



2007 Ontario R&E Summit Highlights

Can we innovate fast enough to avoid health care “tsunami”?

Canada faces a looming health care “tsunami” unless it moves quickly to innovate and make greater use of new and innovative technologies.

That was the blunt message Dr. Alejandro (Alex) Jadad, Chief Innovator & Founder of the Centre for Global eHealth Innovation, had for the audience at the annual Ontario Research and Education Summit, June 4 and 5 in Toronto.



Dr. Alex Jadad delivers his closing keynote address about using communication technologies to innovate our health care system.

In a provocative address, Dr. Jadad asked how the Canadian health care system can keep us healthy, instead of just treating our illnesses. Calling for more resources into health prevention and health promotion, Dr. Jadad stressed the need to create a person-centered approach to health care, and ultimately to use communication and information technology to innovate our failing health care system.

“We need to learn a new language of collaboration,” he said, noting that Canada is slipping in

global health care and innovation rankings and sounded the alarm on a “tsunami” in health care that is quickly approaching as Canada begins to deal with an increasing aging population with a higher average age of mortality combined with a lower birth rate.

“This technology can help us transcend our cognitive, physical, institutional, geographical, cultural, linguistic, and historical boundaries. Or it can contribute to our extinction,” he said.

His comments were echoed by ORION Board Chair Dr. Stan Shapson, VP of Research and Innovation at York University, who noted that Summit speakers and sessions also brought home the need to “push toward the next wave of innovation ... there is an urgency.”

The keynote was the final of over 40 speakers and panellists participating at the Summit this year, with sessions ranging from innovations in collaborative technologies for health and teaching, to colleges’ contribution to applied research, to closing the gap between researchers and information technology leaders to deliver the right infrastructure and support systems.

The Summit attracted over 170 people over the course of the two-day conference, co-hosted by and staged at the MaRS Discovery District in Toronto.

Rob Pennington, Deputy Director of the National Center for Supercomputing Applications (NCSA), was the opening speaker. He outlined the current status of cyberinfrastructure development and support in the United States, setting the stage for a lively roundtable discussion on the state of cyberinfrastructure deployment in Canada.

Dr. Curtis Bonk, world-renowned professor of instructional systems technology at Indiana University, gave a whimsical and engaging keynote on knowledge sharing and technology trends that are equalizing access to learning.

Canadian futurist Jim Carroll also offered his insights on innovation and where the high-velocity voyage of technology is taking us, in the context of business, healthcare, society and education.



Dr. Curtis Bonk talks about online tools transforming teaching and learning.



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2007 ORION Award winners announced at Summit

Recognizing Ontario researchers and educators for innovation and leadership

Ground-breaking innovations, from advanced visualization tools to startling computer simulations unraveling the mysteries of the universe, were recognized at the annual ORION Awards.

Presented at the Ontario Research and Education Summit in Toronto on June 4, the awards recognize achievements in research, education and scientific discovery.

Dr. Nicolas Georganas of the University of Ottawa, one of Canada's most accomplished information technology and networking research pioneers, won the 2007 ORION Leadership Award, while Ontario computer animation pioneer and researcher Dr. Ronald M. Baecker, of the University of Toronto, was recognized with the ORION Leadership Award of Merit.

Carleton University's EUCLYPTUS Project, which is taking the design and collaborative technology world by storm with startling innovations in high-definition visualizations, won the 2007 ORION Discovery Award, while the Black Holes and Cosmic Evolution Project, led by a team of On-

tario and US researchers using some of Canada's top supercomputers was recognized with the Award of Merit for Discovery.



2007 ORION Award winners from left to right: Marlene Scardamalia and Carl Bereiter, founders of the Institute for Knowledge Innovation and Technology; Rudy Candela for Learning Connections; Robert Crawhall, accepting on behalf of Dr. Nicolas Georganas; Dr. Robert Thacker for Black Holes and Cosmic Evolution; and Dr. Ronald Baecker.

