

QUANTUM to COSMOS

Q2Cfestival.com OCT 15-25, 2009 IDEAS FOR THE FUTURE



Canada's Perimeter Institute "Quantum to Cosmos" Festival to be On-site, Online and On TV

Waterloo, Ontario, Canada, June 12, 2009 – For 10 exciting days this October, Perimeter Institute's 10th anniversary science celebration "[Quantum to Cosmos: Ideas for the Future](#)" will take a global audience from the strange subatomic world to the outer frontiers of the universe.

"Ideas developed in the pursuit of pure knowledge have time and again driven fundamental innovation", says Perimeter Institute Director, Neil Turok. "Just one major discovery is literally capable of changing the world. The Festival's three interconnected themes of Quantum, Cosmos and Ideas for the Future will celebrate human ingenuity and our continued ability to make the scientific breakthroughs we need to drive tomorrow's technologies."

About the Festival

Events will take place from October 15 to 25, 2009, commemorating the 10th anniversary of [Perimeter Institute's](#) creation, contributing to [Canada's National Science and Technology Week](#) activities, and providing one of the world's most interesting on-site and online destinations during this [International Year of Astronomy](#).

An extensive program will feature more than 50 events including keynote presentations, panel discussions, exhibits, film screenings, world premieres and cultural events (see details below) that will showcase a wide variety of fascinating topics such as new forms of quantum communication, scientific visualization, the future of robotics, green technologies, personal genetics, and even the possibility of life on other planets.

John Matlock, Perimeter Institute Director of Outreach and External Relations, says, "Quantum to Cosmos will transcend traditional science festivals. Not only will Q2C presentations inspire tens of thousands of on-site visitors here in Waterloo, Ontario, the ideas and information will be shared with hundreds of thousands more via live television broadcasts throughout Ontario and Canada as well as live website streaming of most events to online audiences around the world."

Media Partnership

Perimeter Institute is particularly pleased to announce that [TVO](#), Ontario's public educational media organization, will be the official Presenting Media Partner for the Q2C Festival. TVO's coverage will include:

- Five special editions of TVO's flagship current affairs program [The Agenda with Steve Paikin](#) broadcast live from Perimeter Institute's soaring Atrium.
- Lectures and panel discussions recorded in the Mike Lazaridis Theatre of Ideas for later broadcast on TVO's [Big Ideas](#) series.
- [TVOKids](#) cameras and hosts on location throughout exhibit areas in Waterloo, capturing unique content for inclusion in after-school programming.

"At TVO we're always looking for innovative ways to engage people in the issues, ideas and conversations that shape our world," says CEO Lisa de Wilde. "That's why we're so delighted to be the Presenting Media Partner for the Quantum to Cosmos Festival. This is a unique opportunity to open up access to the world's leading scientific thinkers, and to demystify their sometimes complex ideas for families across Ontario, and beyond."

Confirmed Speakers and Panel Guests include:

- Larry Abbott, Neuroscientist, Columbia University
- Stewart Brand, President, The Long Now Foundation
- Sean Carroll, Author and Physicist, Caltech
- Sean B. Carroll, Author and Biologist, University of Wisconsin
- David Cory, Physicist, MIT
- Peter Diamandis, CEO, the X Prize Foundation
- James Gates Jr., Physicist, University of Maryland
- Michael Griffin, former Administrator of NASA
- Lawrence Krauss, Author and Director of the Origins Initiative
- Fotini Markopoulou, Physicist, Perimeter Institute
- Lee Smolin, Physicist, Perimeter Institute
- Robert Spekkens, Physicist, Perimeter Institute
- Neal Stephenson, Author
- Kip Thorne, Author and Physicist, Caltech
- Neil Turok, Director, Perimeter Institute
- Avi Wigderson, Computer Scientist, Institute for Advanced Study, Princeton

With many other on-site guest speakers still to be announced.

In addition, many leading experts will appear via multi-media presentations (see *The Quantum Tamers* premiere, below) including Dorit Aharonov, Alain Aspect, Joseph Emerson, Nicolas Gisin, Daniel Gottesman, Lucien Hardy, Stephen Hawking, Seth Lloyd, Gerard Milburn, Peter Shor, Barbara Terhal, Andrew White, David Wineland, Stuart Wolf, William Wootters, Anton Zeilinger and Wojciech Zurek.

