A groundbreaking $88 million federal investment in national high performance computing (HPC) resources will provide University of Manitoba researchers access to powerful new computing tools and allow them to share ideas with their colleagues across the country.

The University of Manitoba is a partner in Westgrid, one of Canada’s seven major HPC consortia that together are creating a nationwide network of HPC facilities. New funding for this unified HPC strategy was announced on December 21 in Toronto by representatives from the Government of Canada, the Canada Foundation for Innovation (CFI), and the Natural Sciences and Engineering Research Council of Canada (NSERC). CFI will provide $78 million for the new network, and NSERC will provide an additional $10 million. Matching funds from provincial and industry sources are expected to bring total funding to nearly $180 million.

“This announcement is a historic day for Canadian research,” said Jonathan Schaeffer, a Westgrid co-principal investigator who led Westgrid’s participation in the project. “When combined with provincial and industry matching funds, Westgrid will acquire more than $50 million of computing infrastructure to support research in areas such as climate modeling and prediction, deciphering the human genome and solving compelling problems in science and engineering.

“This investment will give Manitoba researchers better access to powerful computing resources, allowing them to compete on a level playing field with the rest of the world,” said University of Manitoba physics professor Byron Southern, a member of WestGrid’s Executive Committee, and project leader for the U of M. “This national network will not only be a great new tool for individual research programs, it will also open the door to new collaborations between researchers at different institutions.”

The new investment marks the first time CFI has identified a specific research infrastructure of strategic priority for the country and brought together all stakeholders — universities, provincial and federal funding agencies — to collaborate on the development of a purposefully shared pan-Canadian resource. The University of Manitoba is one of more than 60 partners across Canada.

The process leading up to the announcement mobilized Canada’s entire HPC community — previously operating as separate regional consortia competing for resources — to work together on the development of a unified HPC strategy for Canada.

This major investment will ultimately benefit more than 6,000 investigators performing intensive computationally-based research at more than 60 institutions across the country.

“This represents a major leap forward for Canada’s HPC community,” said Eliot Phillipson, President and CEO of CFI. “This investment will provide researchers with the tools to solve large-scale computational problems that we could not even have imagined tackling 10 years ago.”

BY FRANK NOLAN
Research Promotion

U of M part of $88M network

Getting to the bottom of things
Roman graves reveal clues about ancient life

Lea Stirling, Classics, Canada Research Chair in Roman archaeology.

What can graves in Tunisia tell us about everyday life in a Roman city? Quite a lot, if you know what to look for.

Lea Stirling, Classics, has been excavating sites in the Roman city of Leptiminus, Tunisia, for more than a decade. For the past three summers, her work has been focused on a cemetery that was used from the second to the sixth centuries AD.

“It’s quite exciting, because it has such a long period of continuity,” said Stirling, who holds a Canada Research Chair in Roman archaeology. “It covers one of the big changes in Roman burial practices, when there was a movement away from cremating people to burying them. The cemetery also shows the transition from pagan burial rituals to Christian ones.”

Stirling leads an international team of 20 researchers, including graduate students from the University of Manitoba and other universities in Canada, the US and Tunisia. The team has excavated a number of graves in the ancient cemetery, and has recovered a variety of artifacts, including statuettes of Venus, fragments of burial shrouds, and the remnants of food offerings.

“These things give us real insight into burial practices, and the food offerings are particularly fascinating,” said Stirling. “What the people gave their dead in terms of food can tell us something about their belief in the afterlife, and it can tie into things like local cults and religions.”

Stirling’s team is also examining how the graves were constructed, which can give clues about a deceased person’s personal wealth and social status.

“We found one rock-cut tomb that was plastered on the inside, and included paintings of a ship,” she said. “We have also recovered a set of early Christian mosaics from an underground crypt that has stone walls and a vaulted ceiling. This would have taken some time to build, since the bedrock would have to be excavated by hand, so it likely belonged to a prominent citizen.”

Stirling will be presenting her research on January 23, as part of the Get to Know Research at Your University speaker series. Her presentation will outline her team’s findings over the last three years, and it will also reveal what life is like for an archaeological team working for weeks at a time under the hot Mediterranean sun.

The presentation begins at 7:00 pm in the Smartpark boardroom at 135 Innovation Drive. Admission is free, and everyone is invited to attend.

For more information, please call Kimberley at 474-9020.

BY FRANK NOLAN
Research Promotion

Roman graves reveal clues about ancient life

Byron Southern, Physics and Astronomy, is project leader for the University of Manitoba part of Canada’s HPC strategy.

This Lunch Hour has 33 Minutes

By Frank Nolan

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Comments, submissions and event listings to:
stenfaniu@ms.umanitoba.ca
Phone: (204) 474-9020
Fax: (204) 261-5475

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