

OCAD president joins ORANO board



Sara Diamond presented at the 2006 Ontario R&E summit.

Sara Diamond, President of the Ontario College of Art & Design (OCAD) and celebrated artist and new media designer, has joined the Board of Directors of the Optical Regional Advanced Network of Ontario (ORANO).

"We are thrilled to have someone of Sara's calibre join us," says Board Chair Maxim Jean-Louis, President and CEO of Contact North/*Contact Nord*. "Sara will bring a fresh and unique perspective, and I'm personally very pleased that she will be part of our governance team during this next phase of ORION," he said.

Diamond, who joined OCAD as President in 2005, has also most recently been among the catalysts behind ground-breaking collaborations. She has spearheaded the Digital Futures Initiative (DFI), which is a key part of her transformational agenda for OCAD. DFI is a cross-disciplinary program that links knowledge in art and design to emerging digital forms and technologies.

OCAD is also a partner in the Consortium on New Media, Culture, and Entertainment R&D in the Toronto Region (CONCERT), which supports the advancement of a regional innovation network to build R&D capacity within the entertainment and creative sector.

says Phil Baker, ORION President/CEO. "She is fully engaged in leveraging the benefits of new technologies to drive research and innovation in the arts, design and new media, and is a leading advocate for applying design technology to business and industry."

Unanimously recommended by the Council of Ontario Universities to represent Ontario universities, Diamond joins senior representatives of Ontario's research and education and business communities on the board of ORANO.

For more information, read the official announcement at: www.orion.on.ca/news/pdf/SaraDiamondJoinsBoard.pdf.

"We've had the privilege of working with Sara and collaborating with OCAD on several initiatives,"



What's inside...

Major Ontario survey of research technology needs	Page 2
Interuniversity sports webcast live and on VOD	Page 2
Colleges need to embrace new technologies to reach today's student	Page 3
ORION hosts fifth anniversary reception	Page 3
Showcase: UOIT and Trent use AccessGrid to pioneer collaborative program delivery	Page 4
Buzz...	Page 5

Major Ontario survey of research technology needs

Ontario researchers and educators are being asked to participate in a major cross-discipline survey to determine the collaboration and technology needs of their academic and teaching work and research requirements now and in the coming years.

Hoping to reach a healthy sampling of the 75,000+ scientists, researchers and educators with access to the ORION network, the 2008 Ontario Research and Education Technologies Survey aims to determine the current and future collaboration and technology needs of Ontario's researchers and educators.

"We need to have a full understanding of how researchers, scientists and educators are using the network today and how they see their collaboration applications and projects evolve in the future," said ORION President/CEO Phil Baker.

The survey is targeting every postsecondary institution, public research facility and teaching hospital in Ontario. The initiative also seeks to increase awareness among researchers and educators about the capabilities offered by networks like ORION and CANARIE.

The survey will help ORION understand its users' requirements and implement measures to meet them. Results provide baseline information on current needs and anticipated requirements for collaboration tools, networks, online research and learning resources, and connection to sensor devices and scientific instruments.

Working with the research and education community at colleges and universities, as well as other research, education and science organizations, ORION is hoping to reach as many people as possible over the next several months. The survey can be completed online at www.orion.on.ca/2008survey.

Interuniversity sports webcast live and on VOD

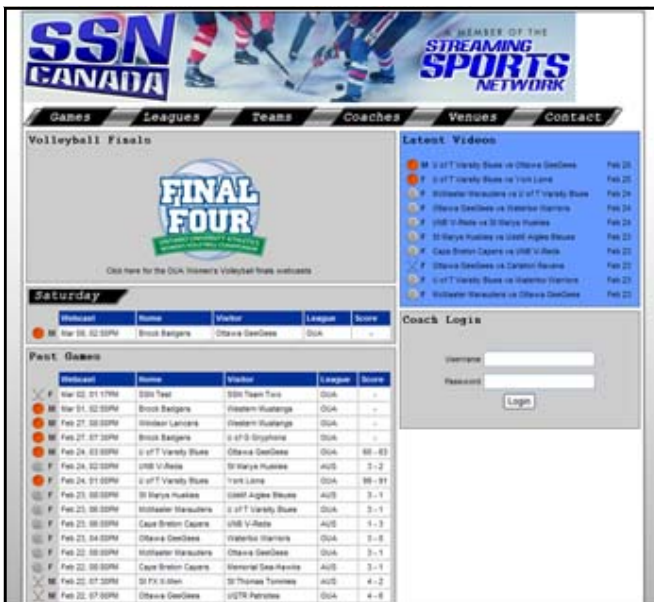
More than 10,000 Canadian student-athletes participate in several sport disciplines each year, and many of those games are now webcast live or available through Video on Demand (VOD) web streaming.

