
The great Australian migration

Riley Henderson & Alex Ward
MWAPP Meeting
19/10/2023



Alex in Aus

Oct. 2022 - Aug. 2023

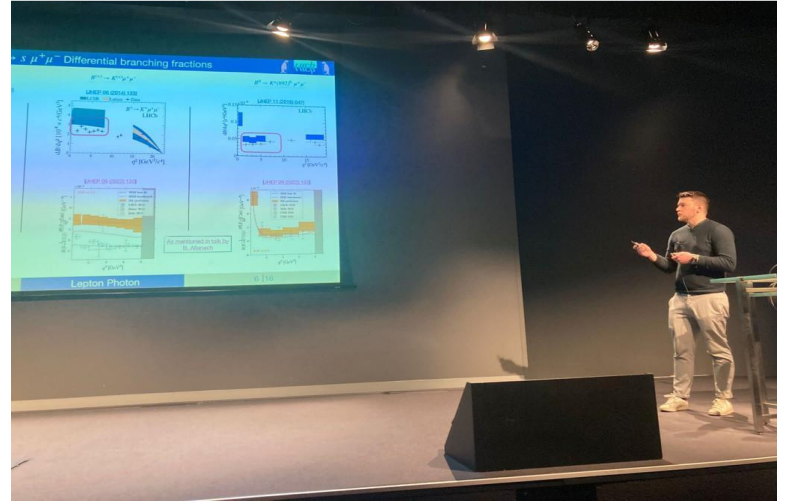


Physics in Monash

- Opportunity for supervision from Ulrik Egede, with access to his expertise.
- Got to be involved in Lepton-Photon and give a talk on behalf of LHCb.
- Worked on a project with Pythia8 and Peter Skands.
- Collaboration between HEP experimental and theory groups at Monash provided opportunities to interact with expertise outside of my immediate field.

- All of these opportunities allowed me to grow as a physicist and a person within a different environment.

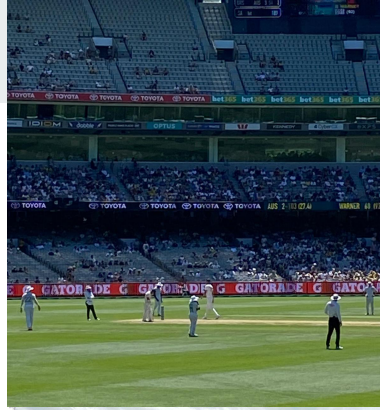
31st Lepton Photon Conference
MELBOURNE CONVENTION
& EXHIBITION CENTRE
17 - 21 JULY



Life in Melbourne

Sports

- Melbourne is a fantastic city for sports.
- I got into AFL, went to the Australian Open, F1, FIFA Women's World Cup, Cricket at the MCG, etc...



Travelling

- Amazing chance to travel around Australia.
- Visited some great places and saw some interesting animals.
- Visited the famous Bondi beach on the rainiest day of the year...

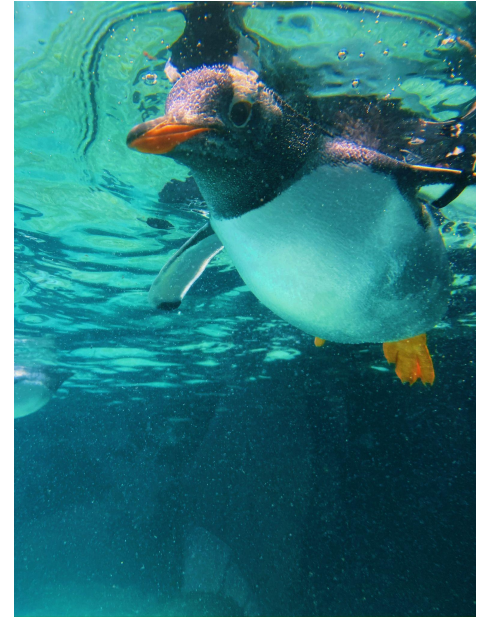


Culture

- Melbourne has great food/coffee.
- Many cultural events/shows/galleries...
- Christmas at 40 degrees is strange.

