

# PHD PHYSICS DEGREES AWARDED IN CANADIAN UNIVERSITIES\*

## DOCTORATS EN PHYSIQUE DÉCERNÉS PAR LES UNIVERSITÉS CANADIENNES\*

DECEMBER 2014 TO DECEMBER 2015 / DÉCEMBRE 2014 À DÉCEMBRE 2015

### ÉCOLE POLYTECHNIQUE DE MONTRÉAL

- BENGUEDOUAR, T., "Étude du couplage entre les codes Tripoli et Dragon", (G. Marleau), August 2015, maintenant un Coordinateur et chargé de cours à Polytechnique Montréal, Montréal, QC, Canada.
- CHOUBAK, S., "The Impact of Hydrogen and Oxidizing Impurities in Chemical Vapor Deposition of Graphene on Copper", (P. Desjardins/R. Martel), April 2015, now searching for employment in the United States.
- DION, M., "Développement de méthodes de calcul de coefficients de sensibilité des sections efficaces multigroupes autoprotégés et de sensibilité implicite du  $K_{\text{eff}}$  aux densités isotopiques", (G. Marleau), March 2015, now pursuing a Post Doctoral Fellowship at the Canadian Nuclear Laboratory, Chalk River, ON, Canada.
- GAGNÉ, M., "Fabrication et applications des réseaux de Bragg ultra-longs", (R. Kashyap), July 2015, maintenant un Ingénieur optique à ESI - Pyrophotonics Lasers, Montréal, QC, Canada.
- HARRISSON, G., "Prise en compte des profils de conditions des matériaux et du couplage axial le long d'un canal du réacteur refroidi à eau supercritique canadien", (G. Marleau), February 2015, now pursuing a Post Doctoral Fellowship at the Canadian Nuclear Laboratory, Chalk River, ON, Canada.
- MARKOV, A., "Practical Microstructures and Plasmonic Terahertz Waveguides", (M.A. Skorobogatiy), May 2015, now pursuing a Post Doctoral Fellowship at the Institut National de la Recherche Scientifique (INRS), Varennes, QC, Canada.
- POULIN, J., "Toward Cold Atom Guidance in a Hollow-Core Photonic Cristal Fibre Using a Blue Detuned Hollow Laser Beam", (R. Kashyap and A.N. Luiten), September 2015, now a R&D Optoelectronic Leader at The Luminaires Group, Montreal, QC, Canada.
- QIAN, J., "Tribo-Mechanical and Electronic Properties of Boron-Containing Coatings", (J.-E. Sapiéha, W. Zhang and L. Martinu), March 2015, now pursuing a Post Doctoral Fellowship at the Polytechnique Montreal, Montreal, QC, Canada.

- RIOUX, D., "Synthèse et modélisation des propriétés optiques de nanoparticules d'alliage or-argent et leur application en imagerie hyperspectrale", (M. Meunier), August 2015, now pursuing a Post Doctoral Fellowship at Polytechnique Montréal, Montreal, QC, Canada.
- SAYAGO HOYOS, J. J., "Organic Transistors Making Use of Room Temperature Ionic Liquids as Gating Medium", (C. Santato, F. Cicoira and F. Saovi), August 2015, now pursuing a Post Doctoral Fellowship at the Univesidat Nacional Autonoma de Mexico, Mexico city Distrito Federal, Mexico.
- SIMONEAU, L.-P., "Percolation dans des réseaux réalistes de nanostructures de carbone", (A. Rochefort), August 2015, maintenant un membre du personnel technique, MDA Corporation, St-Anne-de-Bellevue, QC, Canada.
- SOARES DE LIMA FILHO, E., "Theoretical and Experimental Studies of Laser Induced Cooling of Solids", (R. Kashyap), May 2015, now pursuing a Post Doctoral Fellowship at the Centre d'Optique, photonique et lasers (COPL), Université Laval, Quebec, QC, Canada.
- VANIER, F., "Nonlinear Optics in Chalcogenide and Tellurite Microspheres for the Generation of Mid-Infrared Frequencies", (Y.-A. Peter and M. Rochette), December 2015, now searching for employment in Canada.
- VERNHESES, L., "Thin Coatings for Heavy Industry: Advanced Coatings for Pipes and Valves", (J.-E. Sapiéha and L. Martinu), February 2015, now a Corporate Manager of Product Innovation and Technology at Velan, Montreal, QC, Canada.