March is when many of those sports enter the championship season and viewers can catch the live action, with student-produced broadcasts over web streaming portals, including Ottawa-based Streaming Sports Network.

Ross Currie, Chief Technology Officer, with IntegratingSolutions Inc. which provides web streaming services to postsecondary institutions, says school broadcasts are becoming more professional and are an ideal training ground for budding sports broadcasters, technicians and commentators.

The company hosts the free Sports Streaming Network (SSN) web streaming portal and VOD archive as a public service. Live streams are currently webcast at 350 kb/s, but plans are to expand the bit rate and collaborate with schools to multicast live feeds from various university campuses using DVTS.

As the Canadian Interuniversity Sports (CIS) official broadcaster, SSN features men's and women's football, volleyball, basketball and hockey teams from several leagues, including teams from the Atlantic University Sports League, the Ontario Federation of School Athletic Associations, Ontario University Athletics and the Quebec Student Sports Federation.



SSN is webcasting CIS women's hockey and women's basketball championships, as well as some of the men's basketball championships. SSN recently webcast Ontario University Athletics games and volleyball championships as well as soccer, football and various other finals.

"Technology can overcome the typical demographic hurdles of not many people in a very large space, and we hope that friends, family, scouts, alumni, and generally fans of the schools and sports will find it easy and compelling to visit with us on a regular basis," says company president Bengt Neathery.

SSN expects to introduce significant additions to the portal next season, including an integrated statistics package and search function.

Team and championship details, including schedule of games and webcasts, are available from the Canadian Interuniversity Sports site at www.universitiesport.ca. View live feeds and a VOD archive at www.ssnCanada.ca.

Colleges need to embrace new technologies to reach today's student

Ontario colleges are losing the ability to control the message about their institution and should embrace new social networking and web 2.0 technologies to recruit students and remain relevant to young people.

That's the message college officials heard at the recent Colleges Ontario annual conference hosted by Fanshawe College in London, Ontario.

Content uploaded outside a college is just as likely to shape potential students' views of the school as corporate material posted on college sites, say experts, who encourage schools to embrace such innovations as Second Life, YouTube and social networking sites.

"Technology has destroyed an organization's ability to control its message," noted U.S. communications consultant Dr. Robert Johnson. Students looking for information on a potential institution are just as likely to obtain it from other sources, such as Wikipedia or Facebook, he said.

A quick YouTube search recently turned up more than 160 video submissions dealing with Fanshawe College alone, he said, suggesting schools need to factor in the new realities of how information is available to students.

Colleges should spend as much time and effort contributing their own content to these sites. "Text-based messages are being quickly replaced by video content," he argues, noting that popular sites such as RateMyProfesor.com pose new challenges as well. The best colleges can hope for today is to be able to influence the message about their institution, he says.

Giving up control of an institution's online content is a dramatically different approach, but one that can reap rewards for the organization that makes the transition to more interactive content.

Emily Maroccia, Fanshawe's Director of Marketing and Corporate Communications, says her college is fully embracing social networking and Web 2.0 technologies. The college, which has an island on Second Life, will soon launch its new site, making use of web 2.0 technology and allowing students to post their own content. Hearing directly from other students is extremely effective, she said, adding that the new site will invite posting of video testimonials. Fanshawe also encourages its recruitment officers to make use of such innovations as live web cams so they can respond in real time to potential new students who are seeking information.

TELUS Director of Marketing Sandra May Greefkes suggests schools prepare to accommodate the growing use of mobile devices. Predicting that the use of PDAs and smart phones with full keyboards will likely double in the very near future, she calls on IT and marketing departments to collaborate to develop effective marketing strategies to adapt to this emerging trend.

While there is still no consensus on the impact of new technologies on a school's marketing, teaching and learning outcomes, it's expected that the use of Second Life in higher education and other social networking services will continue to expand.

"Don't be overly concerned about the loss of control of the message," says Dr. Johnson, "it's like holding back the tide."

ORION Research and Education News

The ORION Research and Education News provides news and information of interest to users of the Ontario Research and Innovation Optical Network and to the worldwide research and education community. ORION is an advanced high-speed fibre optic network that connects research and education institutions to each other and to colleagues around the world. ORION is owned and operated by the Optical Regional Advanced Network of Ontario (ORANO). Visit our web site www.orion.on.ca or write the Editor at info@orion.on.ca. Subscribe at www.orion.on.ca/subscribe-news.html.

