NSERC CREATE **TOP-SET** Un programme *FONCER* du CRSNG

En collaboration avec la Série de colloques du département de physique
In collaboration with the Department of Physics Colloquium Series

| Atelier	Workshop
Le jeudi 7 décembre 2023, 10h	Thursday, December 7, 2023, 10 a.m.
Des rafraîchissements seront servis dès 9h45.	Refreshments to be served starting at 9:45 a.m.
STM 224, MS Teams	STM 224, MS Teams
L'atelier se déroulera en anglais.	

Advanced 3D visualization for the physical sciences:

A Blender workshop for scientists

### Ross Cheriton, National Research Council Canada

Abstract: A large part of being a scientist is the effective communication of advanced concepts and ideas to other scientists as well as the public who fund the large majority of the research being conducted. While data plots, graphs, and photos are instrumental in conveying scientific results, often much of the physical environment, materials, and physics of your research cannot be adequately described by data alone. Blender is a professional-grade 3D animation software that is used for anything from 3D printing to game development to big budget animated movies. In this hands-on workshop, you will be trained to use Blender to produce scientific visuals for posters, papers, and presentations, although Blender can be used to run full 3D physical simulations! Designed to get you adept with Blender in only 2 hours, this workshop will make you familiar with mesh creation, object transformations, materials, and lighting. You will create schematic and photorealistic objects relevant to physics, rendering them to form image files and even movies, and be ready to create visuals for your next paper, poster or presentation! See some examples below:
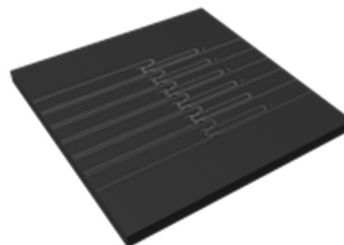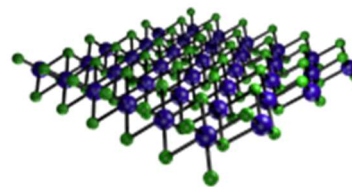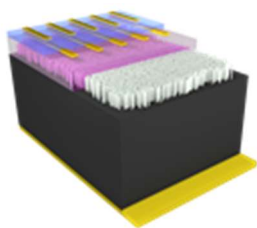
Installation instructions:

- Download and install the most recent version of Blender at
  https://www.blender.org/download/
- Do not install a Beta version.

What you should bring:

- A laptop with Blender installed (all attendees are **strongly** encouraged to download Blender, which is 100% free, lightweight, and open source on all platforms: Windows, MacOS, and Linux).
- A mouse (a mouse makes learning the application **much** easier).
- A keyboard with a numeric keypad is recommended, if possible.

Bio: Dr. Ross Cheriton is a Research Associate at the National Research Council of Canada and adjunct professor at the University of Ottawa. He worked at the National Research Council of Canada for his undergraduate and masters programs on quantum dot theory, and quantum dot-based entangled photon sources in the telecommunications band using semiconductor nanostructures. He received his PhD in Physics at the University of Ottawa with research on the theory and characterization of gallium nitride nanowire intermediate band solar cells for sub-bandgap photocurrent generation on silicon. His research topics include III-V on silicon solar cells, concentrator multijunction solar cells, quantum dot/well theory, entangled photon sources, nanowire solar cells, organic solar cell characterization, and 2D materials.   He has worked for a startup company developing the photovoltaic operation diamond retinal implants restoration for restoring vision for the blind, with his work being featured on the cover of the Ottawa Business Journal, Ottawa Citizen and Le Droit newspapers. He has authored and co-authored over 20 research papers, conference proceedings in a variety of scientific fields and holds 4 patents related to photonics sensing. His work currently focused on astrophotonics and integrated photonic device design for astronomy, spectroscopy, and remote sensing applications. He has taught numerous seminars on 3D modeling using Blender for science visualization.