

# SATURDAY MORNING LECTURES LIVESTREAM

FALL 2020

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**September 26 – 10 a.m. Pacific Time**

## **How Can We See Atoms?**

The scanning tunneling microscope (STM) operates on the principle of quantum tunneling of electrons. It allows for an image resolution in the sub-nanometer size. This talk explains how this is possible, with pictures of what everyday materials look like at the nanometer scale.

by Brandon Stuart — UBC

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**November 21 – 10 a.m. Pacific Time**

## **Comets: Majestic Messengers**

Comet NEOWISE, visible to the naked eye, recently graced our skies. This talk explores how humans gradually understood what comets are, where they come from, and what happens to them in Earth's vicinity and after they're gone. Our growing understanding of them from spacecraft visits will be highlighted.

by Brett Gladman — UBC

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**October 17 – 10 a.m. Pacific Time**

## **Physicists Combat COVID-19**

In two parts, this talk explores how TRIUMF and other Canadian institutions contributed to the development and commercialization of a low-cost emergency room ventilator, and describes how data analysis expertise in particle physics was applied to modeling the spread of COVID to help inform government decision-making.

by Reiner Kruecken — TRIUMF  
Dean Karlen — UVic

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**December 12 – 10 a.m. Pacific Time**

## **Radiation Therapy at TRIUMF – How Nuclear Physics Can Treat Cancer**

Cancer treatment with external particle beams has been a long-standing commitment at TRIUMF, first with pion therapy and later with proton therapy. We provide important radioactive isotopes for cancer diagnostics, and are pushing the frontiers with a new generation of alpha-emitting drugs for cancer treatment.

by Cornelia Hoehr — TRIUMF

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