ALLEN LEARY

PERSONAL INFORMATION

British and French Citizen 21 November 1991

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phone (M) +1 (514) 267 9146

WORK EXPERIENCE

2012–2014 Teaching Assistant, McGill University

McGill University

Responsable for the set up, supervision and grading of first year physics lab courses (Phys 101 & 102) for 40 students. Equally responsable for final exam grading.

2009–2010 Summer Intern, BNP Paribas — Hong Kong

BNP Paribas

Worked in the Mergers and Acquisitions department assiting in market research and predictions in the electronics market in the emerging asian markets.

EDUCATION

2014-present McGill University

Doctor of Philosphy, Biophysics

Description: Courses undertaken in Microscopy and Techniques in Biochemistry. Experimental work focus on physical models for molecular dynamics and development of microscope prototype for high spatio-temporal fluorescence imaging. Microscope design undertaken in partnership with industrial collaborators at Quorum Technologies.
Advisors: Prof. Vogel & Prof. Francois

2012-2014 McGill University & TRIUMF

Masters of Science, Physics

GPA: 3.48 Thesis Title: *Collinear laser spectroscopy on neutron-rich rubidium isotopes and development of a laser frequency locking system*
Description: Masters courses undertaken Nuclear and Particle Physics. Experimental work undertaken at TRIUMF accelerator facility implementing Laser Spectroscopy experiments and data analysis.
Advisors: Prof. Buchinger & Dr. Pearson

2009-2012 McGill University

Bachelor of Science, Physics

GPA: 3.23 Description: Alongside the required courses, electives taken in Nonlinear dynamics and Nanoscience.
Undergraduate research project undertaken under the supervison of Prof Hilke and Dr. Austing on spin blockade in double quantum dots.

PUBLICATIONS

Feb 2015 Direct observation of an isomeric state in 98 Rb and nuclear properties of exotic rubidium isotopes measured by laser spectroscopy

The European Physical Journal A

Fast-beam collinear laser spectroscopy experiments on rubidium have been performed at the ISAC radioactive ion beam facility at TRIUMF. Most recently, the neutron-rich 98Rb isotope has been studied for the investigation of shape coexistence. Two long-lived nuclear states in 98Rb have been clearly observed for the first time: a low-spin state, assigned a spin of I = 0, and a high-spin state. The high-spin state is tentatively assigned a spin of I = 3 based on this

analysis in combination with gamma decay results. The measured nuclear properties of the two states are presented, alongside unpublished values of the neutron-deficient isotopes investigated previously. The mean-square charge radii of both states in 98Rb are observed to continue along the isodeformation line present after the N = 60 onset of deformation.
Authors: T.J. Procter, J.A. Behr, J. Billowes, F. Buchiner, B. Cheal, J.E. Crawford, J. Diliing, A.B. Garnsworthy, **A. Leary**, C.D. Levy, E. Man, M.R. Pearson, O. Shelbaya, M. Stolz, W. Al Tamimi and A. Voss

Apr 2015 Nuclear moments and charge radii of neutron-deficient francium isotopes and isomers

PHYSICAL REVIEW C

Collinear laser fluorescence spectroscopy has been performed on the ground and isomeric states of Fr204,206 in order to determine their spins, nuclear moments, and changes in mean-squared charge radii. A new experimental technique has been developed as part of this work which much enhances the data collection rate while maintaining the high resolution. This has permitted the extension of this study to the two isomeric states in each nucleus. The investigation of nuclear g factors and mean-squared charge radii indicates that the neutron-deficient Fr isotopes lie in a transitional region from spherical towards more collective structures.
Authors:A. Voss, F. Buchinger, B. Cheal, J.E. Crawford, J. Dilling, M. Kartelainen, A.A. Kwiatkowski, **A. Leary**, C.D.P. Levy, F. Mooshammer, M.L. Ojeda, M.R. Pearson, T.J. Procter and W. Al Tamimi

COMPUTER SKILLS

Basic JAVA, C

Intermediate LABVIEW, LaTeX, Adobe Illustrator

Advanced Matlab

OTHER INFORMATION

Awards

2014-2016 · Cellular Dynamics of Molecular Complexes doctoral scholarship

2014 · Lorne Trottier Science accelerator fellowship

Conferences

2015 · Oral Presentation at the IQBI 4th Workshop in quantitative bioscience in Barbados

2015 · Poster at the Cellular Dynamics of Molecular Complexes summer symposium at Universite de Montreal.

Languages

ENGLISH · Fluent

FRENCH · Fluent

MANDERIN · Intermediate Conversational level

GERMAN · Basic

October 9, 2015