Workshop: March 30-31, 2015
‘From Track Structure to Clinical Outcomes and Reverse’
Ballroom Thomson House
3650 rue McTavish
Montreal, QC H3A 1Y2, Canada
Monday 30th of March

09:00-09:20 Coffee
09:20-09:30 Shirin Abbasi Nejad Enger, McGill University, Presentation and overview of the workshop

**Moderator: Shirley Lehnert**

09:30-10:10 Neil Kopek, McGill University Health Center, Higher doses per fraction and smaller fields: the clinical impetus for more accurate dosimetry

10:10-10:50 X. Allen Li, Medical College of Wisconsin, Outcome modeling for radiation treatment planning

10:50-11:10 Coffee

11:10-11:50 Issam El Naqa, McGill University, Systems Radiobiology for radiotherapy response

11:50-12:30 Darel Hunting, University of Sherbrooke, Understanding the radiobiology of DNA modified by chemotherapeutic agents: cisplatin adducts greatly modify DNA sensitivity to gamma radiation

12:30-13:30 Lunch

**Moderator: Issam El Naqa**

13:30-14:10 Sunuchakan Sanguanmith, Jean-Paul Jay-Gerin, University of Sherbrooke, Physicochemical basis for the biological action of ionizing radiation

14:10-15:00 Shirley Lehnert, McGill University, Radiation Dose in the Context of Radiochemotherapy

15:00-16:00 **Discussion** Panel: X. Allen Li, Issam El Naqa, Shirley Lehnert
Tuesday 31st of March

**Moderator: Jan Seuntjens**

09:00-09:40 Jan Schuemann, Harvard University, “From clinical MC simulations to track structure calculations”

09:40-10:20 José María Fernández-Varea, University of Barcelona, “Radiation-matter interaction models for track-structure applications”

10:20-10:40 Coffee

10:40-11:20 Léon Sanche, University of Sherbrooke, “Low energy electron interactions and cross sections of relevance to radiation dose calculations in biological media”

11:20-12:00 Michael Dingfelder, East Carolina University, “Cross sections for track structure simulations of charged particles in biological media”

12:00-13:00 Lunch

**Moderator: Shirin Abbasi Nejad Enger**

13:00-13:40 Sebastien Incerti, Bordeaux 1 University, “Geant4-DNA: past, present and future”

13:40-14:10 Mario Bernal, Departamento de Física Aplicada, Instituto de Física Gleb Wataghin, UNICAMP, Campinas, Brasil, “Using quantum molecular dynamics to study radiation-DNA interaction”

14:10-14:20 Coffee

14:20-14:40 Piotr Pater, McGill University, “Simulation of clusters of DNA lesions using a probabilistic approach”

14:40-15:00 Gloria Backstrom, McGill University, “An approach to predict RBE based on clusters of energy deposit sites”

15:00-15:20 Judy Wang, McGill University, “Validation of MC track structure codes against experiments in amorphous ice”

15:20-16:00 **Discussion** Panel: José María Fernández-Varea, Michael Dingfelder, Léon Sanche