The good

- Experience different styles of supervision / teaching within one PhD
- Personal growth owing to moving to the other side of the world.
- Access to wide range of expertise within physics.
- Saw different ways that research groups operate.
- Experienced teaching at different institutes.
- VISA experience (UK-Aus) was fairly seamless (aside from a 5 minute mandatory meeting in Paris involving 7 hours of trains to/from Geneva...)
- Australia/Melbourne is a very welcoming place.



The not-so-good

- Poor communication from the MWA admin teams throughout the process made some aspects difficult.
- Difficult to continue supervision at home institute without sacrificing personal time due to time difference..
- Distance from CERN/LHCb made attending meetings / giving talks infrequent.
- The 14 hour overnight train to Sydney was regrettable.



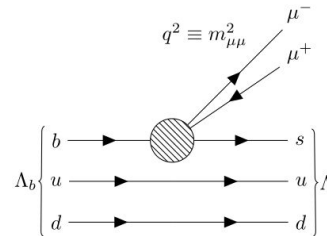
Riley in the UK

Sep. 2022 – Sep. 2023



Physics at Warwick

- Large particle physics department — not only LHCb, but also ATLAS and neutrino experiments.
- The LHCb group is particularly large and active in a number of areas:
 - Rare B decays, electroweak physics, detector development.
- I was surrounded by others also studying rare electroweak penguin decays of B hadrons.
- Excellent opportunity to work closely with true experts in the field.
- In collaboration with Michal (my supervisor), and Tom. B, I started work on a new LHCb analysis measuring the branching fraction for $\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-$.



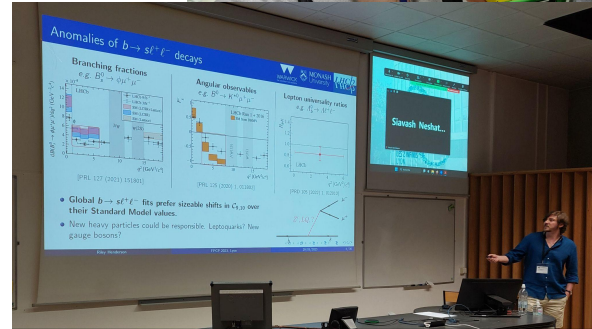
Life at Warwick/Coventry

- The University of Warwick is actually in Coventry – so that’s where I lived.
- Coventry is full of history, with impressive cathedrals, museums, and more.
- Coventry is also full of students from all over the world – being home to two large universities.
- Dead centre of England, but just a short train ride from Birmingham – if you fancy something a bit more lively.



Neat things I did

- Travelled to Geneva to visit CERN and LHCb. →
- Gave a plenary talk at the FPCP 2023 conference in Lyon, France. →



Porlock Weir, England



Yr Wyddfa (Snowdon), Wales



← Toured the entire UK in a campervan!

MWAPP communications



- I helped to create some official communications content for the MWAPP whilst at Warwick.
 - Direct anyone interested to: <https://warwick.ac.uk/global/monash-warwick-alliance/research/mwa-particle-physics>
- I also wrote a similar “about me” piece for the Monash SPA newsletter.

International

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[Our researchers](#) | [Alliance Particle Physics Joint PhD](#)

Opportunities in Particle Physics

The Alliance Joint PhD enables researchers to study at two innovative and internationally renowned institutions. They spend one year at Warwick and one year at any of Monash's Australian campuses. Travel to the other institution usually occurs in the second year. Riley Henderson, a third year PhD student, joined the Monash Warwick Alliance Particle Physics group in 2020. He graduated from Monash University with a bachelor's degree in science and computer science, completed an honours year, before starting his PhD in the School of Physics and Astronomy.



What are the benefits of a Joint PhD

Riley applied for a joint Monash-Warwick PhD position as it offered him extensive experience on the frontiers of research into particle physics and he would also get to travel and see the world which would help build his network and career. Initially his research was based on his home campus at Monash, but in 2022 he moved to the UK. Here he was hosted by the University of Warwick's Particle Physics team, spending time at CERN's Large Hadron Collider, Switzerland, and attending conferences in Europe.