ORION hosts fifth anniversary celebration

Research and Innovation Minister **John Wilkinson** will be guest of honour as members of Ontario's research and education community gathers to celebrate ORION's fifth anniversary, at a reception at the MaRS Centre later this month.

ORION passed the milestone just recently, five years after the first ORION connection was completed and tested, between Laurentian University in Sudbury and York University in Toronto.



Ontario Members of the Legislature and other senior government and business officials are also expected to attend, to learn more about ORION and the contribution it is making in providing Ontario with a next-generation infrastructure for research and innovation, and giving Ontario its critical gateway to global research and science collaborations.

Also joining is **Dr. Roger Strasser**, founding Dean the Northern Ontario School of Medicine, one of the first institutions to rely on ORION's advanced connectivity services.

"ORION would not exist today without the contribution of the government of Ontario, which provided us with initial start-up funding," says ORION President/CEO, Phil Baker. "While ORION is now fully self-sustaining, we continue to rely on the support and collaboration of Ontario's research and education community and regional networks to ensure its continued success."

The March 31 reception—ORION@5—will be held at the state-of-the art MaRS Collaboration Centre, which is also a member of the ORION family. The event will feature live demonstrations and exhibits from partners and institutions that make use of ORION's special capabilities, such as the SHARCNET distributed high performance computing consortium, and the Advanced Broadband Enabled learning (ABEL) program, among others.

With over 75 institutions and organizations now connected to the network, ORION has met many significant milestones. ORION today connects over 1.3 million Ontario students and more than 75,000 researchers, faculty and teachers to each other, across Canada and worldwide.

UOIT and Trent use AccessGrid to pioneer collaborative program delivery

The University of Ontario Institute of Technology (UOIT) and Trent University have become the first in Canada to use AccessGrid (AG) for the delivery of a complete academic program.

The two universities – members of the Shared Hierarchical Academic Research Computing Network (SHARCNET) consortium – are pioneering this new form of multi-institutional graduate program delivery with their Master of Science in Materials Science program.

SHARCNET's AccessGrid nodes at the Oshawa and Peterborough institutions are able to provide a more interactive virtual environment than simple videoconferencing technology, say the schools' faculty.

The concept of the program and its delivery via AG originated from UOIT-Trent discussions led by the UOIT Dean of Science, Dr. William Smith.

It was recognized that researchers at each institution were making significant contributions in both experimental and theoretical studies related to the study of materials, and that by pooling their faculty expertise and resources they could offer students a unique multidisciplinary Materials Science graduate program.

A key component of the vision for the program was the delivery of all courses via AccessGrid. UOIT has been a member of SHARCNET since 2003, and Trent was encouraged to join, both to facilitate the program delivery and to take advantage of SHARCNET's unique high-performance computing resources, which it did in 2005. Specially designed AG rooms were completed at each site in time for the program's launch in September 2007.

The UOIT-Trent MSc program is truly collaborative (for example, the position of director alternates every two years between each institution), and is loosely modelled on the successful Guelph-Waterloo joint physics graduate program, which has a long history of the use of videoconferencing technology.

Through the use of AccessGrid on a regular basis, all courses in the program are team-taught, that is, they are taught by at least one faculty member from each institution. In this way, students have access to a range of instructors and courses at both universities that they would not have had at either one alone. Faculty also now have access to this same breadth of expertise, thereby facilitating research collaborations between the partners.

The AccessGrid technology over SHARCNET goes beyond the limits of standard videoconferencing. It is not limited to participation between only a few sites. It provides high quality transmission of not only voice and video, but also reliable delivery of any computational content produced on a PC at any of the participating sites. Furthermore, by being carried exclusively by SHARCNET and ORION, participants can rely on the throughput and security of the AG facilities.

Also, unlike standard videoconferencing, AG uses multiple cameras and large projection or plasma displays, so the experience is immersive for the participants.

"You quickly forget that you are talking to a concrete wall," says Dr. Andrew Vreugdenhil, associate professor and Trent director of the program. "The AG technology allows for very realistic personal interactions between people at remote sites."



*Dr. Vreugdenhil and student in an AG room at Trent U.
Photo courtesy of Trent University.*

Each AG room is equipped with a tablet PC that allows instructors or students to use a stylus pen to annotate a presentation as it is delivered, which appears directly on computer screens at all participating locations. Participants at each site are visible on display panel windows to the instructors and to participants at every other site.

