

Dr. Brad J. Ramshaw — Curriculum Vitae

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EDUCATION

DOCTORATE IN PHYSICS 2007-2012
University of British Columbia

BACHELOR OF SCIENCE (HONOURS): PHYSICS AND COMPUTER SCIENCE 2002-2007
University of British Columbia

AWARDS AND SCHOLARSHIPS

LEE OSHEROFF RICHARDSON SCIENCE PRIZE 2017
Annual prize for young scientists conducting research employing low temperatures, high magnetic fields, or surface science.

POSTDOCTORAL PUBLICATION PRIZE IN ACTINIDE SCIENCE 2016

POSTDOCTORAL PUBLICATION PRIZE IN EXPERIMENTAL SCIENCES 2015

DIRECTORS FELLOW: LOS ALAMOS NATIONAL LABS 2013

LOS ALAMOS OUTSTANDING POSTER AWARD: WINNER 2013

MARTIN AND BEATE BLOCK PHYSICS AWARD 2011
Best work by a young physicist at the Aspen Winter Physics Conference: Contrasting Superconductivity of Prictides and Cuprates.

NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL POST-GRADUATE SCHOLARSHIP - DOCTORATE 2010-2012

FOUR YEAR FELLOWSHIP FOR PHD STUDENTS 2009-2012

VIRGINIA GRACZAK MUSIC SCHOLARSHIP 2002
Competitive scholarship in classical piano performance.

GRANTS AND FUNDING

DEPARTMENT OF ENERGY—LABORATORY DIRECTED RESEARCH AND DEVELOPMENT:
EARLY CAREER RESEARCH 2016-2018
“New States of Matter in Weyl Semimetals”—20160616ECR. Funded amount: \$430,000.
Principle Investigator: Brad Ramshaw.

EMPLOYMENT

ASSISTANT PROFESSOR JANUARY 2017 - PRESENT
Cornell University.

STAFF SCIENTIST APRIL 2015 - NOVEMBER 2016
National High Magnetic Field Lab - Pulsed Field Facility at Los Alamos National Labs.

