-337-2640.

### CAMPUS LIFE CALENDAR

Dec. 25-Jan. 3  
University closed

Sun., Dec. 26 - 1 p.m.  
**Ninth Annual Alumni Association Family Skate**  
Alumni, family and friends are invited to burn off some seasonal calories on Boxing Day!  
Complimentary beverage, prizes and free admission.  
Sherwood Twin Arena  
Info: 585-4838

Thurs., Jan. 6  
Winter semester classes begin

Tues., Jan. 11 - 6:30 p.m.-8 p.m.  
**Institut franais and SIPP lecture**  
Living in Interesting Times: The Political Dynamics of a Minority Government in Ottawa  
Speaker: Gilles Dupeppe, Leader of the Bloc Quebecois  
Education Auditorium  
Info: 585-5863

For a complete Calendar of Events at the University of Regina visit our Web site at [www.uregina.ca](http://www.uregina.ca)



UNIVERSITY OF REGINA



The First Nations University of Canada was the site of the Dec. 8 announcement that actor Gordon Tootoosis (left) and Canadian Paralympian Lisa Franks (centre) will serve as honorary chairs of the 2005 Canada Summer Games. The Games will bring over 4,500 Canadian athletes to Regina August 6-20, 2005. The University of Regina has partnered with the 2005 Canada Summer Games and will play a key role as the site of the athletes' village, media results centre, and the venue for basketball and volleyball competitions. Pictured with Tootoosis and Franks is Mo Bundton, (right) 2005 Canada Summer Games executive vice-president and Bob Ellard, (back row) president and chair of the board of governors.

U of R photo by AV Services

We want to hear from you!  
Tell us what you think of the U of R Update page  
E-mail your comments to  
[communications@uregina.ca](mailto:communications@uregina.ca)