



Canadian Prairie Theoretical Physics Network 2010 Program Schedule

Tuesday, August 24

- Optional half-day or full-day excursion to **Waterton Lakes National Park**. Please consult with Mark Walton (walton@uleth.ca) for further details.

Acknowledgements: The CPTPN wishes to thank the following institutions and organizations for their generous financial support of this inaugural conference:

- **University of Lethbridge**
Office of the President
Office of the Vice-President (Academic)
Office of the Vice-President (Research)
Office of the Dean, Faculty of Arts & Science
- **University of Saskatchewan**
Office of the Vice-President (Research)
Science Division, College of Arts & Science
- **Winnipeg Institute for Theoretical Physics**
- **Pacific Institute for the Mathematical Sciences**
(PIMS – University of Regina Branch)



Wednesday, August 25 - Morning

- Session: ***Astrophysics, Class. & Quantum Gravity I***
 Location: **Turcotte Hall Room 204**
 Session Chairs: ***Mark Walton*** and ***Hubert de Guise***

Time	Speaker and Presentation Title
8:30 am – 9:00 am	Official Welcome and Opening Remarks
9:00 am – 9:20 am	<i>Gordon Sarty, University of Saskatchewan</i> <i>The Second Known HMXB Black Hole in the Milky Way Galaxy</i>
9:20 am – 9:40 am	<i>Amrish Raghoonundun, University of Calgary</i> <i>Models of Neutron Stars from Tolman Solutions</i>
9:40 am – 10:00 am	<i>Timothy Taves, University of Manitoba/Winnipeg</i> <i>Higher Dimensional Black Hole Formation in PG Co-ordinates</i>
10:00 am – 10:20 am	<i>Mathias Pielahn, University of Winnipeg</i> <i>Dynamical Surface Gravity of Spherically Symmetric Black Holes</i>
10:20 am – 10:30 am	Question/Answer Period for Speakers
10:30 am – 11:00 am	Coffee Break
11:00 am – 11:20 am	<i>James Nester, National Central University (Taiwan)</i> <i>Gravitational Energy: A Covariant Hamiltonian Approach</i>
11:20 am – 11:40 am	<i>David Hobill, University of Calgary</i> <i>Gravitational Lensing by Brane World Black Holes</i>
11:40 am – 12:00 pm	<i>Gabor Kunstatter, University of Winnipeg</i> <i>Polymer Quantization of the Einstein-Rosen Wormhole Throat</i>
12:00 pm – 12:20 pm	<i>Wissam Chemissany, University of Lethbridge</i> <i>Black Holes in Supergravity and Integrability</i>
12:20 pm – 12:30 pm	Question/Answer Period for Speakers
12:30 pm – 2:30 pm	Lunch

Wednesday, August 25 - Afternoon

- Session: ***Class. & Quantum Gravity II, Mathematical Physics I***
 Location: **Turcotte Hall Room 204**
 Session Chairs: ***Gabor Kunstatter*** and ***Tom Steele***

Time	Speaker and Presentation Title
2:30 pm – 2:50 pm	<i>Ahmed Ali</i> , University of Lethbridge <i>Discreteness of Space from GUP II: Relativistic Wave Equations</i>
2:50 pm – 3:10 pm	<i>Arundhati Dasgupta</i> , University of Lethbridge <i>Time Evolving Horizons in Semiclassical Gravity</i>
3:10 pm – 3:30 pm	<i>Dinesh Singh</i> , University of Regina <i>A New Perspective on Path Integral Quantum Mechanics in Curved Space-Time</i>
3:30 pm – 3:50 pm	<i>Edward Doolittle</i> , First Nations University of Canada <i>Solving Hypoelliptic Partial Differential Equations with Path Integrals</i>
3:50 pm – 4:00 pm	Question/Answer Period for Speakers
4:00 pm – 4:30 pm	Coffee Break
4:30 pm – 4:50 pm	<i>Hubert de Guise</i> , Lakehead University <i>General Formulation of SU(n) Quasi-Distribution Functions</i>
4:50 pm – 5:10 pm	<i>Borislav Belchev</i> , University of Lethbridge <i>Flow of S-Matrix Poles for Elementary Quantum Potentials</i>
5:10 pm – 5:30 pm	<i>David Ridout</i> , Université de Montréal <i>Whither Indecomposability?</i>
5:30 pm – 5:50 pm	<i>Fred Sage</i> , University of Saskatchewan <i>Numerical Quantum Chaos in Non-Local Quantum Dynamics</i>
5:50 pm – 6:00 pm	Question/Answer Period for Speakers
6:00 pm – 7:00 pm	Free Period
7:00 pm - evening	CPTPN Banquet at <i>New Dynasty Restaurant</i> . 103-7 th St. South – Phone: (403) 328-1212

