

## Plenary Speakers

This year we have nine plenary speakers:

- Asimina Arvanitaki (Perimeter), *Looking for Dark Matter with Atomic Clocks and Gravitational Wave Detectors*
- Liliana Caballero (U of Guelph), *The black hole influence on accretion disk neutrinos and r-process nucleosynthesis*
- Wojciech Fedorko (UBC), *At the energy frontier: Searches for high mass resonances and non-resonant new physics at the ATLAS experiment*
- Razvan Gornea (Carleton U), *Neutrino-less double beta decay search with Xe-136 and Ba ion tagging R&D*
- Annika Lennarz (TRIUMF), *The DRAGON recoil separator for nuclear astrophysics - Investigation of radiative capture reactions*
- Russ Mammei (U of Winnipeg), *What's So Cool About Ultracold Neutrons?*
- Ryan Martin (Queen's U), *Rare event searches with point contact germanium detectors*
- Jenna Smith (TRIUMF), *Exploring exotic nuclei with the GRIFFIN Spectrometer at TRIUMF-ISAC*
- Daniel Stolarski (Carleton U), *Golden Probes of the Higgs Boson*

## Registration

Thursday, February 12, from 4pm to 5.30pm in the PDC Central Foyer and from 6pm to 7pm just outside the meeting room (KC303).

## Reception

The Welcome Reception will take place after the last talk on Thursday, February 11, starting at approximately 9:00 pm.

## Meals & Breaks

The coffee breaks will be just outside the meeting room. All meals are at the reserved tables in the back of the Vistas Dining room (only lunch is included for the off-site people).

## Talks

All presentations will be in KC303. Presenters are required to put the PDF file of their talk on a memory stick and transfer it to the presentation laptop no later than 15 minutes prior to the start of your session. Prizes will be awarded for the best student talks, funded by our sponsors.

## Schedule Overview

### Thursday, February 11

16:00 – 17:30 Registration  
(PDC Central Foyer)  
17:30 – 19:30 Dinner  
18:00 – 19:30 Registration  
(Outside KC303)  
19:30 – 21:00 Session 1  
21:00 – 23:00 Reception

### Friday, February 12

07:00 – 09:00 Breakfast  
09:00 – 10:30 Session 2a  
10:30 – 11:00 Coffee break  
11:00 – 12:15 Session 2b  
12:30 – 13:30 Lunch  
Afternoon is free for other activities  
17:30 – 19:30 Dinner  
19:30 – 20:30 Session 3a  
20:30 – 21:00 Coffee break  
21:00 – 22:00 Session 3b

### Saturday, February 13

07:00 – 09:00 Breakfast  
09:00 – 10:30 Session 4a  
10:30 – 11:00 Coffee break  
11:00 – 12:15 Session 4b  
12:30 – 13:30 Lunch  
Afternoon is free for other activities  
17:30 – 19:30 Dinner  
19:30 – 20:30 Session 5a  
20:30 – 21:00 Coffee break  
21:00 – 22:00 Session 5b

### Sunday, February 14

07:00 – 09:00 Breakfast  
09:00 – 10:15 Session 6a  
10:15 – 10:45 Coffee break  
10:45 – 12:00 Session 6b  
12:00 – 12:15 Awards: Student prizes  
12:30 – 13:30 Lunch

## Detailed Schedule

Legend:

- **bold names** are the plenary speakers
- \* after the name are non-student talks
- all the others are student talks

### Thursday, February 11, evening

17:30 – 19:30 Dinner

#### Session 1

19:30 – 19:45 Opening remarks

19:45 – 20:15 **Ryan Martin**, *Rare event searches with point contact germanium detectors*

20:15 – 20:30 Amir Hassan Ouyed Hernandez, *Explosive phase transition from hadrons to quarks*

20:30 – 20:45 Brian Kootte, *Trapping Electrons In A Penning Trap In Order to Cool Highly Charged Radioactive Ions*

20:45 - 21:00 Bruno Olaizola\*, *Deformed Structures and Shape Coexistence in  $^{98}\text{Zr}$*

21:00 – 23:00 Reception

**Friday, February 12, morning**

07:00 – 09:00 Breakfast

**Session 2a**

- 09:00 – 09:30 **Wojciech Fedorko**, *At the energy frontier: Searches for high mass resonances and non-resonant new physics at the ATLAS experiment*
- 09:30 – 09:45 Xunyu Liang, *Dark matter in form of the quark nuggets*
- 09:45 – 10:00 Andrzej Pokraka, *New Single Photon Positronium Decay Channel*
- 10:00 – 10:15 Roger Caballero-Folch\*, *Recent and future measurements of  $\beta$  delayed neutron emitters*
- 10:15 – 10:30 Jonathan Lighthall\*, *Status of the EMMA Spectrometer*

10:30 – 11:00 Coffee break

**Session 2b**

- 11:00 – 11:30 **Asimina Arvanitaki**, *Looking for Dark Matter with Atomic Clocks and Gravitational Wave Detectors*
- 11:30 – 11:45 Felix Cormier, *Developing the next generation of the ATLAS Inner Detector: tracking in dense environments*
- 11:45 – 12:00 Michael A. Blessenohl, *A New Electron Beam Ion Source as Charge Breeder for Rare Isotope Beams*
- 12:00 – 12:15 Stepan Dobrodey, *Charge breeding of rare short-lived isotopes with an electron beam ion source (EBIS)*