### McMASTER UNIVERSITY

- FU, M., "Revealing the Ground State Properties of the  $S = 1/2$  Kagome Heisenberg Antiferromagnet: 170 Single-Crystal NMR Investigations of  $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$ ", (T. Imai), October 2015, now a Post-Doc at the John Hopkins University & NIST, Baltimore/Gaithersburg, MD, United States of America.
- HALL, J., "Hybridization, hidden order, and anti-ferromagnetism in  $\text{URu}_2\text{Si}_2$ : electrodynamic studies by infrared spectroscopy", (T. Timusk), September 2015, now a Research Assistant at McMaster University in the Department of Physics & Astronomy, Hamilton, ON, Canada.
- ILTON, M., "Flow in Thin Polymer Films", (K. Dalnoki-Veress), December 2015, now a Post-Doc at the University of Massachusetts at Amherst, Amherst, MA, United States of America.
- JACKEL, B., "Magnetic Dynamos: How Do They Even Work?", (E. Vishniac), September 2015, now a Machine Learning Research Scientist at the Makeplain Corporation, Toronto, ON, Canada.

- NG, R., "Non-equilibrium real time dynamics of quantum spin systems and the quantum critical dynamics of 'dirty' bosons", (E. Sorensen), July 2015, now searching for employment.
- SCHIRM, M., "Molecular Gas in Nearby Merging and Interacting Galaxies: the Whirlpool Galaxy (M51) and the Antennae Galaxies (NGC 4038/39)", (C. Wilson), September 2015, now a Data Analyst at EA, Kitchener, ON, Canada.
- SLIWA, K., "Molecular Gas Properties of Local Luminous Infrared Galaxies", (C. Wilson), July 2015, now a Post-Doc at the Max-Planck Institute for Astronomy, Heidelberg, Germany.
- SUR, S., "Low Energy Effective Field Theories for Metallic Quantum Critical Points", (S. Lee), August 2015, now a Post-Doc at the Florida State University, Tallahassee, Florida, United States of America.
- TOPPOZINI, L., "Effects of various molecules on the structure and dynamics of lipid membranes", (M. Rheinstadter), September 2015, now searching for employment.
- WAGMAN, J., "Neutron Scattering Studies of Strong Dynamic Correlations in High Temperature Superconductors", (B. Gaulin), August 2015, now searching for employment.
- WARD, R., "The Structure and Evolution of Unbound Star-forming Molecular Clouds", (A. Sills and J. Wadsley), July 2015, now a Researcher/Programmer in Astronomy & Space Sciences at the Ontario Science Centre, Toronto, ON, Canada.
- WEBB, J., "The Scale Size and Dynamical Evolution of Star Clusters in Tidal Fields", (W. Harris and A. Sills), July 2015, now a Post-Doc at the Indiana University Bloomington, Bloomington, IN, United States of America.
- WOODS, R., "A New Approach to Radiative Transfer in Galaxies", (H. Couchman and J. Wadsley), September 2015, now a Data Scientist at Preteckt, Memphis, Tennessee, United States of America.

### MEMORIAL UNIVERSITY

- MA, Z., "Simulation of Wind Forced Responses over the Newfoundland Shelf", (G. Han and B. de Young), October 2015, now a Postdoctoral Fellow at the Northwest Atlantic Fisheries Centre, Fisheries & Oceans, St. John's, NL, Canada.
- XU, B., "Assessing Different Types of Disorder in Carbonate Minerals with Vibrational Spectroscopy", (K. Poduska), October 2015, now a Postdoctoral Fellow in the Department of Science at the China University of Petroleum, Huadong, China.

\*This list includes all information submitted to the CAP office by 2016 January 21.

\*La liste comprend l'information reçue au bureau de l'ACP jusqu'au 21 janvier 2016.