Thursday, August 26 - Morning

- Session: ***Subatomic, Math. Physics II, Quantum Information I***
 Location: **Turcotte Hall Room 204**
 Session Chairs: ***Arundhati Dasgupta*** and ***Ben Fortescue***

Time	Speaker and Presentation Title
9:00 am – 9:20 am	<i>Kai Wunderle, University of Saskatchewan</i> <i>Coupling of Fermionic Fields with Mass Dimension One to the O'Raifeartaigh Model</i>
9:20 am – 9:40 am	<i>Robin Kleiv, University of Saskatchewan</i> <i>Mixing between Quark Mesons and Scalar Gluonium</i>
9:40 am – 10:00 am	<i>Gerhard Lotz, University of Alberta (Augustana)</i> <i>Pion Contributions to Photonucleon Knockout</i>
10:00 am – 10:20 am	<i>Ian Blokland, University of Alberta (Augustana)</i> <i>Computer-Based Exact Solutions for Feynman Integrals</i>
10:20 am – 10:30 am	Question/Answer Period for Speakers
10:30 am – 11:00 am	Coffee Break
11:00 am – 11:20 am	<i>Robert Petry, University of Regina</i> <i>Computer Clustering Made Easy with PelicanHPC</i>
11:20 am – 11:40 am	<i>Julia Pulwinski, University of Calgary</i> <i>Dynamical Riemannian Geometry and Plant Growth</i>
11:40 am – 12:00 pm	<i>Michael Skotiniotis, University of Calgary</i> <i>Entanglement-Enhanced Classical Communication Without a Shared Frame of Reference</i>
12:00 pm – 12:20 pm	<i>Bing He, University of Calgary</i> <i>Multimode Effects in Photonic Logic Gate</i>
12:20 pm – 12:30 pm	Question/Answer Period for Speakers
12:30 pm – 2:30 pm	CPTPN Members' Only Lunch Meeting

Thursday, August 26 - Afternoon

- Session: ***Quantum Information II, Philosophy of Physics, Physics Theory Education, CTPN Town Hall Workshop***
Location: **Turcotte Hall Room 204**
Session Chair: ***Dinesh Singh***

Time	Speaker and Presentation Title
2:30 pm – 2:50 pm	<i>Yuval Sanders, University of Calgary</i> <i>Relative Monotones</i>
2:50 pm – 3:10 pm	<i>Kevin Van De Bogart, University of Calgary</i> <i>A Spatial Search with Quantum Cellular Automata</i>
3:10 pm – 3:30 pm	<i>Kent Peacock, University of Lethbridge</i> <i>What Did J.S. Bell Know that George Boole Did Not?</i>
3:30 pm – 3:50 pm	<i>Daria Ahrensmeier, University of Calgary</i> <i>What Can a Theoretical Physicist Learn from Physics Education Research?</i>
3:50 pm – 4:00 pm	Question/Answer Period for Speakers
4:00 pm – 4:30 pm	Coffee Break
4:30 pm – 5:00 pm	CTPN Town Hall Workshop
5:00 pm – 5:30 pm	CTPN Town Hall Workshop
5:30 pm – evening	Closing Remarks and Departure