



📍 231 Park Pl, #34, Brooklyn, NY, USA 11238

- Extreme attention to detail
- Clear written and verbal communication
- Efficient time and project management
- Perpetually organized
- Creative problem solver

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- Design, construction, and alignment of optics
- Electrical circuit design and construction
- Statistical data analysis
- Mathematical modeling
- Atomic and molecular spectroscopy
- Microcontroller operation and application
- Experienced in machine shop work
- CAD/CAM proficiency

- Feb 2015 - Nov 2015

ORAL PRESENTATIONS

- "Fractional T1 relaxation from magnetization transfer in wood: applications to brain MRI?". Frontiers in Biophysics, Jun 2021. Proceedings online.
- "Adiabatic Inversion and T1 Relaxation of Bovine White Matter". ISMRM Annual Conference and Exhibition, Aug 2020. Proceedings online. Abstract #0527.

INVITED SEMINARS

- "Fractional T1 relaxation from magnetization transfer in wood: applications to brain MRI?". ABQMR Seminar Series, Aug 2021. Online.
- "Direct Measurements of Collisional Dynamics in Cold Atom Triads". Quantum Fluids and Gases. Dodd-Walls Centre Seminar Series, Jul 2020. Online.

POSTER PRESENTATIONS

- "Understanding T1 in heterogeneous systems: Extending the two-pool model to fractional order". Frontiers in Biophysics, Jun 2022. Vancouver, BC, Canada.
- "Understanding T1 in heterogeneous systems: Extending the two-pool model to fractional order". ISMRM Annual Conference and Exhibition, May 2022. London, UK. Abstract #1507.
- "T1 Relaxation of White Matter Following Adiabatic Inversion". ISMRM Annual Conference and Exhibition, May 2021. Proceedings online. Abstract #3074.
- "Effects of Adiabatic Pulses on Non-Aqueous Tissue Components". Frontiers in Biophysics, Jun 2019. Vancouver, BC, Canada.

PUBLICATIONS

LA Reynolds, SR Morris, IM Vavasour, L Barlow, C Laule, AL MacKay, CA Michal. Fractional-order two-pool model for longitudinal nuclear spin relaxation in white matter: a new contrast source in human brain imaging?. *Physical Review Letters*, (Manuscript under peer-review), Dec 2023.

LA Reynolds, SR Morris, IM Vavasour, L Barlow, C Laule, AL MacKay, CA Michal. Non-aqueous magnetization following adiabatic and selective pulses in brain: T1 and cross-relaxation dynamics. *NMR in Biomedicine*, 36(8):e4936, Mar 2023. <https://doi.org/10.1002/nbm.4936>

- **Editorial:** <https://doi.org/10.1002/nbm.4997>

LA Reynolds, E Schwartz, U Ebling, M Weyland, J Brand, MF Andersen. Direct Measurements of Collisional Dynamics in Cold Atom Triads. *Physical Review Letters*, 124(7): 073401, Feb 2020. <https://doi.org/10.1103/PhysRevLett.124.073401>

- **Physics Article:** [Watching Three Atoms Collide](#)

WORK EXPERIENCE

Data Acquisition Specialist

NIVO Consulting Ltd., Vancouver, BC, Canada

Apr 2021 - Aug 2023

- Measured flatness and levelness of new concrete floors on commercial construction sites

Luthiery Apprentice

Bashkin Guitars, Fort Collins, CO, USA

Feb 2016 - Jun 2017

- Built and repaired acoustic and electric guitars with specialized tooling. Installed, tested, and developed a pipeline for a CNC router. Drew technical guitar blueprints. Created and produced a luthiery based podcast

Woodworker

Tyler Morris Woodworking, Fort Collins, CO, USA

May 2016 - Jun 2017

- Manufactured custom and commercial wood products using industrial woodworking machines. Optimized production by designing jigs and maintaining machinery. Managed online sales

INVOLVEMENT

UBC Physics & Astronomy Launchpad Program

Jun 2022

- Participated in panel discussing mentor-mentee relations to incoming graduate students

Ars Scientia Collaboration

2021

- UBC research cluster partnering six physicists with four artists in six-month residencies at the Belkin art gallery that explore academic art-science collaborations

International Society of Magnetic Resonance in Medicine Trainee

2019 - present

Society of Physics Students President

2015 - 2016 academic year

ARCS Foundation National Scholar

2015

REFERENCES

Dr. Carl Michal

Associate Professor, Dept. of Physics, University of British Columbia

Email: michal@phas.ubc.ca

Dr. Alex MacKay

Professor Emeritus, Depts. of Physics & Radiology, University of British Columbia

Email: mackay@physics.ubc.ca