The Institute for Knowledge Innovation and Technology (KIT), based at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT), a global leader in research-based innovations in theory, pedagogy, and technology, won the ORION Learning Award.

The Learning Connections Project, which brings together a dedicated group of partners and champion teachers from throughout Ontario, won the ORION Learning Award of Merit.

For more detailed information on the winning projects and leaders, and to view a small photo gallery, visit the Awards website at www.orion.on.ca/2007orionawards.

The call for submissions for the 2008 ORION Awards will be announced next winter.

\$2.5M for interface design to create better Web experience

The University of Toronto recently received \$2.5 million from the U.S.-based Andrew W. Mellon Foundation in support of a U of T-led project that will help universities worldwide provide more consistent and accessible Web services to all users, including those with special needs.

The collaborative project, called FLUID, is being led by Jutta Treviranus, director of the Adaptive Technology Resource Centre (ATRC), housed at U of T's Faculty of Information Studies. Her group will help develop and distribute modular, reusable, swappable interface components for Web applications and build the software architecture to support their implementation.

FLUID will also raise awareness in academic Web culture about the importance of good design.

"The architecture and tools we provide will help ensure that people building various Web applications within a large institution use similar components and make it easier for builders to adapt those components for the individual needs of students and educators," says Treviranus. "The end result will be a library of high quality, accessible, usable user-interface components that universities and any large

organization around the world can use—ultimately a better Web experience for users."

FLUID's core partners are the University of California at Berkeley, University of Cambridge, University of British Columbia and York University (in addition to many other participating universities worldwide). Corporate partners include IBM, Sun Microsystems and Yahoo and participating community source software projects include Sakai, uPortal, Moodle and Quali Student.

The overall project budget for this phase of FLUID is well over \$8 million with more than \$3.5 million to be spent at the University of Toronto.

Please visit www.fluidproject.org or www.atrc.utoronto.ca for more information.



Contact North/Contact Nord 'beams' in speakers in 3-D

Next-generation videoconferencing technology comes to Northern Ontario

Contact North/Contact Nord, Northern Ontario's Distance Education and Training Network, is bringing next-generation 3-D videoconference technology to Northern Ontario and will soon make the technology available for teaching and learning applications in the north.

Representatives of northern educational and healthcare institutions got a glimpse of the new equipment at a live demonstration of the three-dimensional videoconferencing technology (or 'teleported' technology) supplied by Teleportec Inc. This equipment provides the ability to 'beam' instructors, medical professionals and presenters into classrooms, hospital rooms and meetings to interact with participants in real time.

What's unique about this technology is the amazing lifelike-ness of the people 'beamed' in: remote participants appear life-sized on a glass unit in apparent 3-D.

"Using this next-generation technology, we can experiment with the opportunity for instructors and teachers to appear live and life-sized within an apparent 3-D environment in virtual classrooms equipped with standard videoconferencing technology," said Pat Dion, Director, Information Technology, Contact North/Contact Nord.

The demonstration featured James Young, Chairman of Teleportec Inc., who was 'beamed' to Contact North/Contact Nord's Sudbury and Thunder Bay locations from the company headquarters in Dallas, Texas. A total of 52 Northern Ontario IT professionals and industry/educational executives took part in the demonstration and question and answer session.

"Instructors and teachers appear live and life-sized within an apparent 3-D environment..."

Part of James Young's demonstration involved showing a video of an open heart surgery to exhibit the lifelike and 3-D quality of the images – a useful tool for remote medical education. Viewers in Sudbury and Thunder Bay were impressed by the high quality visuals and potential

Students respond to ORION FutureFlick Contest – deadline extended

Ontario students have been responding to the new ORION FutureFlick Contest, and submitting their own vision of student life in the future. The submission deadline has been extended to January 31, 2008 to allow more time for entries around students' busy schedules. This means that the contest remains wide open and submissions already received are still eligible to win. For contest details, visit www.orion.on.ca/futureflick.