"This is a very valuable part of AG as it ensures that participants at any location remain an active part," says Dr. Vreugdenhil. "We rely heavily on this feature, and generally the resulting annotated notes are posted to the course website."

According to faculty, students have embraced the AG delivery format, which allows them to interact with more students and learn from more experts in their field.

Since the AG technology was built into the program from the start and has proven such a success among both faculty and students, it would be very difficult, as Dr. Vreugdenhil states, to envision how this collaborative program could work without it.

"The fact that this program was coming on stream so soon after my arrival and that the bulk of the course offerings would be made via AG, were key factors in my decision to come to UOIT," says Professor Brad Easton.

AG also allows professors to hold virtual office hours. Prof. Easton meets with Trent students to answer questions over AG using tablet computers at each end, allowing them to sketch diagrams and quickly work through problems, even from a distance. AG is also being used for the program faculty's administrative meetings and for face-to-face meetings involving faculty and research teams at partner SHARCNET institutions and colleagues worldwide. One example: a UOIT Health Science professor uses UOIT's AG node to communicate with her colleagues in Australia.

AG has begun to be used for broader course delivery across SHARCNET institutions and beyond. For example, a High-Performance Computing graduate course delivered primarily from the University of Guelph is currently being offered to students at Guelph, UOIT, Trent, and Brock. In addition, a Coast-to-Coast Seminar series involving researchers associated with partners AceNET and Westgrid consortia is delivered on AG on an approximately monthly basis.

The UOIT-Trent Materials Science MSc program points the direction to where the future of collaborative postsecondary education and research lies. To learn more, visit www.trentu.ca and www.science.uoit.ca.

New CANARIE President and CEO

The Board of Directors of CANARIE Inc. recently announced the appointment of Guy Bujold as President and CEO of CANARIE, effective October 1, 2008. Current President and CEO, Andrew Bjerring, will step down September 30. Guy Bujold is currently President of the Canadian Space Agency and has held senior executive positions in a number of federal government departments and agencies, including Industry Canada, Finance Canada, Health Canada, the Canadian Coast Guard, and Infrastructure Canada. CANARIE Board Chair David Steeves welcomed Mr. Bujold "as a new leader who will bring to CANARIE substantial experience in strategic planning and tactical implementation as well as strong interpersonal skills that will be critical for a successful transition and to continue to strengthen Canada's Science and Technology platform." Read more at www.canarie.ca.

Provincial government invests \$115M in Ontario research

The Ontario Government is investing nearly \$115-million to support 19 research projects at nine Ontario universities, institutes and hospitals. Funding will be matched by 107 major industry and other partners participating in the projects. For example, \$17.9 million will go to Queen's University astrophysics professor and lead researcher Dr. Anthony Noble, Canada Research Chair in Particle Astrophysics, to fund ongoing research in SNOLAB, the world's deepest underground laboratory near Sudbury. The funding will ensure that research teams will have the tools and resources they need to continue their globally significant work that aims to expand our understanding of the Universe. For more information on the and other funded projects, visit www.mrii.gov.on.ca.

\$18M for North Bay e-learning centre

The Ontario Ministry of Training, Colleges and Universities recently announced an investment of \$18-million in a new student learning centre at Nipissing University and Canadore College in North Bay. The E-Learning Resource Centre, to be shared by students of Nipissing and Canadore, will feature state-of-the-art technology and provide students with access to a range of digital resources. The 56,000 square foot building will more than double the size of the existing library and provide greater connectivity with regional campuses as well as increased accessibility to the rapidly growing digital resources around the world. Read more at www.edu.gov.on.ca.

New rock fracture lab at U of T

A new facility at the University of Toronto will help researchers understand and predict how rocks will react to different types of stress, such as earthquakes, volcanoes, mining and radioactive waste. The new Rock Fracture Dynamics Laboratory is the only lab in the world where rock samples can be tested under true earth-like stress and temperature conditions while imaging deformation. A key part of the facility is the high-performance computing cluster enabling near-real time processes and displays results from 400 megabytes of data being collected from geophysical acquisition computers. The lab is made possible through \$5-million in funding from the Canadian Foundation for Innovation, Ontario Innovation Trust, Ontario Ministry of Research and Innovation, the U.S. Keck Foundation, as well as commercial partner contributions. Learn more at www.news.utoronto.ca.