Exhibits and Hands-on Fun involve:

- The Mars Science Laboratory
 - o Inspect this full-scale model of the next Mars Rover, named “Curiosity”, which replicates in every detail the SUV-sized Mars Science Laboratory (MSL) due to blast off in October 2011.
- A Nuclear Magnetic Resonance Machine
 - o Learn how quantum physics contributes to technology as you witness a Nuclear Magnetic Resonance (NMR) machine in action.
- Physica Phantastica Tent
 - o Experience the mysteries of the universe under a “Big Top” in the Waterloo town square with exciting hands-on science activities, presentations for families and an immersive 3-D journey through the cosmos.

Science Film Festival featuring:

- Science-Inspired Movies and Related Presentations
 - o Enjoy events in the Uptown Waterloo Princess Cinemas, with daytime activities for school groups and evening and weekend screenings for general audiences. This venue will also feature “The Physics of Innovation,” an inspirational presentation that shows how our scientific exploration of nature can help explain reality and allow us to build cool stuff.

World Premiere of:

- *“The Quantum Tamers: Revealing Our Weird & Wired Future”*
 - o This High Definition broadcast documentary, produced by Perimeter Institute and Title Entertainment, was shot in 16 cities in 6 countries and brings together the planet’s brightest minds, including Prof. Stephen Hawking, the Q2C Festival’s Honorary President, to show how the weird is becoming wired and why a new era of quantum technologies may rock your world.

Science in the Pub

- Discussions with Festival Speakers in a Relaxed Pub Setting
 - o Following the lectures, broadcasts and screenings, the guest speakers will discuss their ideas with Wilson da Silva, Editor of Cosmos Magazine, and fellow audience members in a convivial setting. Extra topics will be added, including:
 - Mission to Mars: Should We Go and Can We Live There?
 - Who Am I? The Brain, Memory and What Makes Me, Me?
 - The Fusion Solution: Will We Ever Make the World’s Cleanest Power Source a Reality?”

Cultural Activities

- From Jazz in the Black Hole Bistro to the world premiere of:
 - o *Quantum Quartet* by composer Kotoka Suzuki, for string quartet, interactive video, dancers, and quantum computer. Enjoy this evening of music performed by the Penderecki String Quartet that examines the luminous influence of Wolfgang von Goethe in the realms of literature, music, science, and physics.

Location, Tickets and Information

The free events, from October 15 to 25, 2009, will be held at Perimeter Institute's award-winning facility as well as at walking-distance venues located throughout Uptown Waterloo. Tickets will become available online starting Tuesday, September 1, 2009. Sign up to receive email alerts on new speakers and events as they are confirmed by visiting www.q2cfestival.com.

Special Thanks

Perimeter Institute would like to recognize the following sponsors for their generous support:

- TVO, Ontario's public educational media organization
- The Government of Ontario, including the Ontario Ministry of Tourism and Ministry of Research and Innovation, The Government of Canada through Perimeter Institute funding via Industry Canada
- Tech Capital Partners, Waterloo, Ontario

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- For media inquiries at TVO, contact Jill Javet at jjavet@tvo.org
- Q2C Festival is produced by Title Entertainment for Perimeter Institute via Sean Kiely at skiely@titleentertainment.com

About Perimeter Institute

Canada's Perimeter Institute for Theoretical Physics is an independent, non-profit, scientific research and educational outreach organization where international scientists cluster to push the limits of our understanding of physical laws and develop new ideas about the very essence of space, time, matter and information. The centre provides a multi-disciplinary environment to foster scientific collaboration in the [research areas](#) of cosmology, particle physics, quantum foundations, quantum gravity, quantum information, superstring theory, and related disciplines.

PI also provides a wide array of award-winning outreach [resources](#) and [public lectures](#) for students, teachers and the general public to share the joy of research, discovery and innovation. In partnership with the Governments of Ontario and Canada, PI continues to be a successful example of private and public collaboration in science research and education. Full details at www.perimeterinstitute.ca.

About TVO

TVO is Ontario's public educational media organization and a trusted source of interactive educational content that informs, inspires and stimulates curiosity and thought. TVO's vision is to empower people to be engaged citizens of Ontario through educational media. For more information, visit tvo.org.