Pat Dion, Director of Information Technology at Contact North/Contact Nord, gives Gary Rockwood, a Teleportec technician, a virtual high-five through teleported videoconferencing technology.

for distance learning opportunities, says Dion.

Contact North/Contact Nord is installing a unit at both locations and expects to have them in place by September. The organization will make them available to educational and healthcare institutions in the region interested in using the new technology for meetings, teaching, training or demonstrations.

For more information, please visit <http://www.contactnorth.ca>.

ORION Research and Discovery News

The ORION Research and Discovery 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/newsletter/subscribe.html.

Ontario university libraries launch new electronic data service

The Ontario Council of University Libraries (OCUL) recently announced the launch of the Ontario Data Documentation, Extraction Service and Infrastructure Initiative (ODESI), which will provide university researchers with unprecedented access to a significant number of datasets in a web-based data extraction system.

ODESI will be delivered through the highly successful Scholars' Portal resource (www.scholarsportal.info).



In a recent testing phase, first year undergraduate students reported that the new service was "fun to use." They were able to analyze data during a three-hour workshop – something which ordinarily would have taken several weeks to accomplish using traditional tools and methods, and that usually would not have been undertaken by first year students.

ODESI will be built on an international metadata standard and will provide both faculty and students with the tools for finding, extracting and analyzing data from a variety of sources, including Statistics Canada, polling data, as well as other national and international data sources.



For undergraduates, it means that they will be exposed to a fast, efficient research resource at an early stage in their careers.

Researchers working with opinion polls, for instance, will be able search across hundreds of datasets and collections to see trends and historical patterns over time. To date, such comparative analysis has been lacking due to the enormous amount of time and labour needed to search and locate data manually.

"This will do for data what Scholars' Portal did for electronic journals", said Michael Ridley, Chief Information Officer and Chief Librarian, University of Guelph.

Carleton University will be leading this project in close partnership with the University of Guelph.

ODESI will be housed at Scholars' Portal, located at the University of Toronto, and will support its goal of providing access for networked scholars to a set of tools to aid both teaching and research.

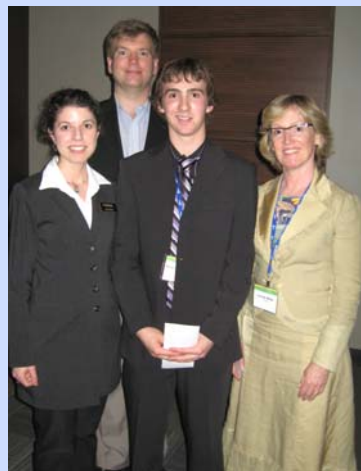
ODESI is jointly funded by the OCUL community and OntarioBuys for a total of \$1.04 million over three years.

For more information, visit <http://www.carleton.ca/duc/newsroom/newsreleases/June112007.html>.

Can we innovate fast enough...?

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Among the Summit highlights was the 16-year-old winner of the EXTREME Virtual Reality (VR) Science Fair, invited to present his project at a session on Youth and Science chaired by TVOntario



EXTREME VR Science Fair winner Alexandre Harvey (centre), with (from left to right) Jane Djivre and Andrew Dasys from MIRARCO, and TVOntario President Lisa de Wilde.

President Lisa De Wilde. The senior high school student, Alexandre Harvey from Temiskaming Shores in northeastern Ontario, used open source 3D modeling software to illustrate a method of naturally decontaminating wood waste at a local forestry processing facility.

The session also featured a presentation on the new Virtual Researchers on Call (VROC) program, which links researchers with high school students via videoconference in the classroom.

Attendees had the chance to experience the new 3-D iAnatomy collection of anatomical images, a

collaboration between the Northern Ontario School of Medicine (NOSM) and California's Stanford University School of Medicine, which makes use of new, advanced technologies that are transforming the way medical education is taught and learned. Attendees were able to view the 3D visualization using 3D glasses to see the images projected on a ten-foot-screen specially brought in for the demonstration.