## UNIVERSITÉ DE MONTRÉAL

- ANTONIUS, G., “Calculs ab initio de structures électroniques et de leur dépendance en température avec la méthode GW”, (M. Côté), Février 2015.
- BOLDUC, C., “Modélisation de l’irradiance solaire totale et spectrale et applications à la chimie stratosphérique terrestre”, (P. Charbonneau et M. Bourqui), Avril 2015.
- COSSETTE, J., “Simulations magnétohydrodynamiques en régime idéal”, (P. Bergeron et P. K. Smolarkiewicz), Février 2015.
- DAWOOD, M., “Space and Time Characterization of Laser-Induced Plasmas for Applications in Chemical Analysis and Thin Film Deposition”, (J. Margot), Septembre 2015.
- DÉSILETS-BENOIT, A., “Étude du champ magnétique interne de deux matériaux magnétiques et d’un supraconducteur sans symétrie d’inversion”, (A. Bianchi), Février 2015.
- GAGNÉ, J., “La recherche de naines brunes et étoiles de faible masse dans les associations cinématiques jeunes du voisinage solaire”, (R. Doyon et D. Lafrenière), Septembre 2015.
- GENEST, V., “Structures algébriques, systèmes superintégrables et polynômes orthogonaux”, (L. Vinet), Septembre 2015.
- KAM, S.Z., “Étude de la cinématique HI (21cm) et H-Alpha de la galaxie du Triangle (M33)”, (C. Carignan), Septembre 2015.
- LIMOGES, M.M., “Relevé spectroscopique et étude des propriétés physiques des étoiles naines blanches à moins de 40 parsecs du Soleil”, (P. Bergeron et S. Lepine), Février 2015.
- MAALOUL, L., “Dynamique de croissance par plasma RF magnétron des couches minces à base d’oxyde de zinc”, (L. Stafford), Septembre 2015.
- MALO, L., “Recherche et caractérisation des étoiles jeunes de faible masse dans le voisinage solaire”, (R. Doyon), Février 2015.
- MCGUIRE, H., “Étude de l’oligomérisation et de la fonction de canaux ioniques par spectroscopie de fluorescence et fluorométrie en voltage imposé”, (R. Blunck), Février 2015.
- MULLER, R., “Topological order in a broken-symmetry state”, (A. Bianchi), Septembre 2015.
- NASSIRI, M.A., “Les algorithmes de haute résolution en tomographie d’émission par positrons: développement et accélération sur les cartes graphiques”, (C. Leroy et P. Després), Septembre 2015.
- OWERRE, S.A., “Études de l’effet tunnel des spins quantiques macroscopiques”, (M. Paranjape), Février 2015.
- PAQUIN, F., “Effet de la microstructure sur les propriétés excitoniques des polymères semi-conducteurs semi-cristallins”, (C. Silva), Février 2015.

## UNIVERSITÉ DE SHERBROOKE

- DUCLOS-CIANCI, G., « Outils de calcul quantique tolérant aux fautes », (D. Poulin), Avril 2015, maintenant un Assistant de recherche à l’École polytechnique de Montréal, et un

scientifique chez Anyon Systems Inc., Montréal, Québec, Canada.

- FAYE, J.P.L., « Méthodes d’amas quantiques dans l’étude des modèles de Hubbard », (D. Sénéchal), Juillet 2015, maintenant un Stagiaire postdoctoral dans le département de physique, Université de Sherbrooke, Sherbrooke, QC, Canada.
- LALUMIÈRE, K., « Électrodynamique quantique en guide d’onde », (A. Blais), Juillet 2015, maintenant un Scientifique chez Anyon Systems Inc, Montréal, QC, Canada.
- MANSOURI, S., « Étude magnéto-optique des composés multiferroïques: DyMnO<sub>3</sub> et TbMn<sub>2</sub>O<sub>5</sub> », (S. Jandl), Février 2015, maintenant un Stagiaire postdoctoral dans le département de physique, Université de Sherbrooke, Sherbrooke, QC, Canada.
- VERMETTE, J., « Origine de l’effet magnétoélectrique dans les manganites de structure hexagonale », (S. Jandl), Avril 2015, maintenant Professionnel de recherche dans le département de chimie, Université de Sherbrooke, Sherbrooke, QC, Canada.