Preparing for research in the UK

The first 18 months of Riley's PhD sped past and he soon had to prepare to head to his new temporary home at Warwick. He quickly found a flat with other university students who made him feel at home from the start and who have been great fun. The University of Warwick's Elementary Particle Physics group welcomed him, and he quickly settled into his new surroundings with like-minded young physicists.



Extending Research Experiences

Day to day life at Warwick and Monash have not been dramatically different, but with one notable exception. Within the first month he visited CERN, the home of the Large Hadron Collider (LHC) which was something he had wanted to tick off his bucket list for some time. Since then he has made a number of other short European trips — for conferences, workshops and vacations — with nothing but a carry bag in hand. Many of the connections he has made whilst abroad, both professionally and personally, will be invaluable and cherished for many years to come.

The ups and downs of it all

The ups

- Finding a place to live and making the move went quite smoothly in both directions.
 - I believe I got quite lucky with this.
- Amazing opportunities to network and interact face-to-face with the wider particle physics community.
 - This is often difficult from Australia with the geographical separation and time difference.
- The particle physics department at Warwick was very welcoming, social, and helpful.

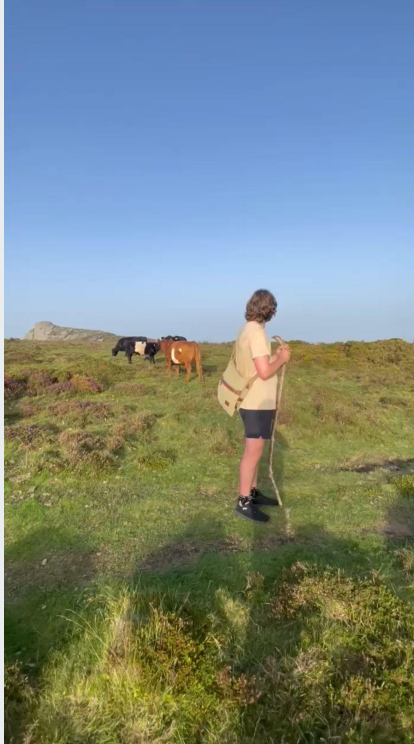
The downs

- Having to schedule my Monash PhD milestone review with the time-zone difference was a bit of a nightmare.
 - Not looking forward to the remote Warwick viva either :/
- Still reaching 120 hours of MGR PD courses required a few very late nights / early mornings.
- Difficult to find analysis discussion times with Warwick supervisor now that I have moved back.
- Great housemates, but not a great house. Rough part of town, and I thoroughly missed my comfortable furniture, clean kitchen, and shielding from street noise back home.

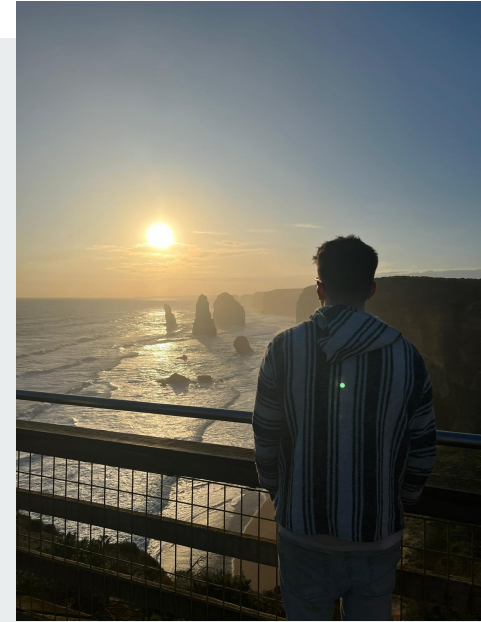
Summary

What did Alex and Riley learn?

- Alex: It was a great experience, **I would recommend it to anybody!**



- Alex: You certainly get out of the LTA what you put into it.
- Alex: I learnt a lot from moving to Monash for the year, I wish I would have had more time to grow and work more within the group.



- Riley: **my time abroad was amazing.** I believe it has been immeasurably beneficial with respect to both my career and life.
- Riley: I made many new friends and connections, gained much experience and knowledge of the world, and (most importantly) learnt a bunch more about physics!