The CANARIE Summit attendees view the iAnatomy stereoscopic images, wearing 3D glasses.

of recent research and development conducted at the National Research Council Institute for Information Technology, including a recent collaboration with the Louvre in Paris on the Mona Lisa.

Most of the presentations, several video streams and a photo gallery of this year's event can be downloaded from the Summit web site (www.orion.on.ca/2007orionsummit).

ORION News Briefs

Still time to register for ABEL Summer Institute 2007

The 2007 Summer Institute, hosted by Advanced Broadband Enabled Learning (ABEL), takes place August 20 and 21, 2007, at the TEL Building, York University in Toronto. This year's theme is *Intersections: Where Learner, Literacy and Technology Meet*. It will offer a range of informative presentations and hands-on workshops. Canadian futurist Richard Worzel will speak at this year's event, along with Dr. Lorna Earl and Dr. Steven Katz, directors of the research and evaluation firm Aporia Consulting Ltd.; Dr. David Booth, Professor of Education at the Ontario Institute for Studies in Education (OISE), University of Toronto; and Dr. Ron Owston, Professor of Education at York University and founding director of the Institute for Research on Learning Technologies. ORION is pleased once again to sponsor this event on teaching and learning through technology. For more information and to register, visit <http://abeldb.abel.yorku.ca/summerInstitute/>.

Consumer Health Informatics Conference registration now open

The Consumer Health Informatics Conference, taking place on October 30, 2007, in Ottawa, focuses on the technical, social, ethical and professional issues arising from consumer empowerment using information technology for health information. The outcome is expected to be a summary report based on all of the presentations and discussions that will contribute to shaping the future of consumer health informatics in Canada. Visit www.chconference.ca for more information and to register.

Lakehead University to establish new research centre for biomass technologies

Premier Dalton McGuinty was recently at Lakehead University to announce a one-time \$6 million grant to support cutting-edge research at the Thunder Bay institution. The Province will provide Lakehead with \$6 million in order to establish the Centre for Research into Biomass Technologies. With this step, the university builds its capacity to contribute to the competitive and sustainable development of Ontario's boreal forest. "This provincial funding will enable us to build on that record of success with the establishment of two Ontario Research Chairs, dedicated to establishing biorefining processes that transform low-value biomass into higher-value products," said Dr. Fred Gilbert, president of Lakehead University. For more information, visit <http://www.premier.gov.on.ca/news/Product.asp?ProductID=1279>.

Queen's University to establish new Centre for Biomaterials Research

Premier Dalton McGuinty recently announced that the government is providing a one-time grant of \$21 million to support a new research centre at Queen's University. The university is working with the private sector to build an advanced research and innovation centre specializing in bioprocessing and biomaterials. "Queen's is one of Canada's leading research-intensive universities," said Dr. Karen Hitchcock, Principal and Vice-Chancellor of Queen's University. "The centre will serve as a

regional hub for research and innovation, bringing together scientists from industry and academia to collaborate on bio-products research and get new technologies to market, faster." To learn more, visit http://qnc.queensu.ca/campusnews_article_loader.php?id=466ef92ac274a.

International Conference on the Management of Mobile Business 2007

The Sixth International Conference on Mobile Business (ICMB) takes place July 9 – 11, 2007 in Toronto. The worldwide event brings together academics, practitioners, and policy makers to present, discuss and review ongoing developments in the field of mobile and wireless technologies, applications and markets. ICMB focuses on the commercialization of new business models exploiting wireless and mobile technologies by presenting research results and future perspectives for the development and sustainable deployment of mobile applications and services. ICMB annually attracts 200 leading executives and researchers from over 20 countries. For more information, visit <http://www.mbusiness2007.org>.

