

Dear Colleagues,

The Graduate Instrumentation and Detector School (GRIDS2018) sponsored by TRIUMF and the Canadian Particle Astrophysics Research Centre (CPARC) will take place at TRIUMF in Vancouver, Canada from August 6-17, 2018. The school also doubles as the 28<sup>th</sup> TRIUMF Summer Institute (TSI2018).

*Please pass this information on to graduate students and post-docs who might be interested. A second circular with more details will be released when registration opens in the coming weeks.*

### **About the School:**

TSI/GRIDS2018 ([tsi.triumf.ca](http://tsi.triumf.ca)) is aimed at graduate students and post-docs for whom particle and radiation detection plays an important role in their work, and who would like to gain hands-on experience with detectors and associated instrumentation technology. The goal of the school is to provide an introduction to practical aspects of radiation detection in nuclear, particle, and astroparticle physics as well as in nuclear medicine so that participants achieve a working knowledge of the origin of data produced by commonly employed detector systems.

### **Objectives:**

GRIDS will offer a diversified program, combining plenary lectures from leading experts with hands-on laboratory experience with typical detector and instrumentation technologies

Participants will develop a basic understanding of the interactions of particles with matter that are relevant to radiation detection, and of the physical mechanisms for collecting energy deposited by radiation. Operational principles will be covered for commonly employed detectors suitable for measurements of energy, momentum, timing, and particle identification. Low background environments and radio-frequency and electronic techniques will be discussed. Participants will explore design and decision-making in the field of radiation detection with focus on the rationale, limitations, and breadth of detector applications and development.

Participants will also develop laboratory skills to operate commonly used equipment for radiation detection in a safe and effective manner, identify common problems associated with operating particle physics detectors, and work as a team to experiment using a detector assembly.

Details about plenary speakers and laboratory experiments will be available in the coming weeks.

### **Application and Registration Procedure:**

The school will host up to 20 participants. Applications along with letters of reference will be accepted via the GRIDS website.

Partial support will be available from CPARC and other agencies.

The application process will open in mid May 2018.

### **For further information:**

Visit the school website at <http://tsi.triumf.ca/> for more information, including travel and accommodations.

Additional questions can be forwarded to [tsi@triumf.ca](mailto:tsi@triumf.ca)

### **Organizing Committee:**

- Tony Noble, CPARC/Queen's (co-chair)
- Nathalie Ouellette, CPARC (co-chair)
- Marcello Pavan, TRIUMF (co-chair)
- Pietro Giampa, TRIUMF
- Fabrice Retiere, TRIUMF
- Isabel Trigger, TRIUMF
- Mark Chen, Queen's
- Philippe Di Stefano, Queen's
- Ken Clark, CPARC/Queen's/TRIUMF
- Alan Robinson, University of Montreal
- Doug Bryman, UBC