



Physics Colloquium

Friday November 27, 2020, 4:30 pm, Online

(Registration required: <https://zoom.us/meeting/register/tJAqc-mpqjlpHt0wp45t3XZ-iPmduXH8DH9w>)

Dr. Svetlana Barkanova

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Subatomic Physics Research in Canada: Planning and Strategy

Abstract: Soon, we may see a revolution in our understanding of the nature of matter and its interactions, as we seek answers to questions such as the nature of the dark matter, the reasons for dominance of matter over antimatter in the Universe, and the origin of the atomic elements. Subatomic physics research, which includes nuclear and particle physics and astrophysics, is a quest to discover the laws governing our Universe, and our research community has received several recent major international awards for projects with leading Canadian involvement. One of the reasons why Canada is so well positioned for discovery and innovation in subatomic physics is nation-wide strategic planning and public investment. Right now, we are working on establishing scientific and funding priorities for future endeavours, covering the period from 2022 through 2026, with the scope extending to 2036. The talk will briefly describe the most fascinating and challenging questions we are facing today, the leading Canadian research groups and facilities, our plans for the next decade, and our joined efforts for improving equity, diversity and inclusion in our field.

Bio: Dr. Svetlana Barkanova is a Professor of Physics at Memorial University of Newfoundland, Grenfell Campus, which now hosts a new BSc program in Subatomic Physics and MSc and PhD in Subatomic Theory. An internationally-known researcher, she is on a quest to discover and understand the basic laws that govern the universe, such as the nature of dark matter, internal structure on the protons and neutrons and fundamental symmetries. Dr. Barkanova is also an award-winning teacher and enthusiastic science promoter leading a novel outreach program combining science with art and local culture for underrepresented youth in Western Newfoundland, especially girls and Indigenous students.