Researchers simulate world's largest heart model

Researchers at the Université de Montréal (UdM) recently ran the largest mathematical simulation of a heart ever assembled -- a 2 billion element model -- on a high-performance computing system from SGI. The new UdM model is up to 1,000 times more detailed than previous models, enabling new scientific discoveries that would never be possible via observation alone. Until recently, the largest heart models in the world had at most a few million elements. Over the last nine months, Dr. Mark Potse and Dr. Alain Vinet, both affiliated with the Research Centre of Sacré-Coeur Hospital and the Biomedical Engineering department at UdM, began running 100 to 120 million-point models as part of their heart disease research on an SGI Altix 4700 system, believed to be the largest shared memory computing system in Canada. They regularly use 60 of the 768 Intel Itanium 2 processors running on the SGI Altix which, as part of the Quebec Network for High-Performance Computing (RQCHP), is shared by many researchers from across Canada. Learn more at http://www.appro.com/product/opteron_main.asp.

Centre for Research in Healthcare Engineering

The new collaborative Centre for Research in Healthcare Engineering (CRHE) recently opened at the University of Toronto, which will advance the expertise and knowledge in solutions that improve the efficiency and effectiveness of healthcare service delivery. Under the direction of Prof. Michael W. Carter of the Department of Mechanical and Industrial Engineering, the centre will also provide relevant education for health care workers, as well as preparing future engineers for the healthcare industry. Learn more at www.mie.utoronto.ca/crhe.

MaRS Experience!Tech 2008

MaRS Experience!Tech 2008 brings together two events under one roof: plenary sessions and keynotes live from IDC's annual Directions Conference in Boston, combined with MaRS Master Class panel sessions in Toronto. The event takes place on Wednesday, March 19 at the MaRS Centre in Toronto. Highlights include leading technology analysts from IDC -- a leading market analysis consulting firm, and business leaders on market trends, technologies and business models. Participants will also have the opportunity to interact with some of the tech community's most successful players. For more information, visit marsdd.com/exptech08.

OCAD seeks to lower carbon footprint

The Ontario College of Art & Design is one of the organizations signing on to the new Zerofootprint Web 2.0 portal to encourage students and staff to cut down on their emissions. Zerofootprint Inc. recently launched its Toronto-specific Web site, which contains an emissions calculator and other social networking tools such as forums, groups, a marketplace, and an events calendar. Users can tweak their emissions calculations to such city-specific information as how often they ride various forms of public transit, and how far away their food comes from. Zerofootprint is training managers at OCAD and an on-campus event will help introduce the online calculator and it will be used to generate competitions between student groups. Learn more at <http://www.toronto.zerofootprint.net/>

2008 ORION Awards

The submission deadline for the fourth annual ORION Awards is June 16, 2008. These are the fourth annual awards, which recognize Ontario champions of advanced technologies in scientific research, teaching and learning. Judges with representation from ORION stakeholder communities, will review submissions and select winners. The awards will be announced at a reception and ceremony during the joint ORION-CANARIE Summit, November 3-4, 2008, at the Metro Toronto Convention Centre. To submit a nomination and learn more about the Awards, visit www.orion.on.ca/2008awards.

Contenu français en ligne

La version française du site web d'ORION est maintenant en ligne. ORION a tout récemment révisé son site web et le contenu français, y compris plusieurs téléchargements, publications et documentation d'admissibilité. Questions fréquemment posées et communiqués sont aussi disponibles. Le lien pour accéder la section française est visible au haut de la page. Vous pouvez la visiter au www.orion.on.ca/indexFR.html.

People News

Alan Wildeman, Vice-President (Research) at the University of Guelph, has been appointed President and Vice-Chancellor of the University of Windsor, effective July 1, 2008. Current president (and founding chair of ORANO) **Dr. Ross Paul** retires after 10 years in the position. Guelph University Chief Information Officer **Michael Ridley** has been honoured with the Ontario Library Association's (OLA) Larry Moore Distinguished Service Award for his visionary work in establishing the innovation Knowledge Ontario digital library. **Elio Benincasa** leaves UOIT/Durham College to join a Toronto financial services institution as director of technical services. Moving on from ORION is **Nadeem Junejo**, Manager of Network Technologies, after more than five years. He played a critical role in deploying the network's state-of-the-art IP and optical infrastructure. Joining the ORION team are **Chris Baxter**, Senior Financial Analyst; **Daniel Wang**, System Administrator; and **Alison Brett**, Corporate Affairs Coordinator.