PUBLICATIONS

- [1] **B. J. Ramshaw**, N. Harrison, S. E. Sebastian, S. Ghannadzadeh, K. A. Modic, D. A. Bonn, W. N. Hardy, Ruixing Liang, and P. A. Goddard. Broken rotational symmetry on the fermi surface of a high- T_c superconductor. *NPJ Quantum Materials*, 2(1):8, 2 2017
- [2] Jiecheng Zhang, Eli M. Levenson-Falk, **B. J. Ramshaw**, D. A. Bonn, Ruixing Liang, W. N. Hardy, Sean A. Hartnoll, and Aharon Kapitulnik. Anomalous thermal diffusivity in underdoped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$. *Proceedings of the National Academy of Sciences of the United States of America*, 114(21):5378–5383, May 23 2017
- [3] Arkady Shekhter, K. A. Modic, R. D. McDonald, and **B. J. Ramshaw**. Thermodynamic constraints on the amplitude of quantum oscillations. *Phys. Rev. B*, 95:121106, Mar 2017
- [4] Albert Migliori, Per Söderlind, Alexander Landa, Franz J Freibert, Boris Maiorov, **B. J. Ramshaw**, and Jon B Betts. Origin of the multiple configurations that drive the response of δ -plutonium's elastic moduli to temperature. *Proceedings of the National Academy of Sciences*, page 201609215, 2016
- [5] Nicholas P. Breznay, Ian M. Hayes, **B. J. Ramshaw**, Ross D. McDonald, Yoshiharu Krockenberger, Ai Ikeda, Hiroshi Irie, Hideki Yamamoto, and James G. Analytis. Shubnikov-de Haas quantum oscillations reveal a reconstructed fermi surface near optimal doping in a thin film of the cuprate superconductor $\text{Pr}_{1.86}\text{Ce}_{0.14}\text{CuO}_{4\pm\delta}$. *Phys. Rev. B*, 94:104514, Sep 2016
- [6] Philip JW Moll, Andrew C Potter, Nityan L Nair, **B. J. Ramshaw**, KA Modic, Scott Riggs, Bin Zeng, Nirmal J Ghimire, Eric D Bauer, Robert Kealhofer, Filip Ronning, and James G. Analytis. Magnetic torque anomaly in the quantum limit of weyl semimetals. *Nature Communications*, 7, 2016
- [7] M. K. Chan, N. Harrison, R. D. McDonald, **B. J. Ramshaw**, K. A. Modic, N. Barisic, and M. Greven. Single reconstructed fermi surface pocket in an underdoped single-layer cuprate superconductor. *Nature Communications*, 7, Jul 2016
- [8] Akash V. Maharaj, Yi Zhang, **B. J. Ramshaw**, and S. A. Kivelson. Quantum oscillations in a bilayer with broken mirror symmetry: A minimal model for $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$. *Phys. Rev. B*, 93:094503, Mar 2016
- [9] G. Grissonnanche, F. Laliberté, S. Dufour-Beauséjour, M. Matusiak, S. Badoux, F. F. Tafti, B. Michon, A. Riopel, O. Cyr-Choinière, J. C. Baglo, **B. J. Ramshaw**, R. Liang, D. A. Bonn, W. N. Hardy, S. Krämer, D. LeBoeuf, D. Graf, N. Doiron-Leyraud, and Louis Taillefer. Wiedemann-franz law in the underdoped cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$. *Phys. Rev. B*, 93:064513, Feb 2016
- [10] Jing Fei Yu, **B. J. Ramshaw**, I. Kokanović, K. A. Modic, N. Harrison, James Day, Ruixing Liang, W. N. Hardy, D. A. Bonn, A. McCollam, S. R. Julian, and J. R. Cooper. Magnetization of underdoped $\text{YBa}_2\text{Cu}_3\text{O}_y$ above the irreversibility field. *Phys. Rev. B*, 92:180509, Nov 2015
- [11] **B. J. Ramshaw**, S. E. Sebastian, R. D. McDonald, James Day, B. S. Tan, Z. Zhu, J. B. Betts, Ruixing Liang, D. A. Bonn, W. N. Hardy, and N. Harrison. Quasiparticle mass enhancement approaching optimal doping in a high- T_c superconductor. *Science*, 348:317–320, 2015
- [12] **B. J. Ramshaw**, Arkady Shekhter, Ross D. McDonald, Jon B. Betts, J. N. Mitchell, P. H. Tobash, C. H. Mielke, E. D. Bauer, and Albert Migliori. Avoided valence transition in a plutonium superconductor. *Proceedings of the National Academy of Sciences*, 112(11):3285–3289, 2015