## UNIVERSITY OF MANITOBA

- HILDEBRAND, W.K., “Ultrasonic Waves in Strongly Scattering Disordered Media: Understanding Complex Systems through Statistics and Correlations of Multiply Scattered Acoustic and Elastic Waves”, (J.H. Page), October 2015.
- KIDWAI, S., “Electron Impact Excitation Studies of Laser-Excited and Ground-State Barium and Ytterbium”, (G. Gwinner), October 2015, Searching for Employment.
- MACEWAN, S., “The Weak Charge of the Proton: A Search for Physics Beyond the Standard Model”, (M. Gericke), October 2015.
- MATHESON, H., “X-Ray Observations of the Young Pulsar Wind Nebula G21.5-0.9 and the Evolved Pulsar Wind Nebulae CTB 87 (G74.9+1.2) and G63.7 + 1.1”, (S. Safi-Harb), February 2015, Searching for Employment.

## UNIVERSITY OF NEW BRUNSWICK

- ARBABI, A., “Magnetic Resonance Study of Two-Phase flows: Acoustic Cavitations and Vertical Bubbly Flows”, (Igor Mastikhin), May 2015, now pursuing a Postdoctoral Fellowship at the University for Sick Children, Toronto, ON, Canada.
- LANGILLE, J., “The Development and Optimization of Two High-Resolution Interferometers for the Measurement of Upper Atmospheric Winds”, (William Ward), October 2015, now pursuing a Postdoctoral Fellowship at the University of New Brunswick, Fredericton, NB, Canada.
- VASHAEE, S., “Quantitative Magnetic Resonance Measurements of Porous Media: Radio Frequency Field Mapping and Selective Pulse Design”, (Bruce Balcom), May 2015, now pursuing a Postdoctoral Fellowship at the University of New Brunswick, Fredericton, NB, Canada.

- WATSON, C., “GPS Total Electron Content Techniques for Observing the Structure and Dynamics of the High Latitude Ionosphere”, (P.T. Jayachandran), May 2016, now pursuing a Postdoctoral Fellowship at the University of Calgary, Calgary, AB, Canada.

## UNIVERSITY OF OTTAWA

- BARLOW, A., “Coherent anti-stokes Raman Scattering Microscopy”, (A. Stollow), April 2015.
- HAASE, K., “Mechanics & Mechanotransduction of Adherent Cells A Compendium of Atomic Force Microscopy Studies”, (A. Pelling), December 2014, following an NSERC Postdoctoral Fellowship at MIT.
- KWOK, H.W.H., “New Approach in Fabrication of Solid-State Nanopore for Bio-Sensing Applications”, (V. Tabard-Cossa), February 2015.
- LI-POOK-THAN, A., “In Situ Raman Spectroscopy of the Type Selective Etching of Carbon Nanotubes and their Growth from C60 Seeds”, (P. Finnie), August 2015.
- LU, Y., “Study of Kerr phase-interrogator and the applications”, (X. Bao), November 2015, now an Assistant Professor at the Chinese Defense University in Changsha, China.
- OZFIDAN, I., “Electron-Electron Interactions in Optical Properties of Graphene Quantum Dots”, (P. Hawrylak), August 2015, now following a Post Doctoral Fellowship at the University of Alberta, Edmonton, AB, Canada.
- THÉRIAULT, O., “Analysis of the external quantum efficiency of quantum dot enhanced multi-junction solar cells”, (K. Hinzler), December 2014.

## UNIVERSITY OF SASKATCHEWAN

- BAZYLEWSKI, P., “Band Engineering of Graphene using Metal Mediated Oxidation”, (G.S. Chang), May 2015, now pursuing a Post Doctoral Fellowship at the University of Western Ontario, London, ON, Canada.
- BERTWISTLE, D., “X-Ray Crystallography of Inositol Dehydration Enzymes”, (J. Bergstrom and D. Sanders), April 2015, now working in the Accelerator Operations and Development department of Canadian Light Source, Saskatoon, SK, Canada.
- PERRY, G., “Large Scale Plasma Density Perturbations in the Polar F-Region Ionosphere”, (J.P. St-Maurice), February 2015, now an Eyes High Post Doc at the University of Calgary, Calgary, AB, Canada.
- PURDY, S., “Carbon Ion Implanted Silicon for Schottky Light-Emitting Diodes”, (G.S. Chang and M. Bradley), October 2015, now a physicist at Blue Sky Spectroscopy, Lethbridge, AB, Canada.
- ZARIFI, N., “Computational approaches and structural prediction of high pressure molecular solids”, (J. Tse), August 2015, now currently unemployed and will start a Post Doctoral Fellowship in the Department of Chemistry in June 2016 at the University of Buffalo, Buffalo, NY, United States of America.

