

# Durham SciTech Talks Series 2015

Discover Contemporary Issues in

# SCIENCE

## From THE BIG BANG to BLACK HOLES:

### CANADA'S ROLE in the global quest for the STARS

*A journey through time and space to explore the development of modern astronomy and Canadian contributions to this amazing story: from taking the temperature of space, to seeing planets around other stars.*



DR. SHOHINI GHOSE

Wilfrid Laurier University, Physics and Computer Science

Director - Centre for Women in Science

Research Area: Quantum Information

Ted Fellow: <http://www.ted.com/profiles/2252616/fellow>

**S**hohini Ghose is an award-winning quantum physicist who studies how the laws of quantum physics can be harnessed to transform computation and communication, and to develop novel tasks such as teleportation. She and her research collaborators made the first ever movies of individual atoms, showing evidence of the connection between chaos theory and quantum physics.

Her research has been published in leading journals including *Nature*, *Physical Review Letters*, and *McGraw-Hill's Yearbook of breakthroughs in science and technology*. Her work has received worldwide media attention.

She was recently awarded a Sera Bangali Prize for her contributions to science (past winners have included Nobel Laureate, M. Yunus and President of India, Pranab Mukherjee). In 2014, she was selected as one of 20 TED Fellows from over 1000 applicants worldwide, and invited to speak about her work at the annual TED conference in Vancouver. She was named Woman Physicist of the Month in April 2014 by the American Physical Society. She was also selected as a 2014 Gifted Citizen from over 1300 applicants representing 63 countries. In October 2014, she received a Mahatma Gandhi Global Achievers award from Baroness Sandip Verma (UK Minister of Energy and Climate Change) and the NRI Welfare Society at the House of Lords in London.

Dr. Ghose has taught physics to over 2000 students enrolled in her courses. In 2012, she co-authored Canada's first introductory astronomy textbook, which is in use by several thousand students across Canada. Under her supervision, her students have created an online database that is a resource for learning introductory physics – designed by students, for students.

In 2014, she won a Women of Waterloo (WOW) region award for Education. She recently founded the Laurier Centre for Women in Science (WinS), with the mission of building a strong community for women in science through research, communication and action. In 2013, Lisa Raitt, then Minister of Labour of Canada, noted the Centre as a model for promoting the participation of women in science. Dr. Ghose is also the Chair of the national Committee to Encourage Women in Physics of the Canadian Association of Physicists, and Chaired the 2014 International Conference on Women in Physics, which was being held in North America for the first time.

Dr. Ghose is a popular speaker, and gives numerous talks about science and gender issues to a wide range of audiences. She is an affiliate of the Perimeter Institute for Theoretical Physics and the Institute for Quantum Computing at the University of Waterloo.

February 26, 2015 7:00 pm - 8:15 pm

Durham District School Board, Education Centre, Boardroom

400 Taunton Road East, Whitby