- [13] N Harrison, **B. J. Ramshaw**, and A Shekhter. Nodal bilayer-splitting controlled by spin-orbit interactions in underdoped high- T_c cuprates. *Scientific reports*, 5, 2015
- [14] B. S. Tan, N. Harrison, Z. Zhu, F. Balakirev, **B. J. Ramshaw**, B. J., A. Srivastava, S. A. Sabok, B. Dabrowski, G. G. Lonzarich, and Suchitra E. Sebastian. Fragile charge order in the nonsuperconducting ground state of the underdoped high-temperature superconductors. *Proceedings of the National Academy of Sciences*, 2015
- [15] N Doiron-Leyraud, S Badoux, S René de Cotret, S Lepault, D LeBoeuf, F Laliberté, E Hassinger, **B. J. Ramshaw**, DA Bonn, WN Hardy, et al. Evidence for a small hole pocket in the fermi surface of underdoped $\text{YBa}_2\text{Cu}_3\text{O}_y$. *Nature Communications*, 6, 2015
- [16] N. Shapira, Y. Lamhot, O. Shpielberg, Y. Kafri, **B. J. Ramshaw**, D. A. Bonn, Ruixing Liang, W. N. Hardy, and O. M. Auslaender. Disorder-induced power-law response of a superconducting vortex on a plane. *Phys. Rev. B*, 92:100501, Sep 2015
- [17] G Grissonnanche, O Cyr-Choiniere, F Laliberte, S Rene de Cotret, A Juneau-Fecteau, S Dufour-Beausejour, M-E Delage, D LeBoeuf, J Chang, **B. J. Ramshaw**, D. A. Bonn, W. N. Hardy, Ruixing Liang, S. Adachi, N. E. Hussey, B. Vignolle, C. Proust, M. Sutherland, S. Kramer, J.-H. Park, D. Graf, N. Doiron-Leyraud, and Louis. Taillefer. Direct measurement of the upper critical field in a cuprate superconductor. *Nature Communications*, 5, Feb 2014
- [18] A. Shekhter, **B. J. Ramshaw**, R. D. McDonald, J. B. Betts, F. Balakirev, Ruixing Liang, W. N. Hardy, D. A. Bonn, Scott C. Riggs, and Albert Migliori. Bounding the pseudogap with a line of phase transitions in $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$. *Nature*, 498(7452):75–77, 2013
- [19] **B. J. Ramshaw**, James Day, Baptiste Vignolle, David LeBoeuf, P. Dosanjh, Cyril Proust, Louis Taillefer, Ruixing Liang, W. N. Hardy, and D. A. Bonn. Vortex lattice melting and H_{c2} in underdoped $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$. *Phys. Rev. B*, 86:174501, Nov 2012
- [20] B. Vignolle, **B. J. Ramshaw**, James Day, David LeBoeuf, Stéphane Lepault, Ruixing Liang, W. N. Hardy, D. A. Bonn, Louis Taillefer, and Cyril Proust. Coherent c-axis transport in the underdoped cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$. *Physical Review B*, 85(22):224524, 2012
- [21] **B. J. Ramshaw**, Baptiste Vignolle, James Day, Ruixing Liang, W. N. Hardy, Cyril Proust, and D. A. Bonn. Angle dependence of quantum oscillations in $\text{YBa}_2\text{Cu}_3\text{O}_{6.59}$ shows free-spin behaviour of quasiparticles. *Nature Physics*, 7(3):234–238, Mar 2011
- [22] J. Chang, Nicolas Doiron-Leyraud, Francis Laliberté, R. Daou, David LeBoeuf, **B. J. Ramshaw**, Ruixing Liang, D. A. Bonn, W. N. Hardy, Cyril Proust, I. Sheikin, K. Behnia, and Louis Taillefer. Nernst effect in the cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_y$: Broken rotational and translational symmetries. *Phys. Rev. B*, 84:014507, Jul 2011
- [23] David LeBoeuf, Nicolas Doiron-Leyraud, B. Vignolle, Mike Sutherland, **B. J. Ramshaw**, J. Levallois, R. Daou, Francis Laliberté, Olivier Cyr-Choinière, Johan Chang, Y. J. Jo, L. Balicas, Ruixing Liang, D. A. Bonn, W. N. Hardy, Cyril Proust, and Louis Taillefer. Lifshitz critical point in the cuprate superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$ from high-field hall effect measurements. *Phys. Rev. B*, 83:054506, Feb 2011
- [24] F. Laliberte, J. Chang, N. Doiron-Leyraud, E. Hassinger, R. Daou, M. Rondeau, **B. J. Ramshaw**, R. Liang, D. A. Bonn, W. N. Hardy, S. Pyon, T. Takayama, H. Takagi, I. Sheikin, L. Malone, C. Proust, K. Behnia, and Louis Taillefer. Fermi-surface reconstruction by stripe order in cuprate superconductors. *Nature Communications*, 2, Aug 2011

