

## DIMITRI SCHRITT

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CONTACT INFORMATION      Department of Physics and Astronomy      *Mobile:* +64-2-26250364  
University of Canterbury      *Office:* +64-3-364-2987 ext. 7620  
Private Bag 4800      *E-mail:* dimitri.schritt@pg.canterbury.ac.nz  
Christchurch 8140  
New Zealand

EDUCATION      University of Canterbury, Christchurch, New Zealand

Ph.D., Mathematical Physics (expected graduation: March 2013)

- Thesis topic: *Symmetries in quantum field theory*.
- Advisers: Dr. D.V. Ahluwalia, Dr. T.F. Goldman, Dr. S. Panda.
- Areas of study: quantum field theory, dark matter, and particle physics.

B.Sc. with First Class Honours, Mathematical Physics, April 2008

- Thesis topic: *Elko dark matter*.
- Advisers: Dr. D.V. Ahluwalia, Dr. B. Martin.
- Areas of study: quantum field theory and dark matter.

AWARDS      University of Canterbury, Christchurch, New Zealand

- Ph.D. Scholarship, 2008.
- Alister George McLellan Prize, 2007.
- Summer Research Scholarship, 2007.

Golden Key International Honour Society, Atlanta, GA, USA

- Graduate Scholar Award, 2008.
- Invited Membership, 2005.

PUBLICATIONS      *On a renormalisable theory of spin two*  
D. Schritt

In preparation for submission to JHEP.

*An effect of lower spin components on renormalisability*

D.V. Ahluwalia, Sebastian Horvath, Cheng-Yang Lee, D. Schritt  
In preparation for submission to JHEP.

*Self-interacting Elko dark matter with an axis of locality*

D.V. Ahluwalia, Cheng-Yang Lee, D. Schritt  
Phys. Rev. D83: 065017, 2011.

*Elko as self-interacting fermionic dark matter with axis of locality*

D.V. Ahluwalia, Cheng-Yang Lee, D. Schritt,  
Phys. Lett. B687: 248 – 252, 2010.

*Possible polarisation and spin dependent aspects of quantum gravity*

D.V. Ahluwalia, N.G. Gresnigt, Alex B. Nielsen, D. Schritt, T.F. Watson  
Int. J. Mod. Phys. D17: 495 – 504, 2007.

COMPUTATION SKILLS	<p>Symbolic manipulation:</p> <ul style="list-style-type: none"> <li>• Mathematica – advanced skills.</li> <li>• Maple – basic skills.</li> </ul> <p>Data analysis and modelling:</p> <ul style="list-style-type: none"> <li>• Python – intermediate skills.</li> <li>• Matlab – basic skills.</li> </ul>
ACADEMIC EXPERIENCE	<p>University of Canterbury, Christchurch, New Zealand</p> <ul style="list-style-type: none"> <li>• Organisation committee, 7th International Heidelberg Conf. on Dark Matter in Astro and Particle Physics, 2009.</li> <li>• Physics tutor, 2008 – 2011.</li> <li>• Mathematics tutor, 2007.</li> <li>• Private mathematics tutor, 2006.</li> </ul>
TALKS	<p>13th Marcel Grossmann Meeting, 2012 Stockholm University, Stockholm, Sweden <i>Lorentz violation in Majorana-inspired Elko spinors and dark matter.</i></p> <p>29th Departmental Conference, 2012 University of Canterbury, Christchurch, New Zealand <i>Amplitudes for space-like separations and causality.</i></p> <p>28th Departmental Conference, 2011 University of Canterbury, Christchurch, New Zealand <i>Toward a theory of quantum gravity.</i></p> <p>27th Departmental Conference, 2010 University of Canterbury, Christchurch, New Zealand <i>The scalar-tensor theory of gravity.</i></p> <p>5th Australian Conference on General Relativity and Gravitation, 2009 University of Canterbury, Christchurch, New Zealand <i>Self-interacting fermionic dark matter with axis of locality.</i></p> <p>26th Departmental Conference, 2009 University of Canterbury, Christchurch, New Zealand <i>Uncovering the mysteries of Maxwell's equations.</i></p> <p>7th International Heidelberg Conf. on Dark Matter in Astro and Particle Physics, 2009 Rydges Hotel, Christchurch, New Zealand <i>On the subtle features of Elko.</i></p> <p>Colloquium, 2008 Jamia Millia Islamia, New Delhi, India <i>Local fermionic dark matter with mass dimension one.</i></p> <p>6th International Heidelberg Conf. on Dark Matter in Astro and Particle Physics, 2007 University of Sydney, Sydney, Australia <i>Elko dark matter: a conservative candidate.</i></p>

REFEREES

Dr. D.V. Ahluwalia

*Affiliation:* Department of Physics and Astronomy, University of Canterbury, NZ

*E-mail:* dharamvir.ahluwalia@canterbury.ac.nz

Dr. T.F. Goldman

*Affiliation:* Los Alamos National Laboratory and University of New Mexico, USA

*E-mail:* tjgoldman@post.harvard.edu

Dr. S. Panda

*Affiliation:* Harish-Chandra Research Institute, India

*E-mail:* panda@mri.ernet.in