## UNIVERSITY OF TORONTO

- ABOUZEID, O.S.A., "The search for a heavy-like boson in the H-WW- $\nu_{\nu j}$  channel with the ATLAS detector", (P. Krieger), November 2015, now following a Post Doctoral Fellowship at the University of California in Santa Cruz (UCSC), based at CERN, Geneva, Switzerland.
- BENTON, S.J., "Mapping submillimetre polarization with BLASTPol", (C. B. Netterfield), June 2015, now following a Post Doctoral Fellowship, Cosmology, Princeton University, New Jersey, NJ, United States of America.
- BRADEN, J.N., "Nonlinear intermittent field dynamics in the early universe", (J.R. Bond), June 2015, now following a Post Doctoral Fellowship at the University College London, London, United Kingdom.
- BURENKOV, V.V., "Security issues of quantum cryptographic systems with imperfect detectors", (H.-K. Lo), June 2015, now following a Post Doctoral Fellowship at the University of York, York, United Kingdom.
- CHAN, I., "Balance models for equatorial planetary-scale dynamics", (T.G. Shepherd), June 2015, now a Quantitative Analyst at FinCAE, financial tech Co, Vancouver, BC, Canada.
- ERLER, A.R., "High resolution hydro-climatological projections for Western Canada", (W.R. Peltier), November 2015, now a Postdoctoral Scientist, Aquanty, Waterloo, ON, Canada.
- FEIZPOUR, A., "Nonlinear optics at the single-photon level", (A.M. Steinberg), March 2015, now following a Post Doctoral Fellowship in the Department of Physics at Oxford University, Oxford, United Kingdom.
- FREEDMAN, S., "Applications of effective field theory techniques to jet Physics", (M.E. Luke), June 2015, now a Quantitative Analyst at the Canadian International Bank of Commerce, Toronto (CIBC), ON, Canada.
- GHOFRANI TABARI, M., "Time-lapse ultrasonic imaging of elastic anisotropy in saturated sandstone under polyaxial stress state", (R.P. Young), November 2015, now following a Post Doctoral Fellowship in Civil Engineering at the University of Toronto, Toronto, ON, Canada.
- GOMEZ SANCHEZ, C., "Topics in Physics beyond the standard model with strong interactions", (B. Holdom), November 2015, searching for employment.
- ILIC, N., "The discovery of the Higgs Boson on the WW  $\rightarrow$   $\nu\nu$  decay mode", (R.J. Teuscher), June 2015, now following a Post Doctoral Fellowship at Stanford University based at CERN in Geneva, Switzerland.
- LEE, K., "Theoretical progress in hyper honeycomb iridate  $b - \text{Li}_2\text{IrO}_3$ ", (Y.-B. Kim), November 2015, now employed by DeepLearning4j, Toronto, ON, Canada.