- [25] Baptiste Vignolle, David Vignolles, David LeBoeuf, Stéphane Lepault, **Brad Ramshaw**, Ruixing Liang, DA Bonn, WN Hardy, Nicolas Doiron-Leyraud, A Carrington, N. E. Hussey, Louis Taillefer, and Cyril Proust. Quantum oscillations and the Fermi surface of high-temperature cuprate superconductors. *Comptes Rendus Physique*, 12(5):446–460, 2011
- [26] J. S. Bobowski, J. C. Baglo, James Day, P. Dosanjh, Rinat Ofer, **B. J. Ramshaw**, Ruixing Liang, D. A. Bonn, W. N. Hardy, Huiqian Luo, Zhao-Sheng Wang, Lei Fang, and Hai-Hu Wen. Precision microwave electrodynamic measurements of K- and Co-doped BaFe₂As₂. *Phys. Rev. B*, 82:094520, Sep 2010
- [27] R. Daou, J. Chang, David LeBoeuf, Olivier Cyr-Choinière, Francis Laliberte, Nicolas Doiron-Leyraud, **B. J. Ramshaw**, Ruixing Liang, D. A. Bonn, W. N. Hardy, and Louis Taillefer. Broken rotational symmetry in the pseudogap phase of a high-T_c superconductor. *Nature*, 463(7280):519–522, Jan 2010
- [28] J. Chang, R. Daou, Cyril Proust, David LeBoeuf, Nicolas Doiron-Leyraud, Francis Laliberté, B. Pingault, **B. J. Ramshaw**, Ruixing Liang, D. A. Bonn, W. N. Hardy, H. Takagi, A. B. Antunes, I. Sheikin, K. Behnia, and Louis Taillefer. Nernst and seebeck coefficients of the cuprate superconductor YBa₂Cu₃O_{6.67}: A study of fermi surface reconstruction. *Phys. Rev. Lett.*, 104:057005, Feb 2010
- [29] David LeBoeuf, Nicolas Doiron-Leyraud, Julien Levallois, R. Daou, J.-B. Bonnemaïson, N. E. Hussey, L. Balicas, **B. J. Ramshaw**, Ruixing Liang, D. A. Bonn, W. N. Hardy, S. Adachi, Cyril Proust, and Louis Taillefer. Electron pockets in the fermi surface of hole-doped high-T_c superconductors. *Nature*, 450(7169):533–536, Nov 22 2007

MANUSCRIPTS IN PREPARATION

- [1] **B. J. Ramshaw**, K. A. Modic, Arkady Shekhter, Philip J. W. Moll, M. K. Chan, J. B. Betts, F. Balakirev, A. Migliori, N. J. Ghimire, E. D. Bauer, F. Ronning, and R. D. McDonald. Annihilation of Weyl Nodes in the Extreme Quantum Limit of TaAs. *arXiv:1704.06944*, 2017
- [2] F Ronning, T Helm, K Shirer, M Bachmann, L Balicas, M Chan, **B. J. Ramshaw**, RD McDonald, FF Balakirev, M Jaime, , ED Bauer, and PJW Moll. Electronic in-plane symmetry breaking at field-tuned quantum criticality in cerhin5. *arXiv preprint arXiv:1706.00963*, 2017
- [3] P Giraldo-Gallo, JA Galvis, Z Stegen, KA Modic, FF Balakirev, JB Betts, X Lian, C Moir, SC Riggs, J Wu, A. T. Bollinger, X. He, I. Bozovic, **B. J. Ramshaw**, R. D. McDonald, G. S. Boebinger, and A. Shekhter. Scale-invariant magnetoresistance in a cuprate superconductor. *arXiv preprint arXiv:1705.05806*, 2017
- [4] Kefeng Wang, F Boschini, **B. J. Ramshaw**, D Graf, Limin Wang, M Michiardi, A Zonno, E Rotenberg, A Bostwick, A Damascelli, et al. Dirac dispersion and non-trivial berry’s phase in three-dimensional semimetal rhsb3. *arXiv preprint arXiv:1703.04673*, 2017
- [5] O. Cyr-Choinière, R. Daou, F. Laliberté, C. Collignon, S. Badoux, D. LeBoeuf, J. Chang, **B. J. Ramshaw**, D. A. Bonn, W. N. Hardy, R. Liang, J.-Q. Yan, J.-G. Cheng, J.-S. Zhou, J. B. Goodenough, S. Pyon, T. Takayama, H. Takagi, N. Doiron-Leyraud, and L. Taillefer. Pseudogap temperature T^* of cuprate superconductors from the Nernst effect. *ArXiv e-prints*, March 2017
- [6] K.A. Modic, **B. J. Ramshaw**, Nicholas P. Breznay, James G. Analytis, Ross D. McDonald, and Arkady Shekhter. Robust spin correlations at high magnetic fields in the honeycomb iridates. *arXiv preprint arXiv:1612.09410*, 2016