12:30 – 13:30 Lunch

**Friday, February 12, evening**

17:30 – 19:30 Dinner

**Session 3a**

19:30 – 20:00 **Jenna Smith**, *Exploring exotic nuclei with the GRIFFIN Spectrometer at TRIUMF-ISAC*

20:00 – 20:15 Mohamad Moukaddam\*, *In-Beam Performance of the SPICE detector at TRIUMF-ISAC*

20:15 – 20:30 Tony Kwan, *Measurement of neutral current Drell-Yan production in proton-proton collisions at 8 TeV with the ATLAS detector*

20:30 – 21:00 Coffee break

**Session 3b**

21:00 – 21:30 Andrée Welker, *Mass measurements of neutron-rich isotopes and technical developments at ISOLTRAP*

21:30 – 21:45 Adam Mayer, *Half-life and  $Q$ -value for the double-beta decay of  $^{96}\text{Zr}$*

21:45 – 22:00 Jessica Campbell, *The Super-Bigbite Spectrometer facility with focus on the Coordinate Detector*

**Saturday, February 13, morning**

07:00 – 09:00 Breakfast

**Session 4a**

09:00 – 09:30 **Russell Mammei**, *What's So Cool About Ultracold Neutrons?*

09:30 – 09:45 Joochun Park, *Decay modes of  $N = Z$  nuclei near  $^{100}\text{Sn}$*

09:45 – 10:00 Andrew MacLean, *Gamma-Gamma Angular Correlation Measurements With GRIFFIN*

10:00 – 10:15 Alexander Held, *Optimizing the Matrix Element Method for the  $t\bar{t}H$  search at  $\sqrt{s} = 13$  TeV with the ATLAS detector*

10:15 – 10:30 Johnson Liang, *Compilation, Evaluation and Systematics of Beta Delayed Neutrons in the Fission Region,  $30 \leq Z \leq 40$*

10:30 – 11:00 Coffee break

**Session 4b**

11:00 – 11:30 **Daniel Stolarski**, *Golden Probes of the Higgs Boson*

11:30 – 11:45 Matthew Williams, *EMMA Commissioning: Magnet Calibration and GEANT4 Simulations*

11:45 – 12:00 Justin Chiu, *Performance and implementation of the ATLAS missing transverse momentum trigger in Run-2*

12:00 – 12:15 Christina Burbadge, *Investigation of excited  $0^+$  states populated via the  $^{162}\text{Er}(p, t)$  reaction*

12:30 – 13:30 Lunch

**Saturday, February 13, evening**

17:30 – 19:30 Dinner

**Session 5a**

19:30 – 20:00 **Liliana Caballero**, *The black hole influence on accretion disk neutrinos and  $r$ -process nucleosynthesis*

20:00 – 20:15 Kayla McLean, *Search for dark matter through signatures with leptonically-decaying  $Z$  bosons and missing transverse energy in the ATLAS detector at the LHC: signal models and systematics*

20:15 – 20:30 Alison Elliot, *Search for dark matter through signatures with leptonically-decaying  $Z$  bosons and missing transverse energy in the ATLAS detector at the LHC: 2015 discovery prospects*

20:30 – 21:00 Coffee break

**Session 5b**

21:00 – 21:15 Shihao Wu, *Search for Dark Matter: Dark Photon and  $Z'$  Boson*

21:15 – 21:30 Savino Longo, *Radiation Hardness of 30 cm Long Thallium doped Cesium Iodide Scintillation Crystals*

21:30 – 21:45 Nikita Bernier, *Decay Spectroscopy of  $^{128-132}\text{Cd}$  with GRIFFIN*

21:45 – 22:00 Jaspreet Singh Randhawa, *Investigation of Resonances in  $^{20}\text{Mg}$  : Implications for Nuclear Astrophysics and Nuclear Structure*

**Sunday, February 14, morning**

07:00 – 09:00 Breakfast

**Session 6a**

09:00 – 09:30 **Annika Lennarz**, *The DRAGON recoil separator for nuclear astrophysics - Investigation of radiative capture reactions*

09:30 – 09:45 Devin Burke, *Development of a Novel Hybrid Ionization Chamber / Double-Sided-Silicon-Strip Detector to be installed at the DRAGON laboratory at TRIUMF*

09:45 – 10:00 Sebastien Rettie, *Search for New Phenomena in the Dimuon Final State using Proton-Proton Collisions at  $\sqrt{s} = 13$  TeV with the ATLAS Detector*

10:00 – 10:15 Luis Welbanks, *Strange Quark Seeding from Dark Matter Annihilation in Neutron Stars*

10:15 – 10:45 Coffee break

**Session 6b**

10:45 – 11:15 **Razvan Gornea**, *Neutrino-less double beta decay search with Xe-136 and Ba ion tagging R&D*

11:15 – 11:30 Zackary Shand, *Nuclear Sensitivity Studies with SiRop*

11:30 – 11:45 Vincent Wong, *ATLAS Transition Radiation Tracker Firmware Upgrade for LHC Run 2*

11:45 – 12:00 Taraneh Andalib, *Magnetic Fields for Neutron Electric Dipole Moment Measurement at TRIUMF*

12:00 - 12:15 Awards: Student prizes

12:30 – 13:30 Lunch