Robarts Research Institute and Western finalize integration agreement

The agreement to integrate Robarts Research Institute with The University of Western Ontario has recently been approved by both organizations, paving the way for official integration July 1st. Much of the work toward integration has been under way for some months, ensuring that the process will run smoothly in the coming weeks. Robarts will become a part of the Schulich School of Medicine and Dentistry at The University of Western Ontario and Robarts employees will be welcomed as Western employees. "This merger represents the best of both worlds for Robarts' science," said interim Scientific Director Dr. Cecil Rorabeck, "and it marks the beginning of a new era for medical discovery in Canada." To learn more, visit <http://www.robarts.ca/news.php?id=212>.

CBC launches e-commerce Web site for educational content

The CBC recently launched a Web site dedicated to promoting its educational content and making it available for purchase for classroom learning. CBC Learning allows teachers, school boards and post-secondary professors to watch excerpts and purchase CBC-produced educational video and audio content online. In addition, a large amount of free educational material, such as lesson plans and project ideas, can be found throughout the site. With more than 600 CBC programs exploring curriculum-relevant topics such as Canadian history, bullying and the environment, educators can now access more easily Canadian-made educational programming for their students. For more information, visit www.cbclearning.ca.

Waterloo beats out other world cities for Intelligent Community of the Year award

Waterloo has put Ontario on the map for technological innovation. Beating out six international

finalists, Waterloo was recently named the 2007 Intelligent Community of the Year by the Intelligent Community Forum (ICF), a New York-based non-profit think tank that focuses on economic development in the broadband economy. The goal of the awards is to increase awareness of the role that broadband communication and information technology play in economic and social development worldwide. Another Ontario town, Ottawa-Gatineau, followed close on Waterloo's heels. The other international finalists for the Intelligent Community of the Year award were Issy-les-Moulineaux (France), Tallinn (Estonia), the Gangnam District of Seoul, South Korea, and the cities of Dundee and Sunderland, both in the U.K. ICF co-founder Louis Zacharilla called Waterloo "a tidal wave of a town" that has "never stopped raising the bar." Learn more at <http://www.intelligentcommunity.org/displaycommon.cfm?an=1&subarticlenbr=221>.

Ottawa releases national Science and Technology Strategy

Prime Minister Stephen Harper recently released Canada's new national science and technology (S&T) strategy, identifying more private research and development as key to strengthening Canada's economy. The strategy, entitled Mobilizing Science and Technology to Canada's Advantage, was announced at the Perimeter Institute for Theoretical Physics. "Our new strategy will strengthen Canada's economy by tapping our deep well of entrepreneurial energy to fuel our technological progress," the Prime Minister said. The strategy focuses federal support for research and development in four key areas: natural resources, the environment, health, and information technology. Details of the strategy can be found at <http://www.ic.gc.ca/s&tstrategy>.

People News

The Ontario Council of University Libraries has appointed **Kathy Scardellato** as Executive Director. The former manager of the Virtual Reference Library at Toronto Public Library takes up her position on August 1, 2007. The Council of Ontario Universities (COU) announced the appointment of **Dr. Paul Chisholm Genest** as its new President and CEO, effective July 1, 2007, succeeding **Dr. Ian Clark**. **Tim McTiernan**, Assistant Vice-President (Research) and Executive Director of Innovations at U of T, has been appointed Interim Vice-President (Research) for a six-month period beginning July 1 or until a new vice-president takes office. He will fill the position being vacated by **Prof. John Challis**, who is returning to teaching and research. Replacing **Volker Thomsen**, **Chris Whitaker** has been appointed President and CEO of St. Lawrence College, effective August 1, 2007. **Julia Walden**, well-known Canadian new media producer, is the new Director of the Visualization Design Institute at Sheridan College, starting in July. Former ORANO team member **Randy Neals** leaves Trent University as Manager, Network and Security, for sunny Mountain View, California, where he becomes Technical Project Manager for Google.