[7] Akash V Maharaj, Ilya Esterlis, Yi Zhang, **B. J. Ramshaw**, and SA Kivelson. The hall number across a van hove singularity. *arXiv preprint arXiv:1611.03875*, 2016

[8] Z Zhu, RD McDonald, A Shekhter, **B. J. Ramshaw**, KA Modic, FF Balakirev, and N Harrison. Tunable excitonic insulator in quantum limit graphite. *arXiv preprint arXiv:1508.03645*, 2015

[9] G Grissonnanche, F Laliberte, S Dufour-Beausejour, A Riopel, S Badoux, M Caouette-Mansour, M Matusiak, A Juneau-Fecteau, P Bourgeois-Hope, O Cyr-Choiniere, J. C. Baglo, **B. J. Ramshaw**, R. Liang, D. A. Bonn, W. N. Hardy, S. Kramer, D. LeBoeuf, D. Graf, N. Doiron-Leyraud, and L. Taillefer. Onset field for fermi-surface reconstruction in the cuprate superconductor YBCO. *arXiv preprint arXiv:1508.05486*, 2015

h-index

14

RESEARCH HIGHLIGHTS IN THE MEDIA

MPA MATERIALS MATTER — RAMSHAW RECEIVES 2017 LEE OSCHEROFF RICHARDSON

SCIENCE PRIZE

JUNE 2017

Newsletter of the Materials Physics and Applications Division, Los Alamos National Laboratory.

NHMFL AROUND THE LAB — NEW TECHNIQUE FOR PULSED MAGNETS

JANUARY 2016

Kristen Coyne.

ALUMNILINK — USING MAGNETIC FIELDS TO UNDERSTAND HIGH-TEMPERATURE

SUPERCONDUCTIVITY

MAY 2015

Linda Anderman. Picked up by *phys.org*, *sciencedaily.com*, and other science websites.

MAGLAB REPORTS — QUANTUM OSCILLATIONS IN THE HIGH-Tc SUPERCONDUCTOR

$\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$ NEAR OPTIMAL DOPING

SUMMER 2014

Kristin Roberts

LOS ALAMOS SCIENCE AND TECHNOLOGY MAGAZINE (1663) — PHASE FIVE, A NEW

STATE OF MATTER

NOVEMBER 2013

Jay Schecker

NATURE NEWS AND VIEWS—HIGH-TEMPERATURE SUPERCONDUCTIVITY: THE SOUND

OF A HIDDEN ORDER

JUNE 2013

Jan Zaanen

NATURE PHYSICS NEWS AND VIEWS—SUPERCONDUCTIVITY: GENETICS AND G-FACTORS MARCH 2011

Stephen R. Julian and Michael R. Norman

INVITED TALKS

POSTDOCTORAL ACTINIDE PUBLICATION AWARD, LOS ALAMOS NATIONAL LABS

2017

Speaker

CANADIAN INSTITUTE FOR ADVANCED RESEARCH, VANCOUVER

2017

Quantum Materials Meeting invited speaker.

AMERICAN PHYSICAL SOCIETY MARCH MEETING, LOUISIANA

2017

Invited speaker

QUANTUM CRITICALITY AND TOPOLOGY IN ITINERANT ELECTRON SYSTEMS, ALBUQUERQUE Invited speaker	2016
LOS ALAMOS NATIONAL LABS Q-mat Seminar	2016
CORNELL UNIVERSITY Special Physics Seminar	2016
COLORADO SCHOOL OF MINES Special Physics Colloquium	2016
JOHNS HOPKINS Condensed Matter Seminar	2016
UNIVERSITY OF CALIFORNIA, RIVERSIDE Condensed Matter Physics Seminar	2016
CALTECH Condensed Matter Physics Seminar	2016
UNIVERSITY OF TORONTO Special Condensed Matter Seminar	2016
CORNELL UNIVERSITY LASSP and A&EP Seminar	2016
PHYSICAL PHENOMENA AT HIGH MAGNETIC FIELDS VIII, TALLAHASSEE Invited speaker	2016
POSTDOC PUBLICATION AWARD, LOS ALAMOS NATIONAL LABS Speaker	2015
INTERNATIONAL CONFERENCE ON RESEARCH IN HIGH MAGNETIC FIELDS, GRENOBLE, FRANCE Invited speaker	2015
UNIVERSITY OF CHICAGO Department of Physics Colloquium	2015
STANFORD UNIVERSITY Condensed Matter Physics Seminar	2015
UNIVERSITY OF WASHINGTON Department of Physics Colloquium	2014
UNIVERSITY OF CALIFORNIA, BERKELEY 290 K Condensed Matter Seminar Series	2014
SUPERSTRIPES 2014, ERICE, SICILY Invited speaker	2014
STANFORD UNIVERSITY Condensed Matter Physics Seminar	2014
UNIVERSITY OF CALIFORNIA, LOS ANGELES Physics and Astronomy Colloquium	2014

