Christopher Coutts

Personal Data

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Education

Current	Master of Science in Physics **Simon Fraser University**, Burnaby, BC, Canada
July 2017	Bachelor of Science in Physics Honours **Simon Fraser University**, Burnaby, BC, Canada
September 2011	Bachelor of Science in Applied Mathematics **University of British Columbia Okanagan**, Kelowna, BC, Canada
Fall/Spring 2009-2010	Exchange year at **University of Glasgow**, Glasgow, Scotland, UK

Professional Experience

Summer 2017 — VPR USRA Researcher
Simon Fraser University
Examined quantum critical properties of lanthanum doped CeTiGe alloys. Wrote PID software for magnetic field and temperature control of 9T cryostat.

Sep 2015 - April 2016 — Undergraduate Student Researcher
TRIUMF
Investigated nuclear structure by use of ab initio calculations. Analyzed effectiveness of Simularity Renormalization Group in minimizing induced many-body forces. Calculations were performed using parallelized FORTRAN code.

Summer 2015 — VPR USRA Researcher
Simon Fraser University
Deposited thin film multilayers by use of magnetron sputtering. Used x-ray diffraction techniques to determine thickness and structure of deposited films. Examined boundary conditions and magnetic properties of films by ferromagnetic resonance.

Summer 2009/2011 — Summer Undergraduate Researcher
University of British Columbia Okanagan
Modelled predator-prey interactions as coupled differential equations using MATLAB software. Investigated effect of generalist predation on snowshoe hare populations. Utilized XPPAUT for phase plane analysis and to investigate bifurcations in the system.

Publications

1. **Chris Coutts**, Monika Arora, Rene Hubner, Bret Heinrich, and Erol Girt. Magnetic properties of Co/Ni grain boundaries after annealing *AIP Advances*, 8:056318, Jan 2018.

2. Monika Arora, Nicholas R. Lee-Hone, Tommy McKinnon, **Chris Coutts**, Rene Hubner, Bret Heinrich, Dave M. Broun, and Erol Girt. Magnetic properties of Co/Ni multilayer structures for use in STT-RAM *Journal of Physics D: Applied Physics*, 50:505003, Nov 2017.

3. Pavlo Omelchenko, Eric Montoya, **Chris Coutts**, Bret Heinrich, and Erol Girt. Tunable magnetization and damping of sputter-deposited, exhange coupled Py|Fe bilayers *Scientific Reports*, 7:4861, Jul 2017.

4. Eric Montoya, Pavlo Omelchenko, **Chris Coutts**, Nicholas R. Lee-Hone, Rene Hubner, David Broun, Bret Heinrich, and Erol Girt. Spin transport in tantalum studied using magnetic single and double layers. *Phys. Rev. B*, 94:054416, Aug 2016.

Presentations

1. **Chris Coutts**, Angelo Calci, and Petr Navratil. Suppressing Induced Many-Body Forces by Designed SRG Generators. *Progress in Ab Initio Techniques in Nuclear Physics*, Vancouver, Canada, 2016.

2. **Chris Coutts**, Angelo Calci, and Petr Navratil. Suppressing Induced Many-Body Forces by Designed SRG Generators. *Progress in Ab Initio Techniques in Nuclear Physics*, Vancouver, Canada, 2016.

Honours and Awards

May. 2018	NSERC Canada Graduate Scholarship - Masters (CGSM)
Sept. 2017	Special Graduate Entrance Scholarship
May. 2017	SFU VPR Undergraduate Student Research Award
May. 2015	SFU VPR Undergraduate Student Research Award
Sept. 2009	Choquette Family Foundation Global Student Mobility Award