- LUPASCU, A., "Magnetic and structural properties of iridates and cuprates in reduced dimensions", (Y.-J. Kim), November 2015, now employed in the private sector financial field.
- MAHLER, D.H., "Quantum measurement on a budget", (A.M. Steinberg), June 2015, now a Research Assistant at the Centre for Quantum Photonics at Bristol University, Bristol, United Kingdom.
- O'KEEFFE, D.K., "Aspects of applied holography", (A. Peet), November 2015, now employed in the financial sector.
- QIAN, Z., "A study of burst-mode ultrafast-pulse laser ablation on soft tissues and tissue-proxies", (R.S. Marjoribanks), November 2015, searching for employment.
- QUESADA MEJIA, J.N., "Very nonlinear quantum optics", (D.F.V. James), November 2015, now following a Post Doctoral Fellowship at Sherbrooke University, Sherbrooke, QC, Canada.
- RAO, K.M., "Photocurrent control in a magnetic field through quantum interference", (J.E. Sipe), June 2015, now searching for employment.
- RYAN, N., "The application of millimeter wave spectroscopy to ground-based remote sensing of the atmosphere", (K.A. Walker), June 2015, now searching for employment.
- SAMIM, M., "Nonlinear Polari metric microscopy for biomedical imaging", (V. Barzda), November 2015, now following a Post Doctoral Fellowship at the University Health Network, Toronto, ON, Canada.
- SCHRAMM, S., "Search for dark matter with the ATLAS detector in events with an energetic jet and large missing transverse momentum", (P.E. Savard), June 2015, now following a Post Doctoral Fellowship at the University of Geneva, Geneva, Switzerland.
- SMYTH, C., "Measuring quantum effects in photosynthetic light-harvesting complexes with multipartite entanglement", (G.D. Scholes), June 2015, now following a Post Doctoral Fellowship at Fields Institute in the University of Toronto, Toronto, ON, Canada.
- SUN, D., "The effect of hydrostatic pressure on the nematic phases of  $\text{Sr}_3\text{Ru}_2\text{O}_7$ ", (S.R. Julian), June 2015, now following a Post Doctoral Fellowship at Max Planck Institute for Chemical Physics of Solids, Dresden, Germany.
- TEEPLE, B.J., "Deconfinement and duality of (super) Yang-Mills on toroidally compactified space times for all gauge groups", (E. Poppitz), November 2015, now searching for employment.
- TIAN, Y., "Planetary dynamos: magnetic constraints on the interior structure and evolution of a planet", (S. Stanley), November 2015, now pursuing a degree in finance.

- VILIM, R., "The effect of material properties on dynamo generation in planets", (S. Stanley), November 2015, now a Data Scientist at Axon Vibe, New York, NY, U.S.A.
- ZAREAPOUR, P., "Proximity effect and tunnelling spectroscopy of high-temperature superconductor-semiconductor hybrid structures", (K.S. Burch), November 2015, now an Associate Technical Consultant at SWI System ware Innovation Corporation, Toronto, ON, Canada.

## UNIVERSITY OF WESTERN ONTARIO

- AHMED, M.H.A., "Nitrogen Abundances in Early-Type Be Stars", (T.A.A. Sigi), October 2015, currently pursuing a post-doctoral fellowship in Canada or elsewhere.
- GARBANZO SALAS, M., "High resolution tropospheric studies with a MST type radar", (W.K. Hocking), October 2015, now a full-time Instructor at the University of Costa Rica.
- GOLRIZ, S., "Stellar Spectroscopy: New Methods and Insights", (J. Cami and J. Landstreet), April 2015, currently pursuing employment.
- HAQUE, I., "The study of Stark effect and proton trapping in photonic crystals", (M.R. Singh), January 2015, now a Math Technologist at Fanshawe College's Learning Centre.
- JONES, S., "Methods and results toward measuring magnetic field in star-forming regions", (M. Houde), April 2015, now a part-time research technologist at the University of Waterloo.
- LOBACHEVA, O., "Ion beam modification of strontium titanate and highly oriented pyrolytic graphite", (L. Goncharova and T.K. Sham), May 2015, now pursuing employment.
- MCCULLOUGH, E., "A new technique for interpreting depolarization measurements using the CRL atmospheric lidar in the Canadian High Arctic", (R.J. Sica), December 2015, now working on Lidar equipment in the Canadian High Arctic.

## UNIVERSITY OF WINDSOR

- McKENZIE, C., "An Interpretation of Relativistic Spin Entanglement Using Geometric Algebra", (William Baylis), October 2015, now a Teaching Assistant at the University of Windsor and searching for employment.

## YORK UNIVERSITY

- SEABROOK J., "Differential Absorption Lidar Measurements of Tropospheric Ozone in the Arctic", (J. Whiteway), June 2015, now a Postdoctoral Fellow at York University, Toronto, ON, Canada.

The list of PhD Degrees awarded in the following universities will be included in the next issue (No. 2) :

*La liste des doctorats décernés par les universités suivantes sera incluse dans le prochain numéro (no. 2) :*

Brock University, Carleton University, McGill University, Queen's University, Simon Fraser University, University of Alberta, and/et University of Victoria