MATERIALS RESEARCH SOCIETY SPRING MEETING 2014, SAN FRANCISCO. Invited speaker	2014
UNIVERSITY OF MARYLAND, COLLEGE PARK CNAM Condensed Matter Colloquium	2014
UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER Condensed Matter Seminar	2014
ASPEN WINTER PHYSICS CONFERENCE Unconventional Order in Strongly Correlated Electron Systems.	2014
CORNELL UNIVERSITY, ITHACA Laboratory of Atomic and Solid State Physics Seminar	2013
CANADIAN INSTITUTE FOR ADVANCED RESEARCH, VANCOUVER Quantum Materials Meeting	2013
UNIVERSITY OF CALIFORNIA, LOS ANGELES Condensed Matter Seminar	2012
UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER International Summer School on Surfaces and Interfaces in Correlated oxides	2011
ASPEN WINTER PHYSICS CONFERENCE Contrasting Superconductivity of Pnictides and Cuprates	2011
PHYSICAL PHENOMENA AT HIGH MAGNETIC FIELDS VII, TALLAHASSEE Invited speaker	2010
UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER Condensed Matter Seminar	2009
CONTRIBUTED PRESENTATIONS	
NSF SITE VISIT: NATIONAL HIGH MAGNETIC FIELD LAB, TALLAHASSEE, FLORIDA Young scientist poster presentation	2016
AMERICAN PHYSICAL SOCIETY MARCH MEETING, SAN ANTONIO, TEXAS Contributed talk	2015
LOS ALAMOS POST-DOC RESEARCH DAY, LOS ALAMOS, NEW MEXICO Poster presentation	2013
AMERICAN PHYSICAL SOCIETY MARCH MEETING, BALTIMORE, MARYLAND Contributed talk	2013
GORDON RESEARCH CONFERENCE ON CORRELATED ELECTRON SYSTEMS, MOUNT HOLYOKE COLLEGE, MASSACHUSETTS Poster presentation	2010
AMERICAN PHYSICAL SOCIETY MARCH MEETING, PORTLAND, OREGON Contributed talk	2010

Contributed talk

SYNERGISTIC ACTIVITIES

- NSF WORKSHOP ON ULTRAHIGH MAGNETIC FIELDS SEPTEMBER 2017
Workshop convening worldwide experts on high magnetic field research to determine future directions for NSF funding.
- KITP CONFERENCE ON INTERTWINED ORDER: SCIENTIFIC ADVISER JUNE 2017
Conference on complex and intertwined orders in cuprates, pnictides, iridates, and ruthenates.
- WORKSHOP: CRACKING THE ENIGMA OF CUPRATE SUPERCONDUCTORS MAY 2017
Attendee of a three day focus session on the outstanding problems in high- T_c superconductivity.
- NATIONAL HIGH MAGNETIC FIELD LAB: SITE REVIEW AUGUST 2016
Two day external review of the NHMFL for the National Science Foundation—presenter.
- PHYSICS IN THE FIELD SEMINAR SERIES: CO-FOUNDER AND ORGANIZER 2013-2015
Seminar series at Los Alamos National Labs—Pulsed Field Facility.
- LET'S TALK SCIENCE: VOLUNTEER 2011-2012
Demonstrations and organizing group activities for grades 1 and 2 students.
- CANADIAN INSTITUTE FOR ADVANCED RESEARCH SUMMER SCHOOL: ORGANIZER 2009
Three-day summer school at the University of British Columbia.