



Loughborough
University

Peter Harrison Centre
for Disability Sport

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for Disability Sport

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15 years, 15 stories





Celebrating 15 years

The Peter Harrison Centre for Disability Sport (PHC) based at Loughborough University within the School of Sport, Exercise and Health Sciences (SSEHS), celebrates its 15th anniversary this year. To celebrate, we have collected 15 stories that capture the essence of what it is like to be a part of the PHC, to work here, to study here, to collaborate here.

We have been described as a thriving and productive research unit with engaged staff and students. We have a proud tradition of PhD scholarship; with 26 doctoral graduates across the areas of elite disability sport and health and wellbeing. More are on the way! We are passionate about disseminating this work and delivering research that is practically useful, research with impact. Our collaborations are local and global, Watford to Wakayama; Buckinghamshire to British Columbia. The stories reflect all this and more; there is much to celebrate.

I hope you enjoy reading them as much as I did. The tales are rich and diverse; from boarding the wrong flight to boarding the podium. What they all share though is a focus on relationships. The people that make all the hard work worthwhile. They show how professional relationships have shaped personal relationships across many years – colleagues have become friends. In one case, spouses! Although only a snippet, the stories illustrate wonderfully the colourful tapestry of the PHC's first 15 years. To the next 15.

Professor Vicky Tolfrey

<https://youtu.be/eJDkK4I-0xQ>





Photo credit © IPC/Ralf Kuckuck

Introducing our Storytellers

1. **Professor Stuart Biddle**
University of Southern Queensland (Australia). Formerly, Loughborough University, 1998-2014; Head, School of Sport and Exercise Sciences, 2001-2007.
2. **Professor Lucas van der Woude**
University of Groningen, and Visiting Professor at Loughborough University.
3. **Dr Christof Leicht**
Loughborough University. Former PHC PhD student and Research Associate of the PHC.
4. **Andy Barrow**
Inspirational Speaker. Former GB Wheelchair Rugby Player.
5. **Penny Briscoe**
British Paralympic Association. Chef de Mission for Tokyo 2020.
6. **Nik Diaper**
Loughborough University. Formerly, British Paralympic Association and English Institute of Sport.
7. **Jonathon Riall**
GB Head Paratriathlon Coach.
8. **Professor Brett Smith**
Durham University. Former Loughborough University PHC Psycho-social Strand Leader.
9. **Dr Anthony Papathomas**
Loughborough University. Former Research Associate of the PHC.
10. **Professor Kathleen Martin Ginis**
The University of British Columbia (Canada), and Visiting Professor at Loughborough University.
11. **Professor Maureen MacDonald**
McMaster University (Canada), and Visiting Professor at Loughborough University.
12. **Professor Fumihiko Tajima**
Wakayama Medical University, and Visiting Professor at Loughborough University.
13. **Dr Jan van der Scheer**
University of Cambridge, and Visiting Fellow at Loughborough University. Former Research Associate of the PHC.
14. **Dr Rienk van der Slikke**
The Hague University of Applied Sciences.
15. **Dr Terri Paulson and Dr Tom Paulson**
English Institute of Sport. Former PHC PhD students and staff members.

The Vision

“Peter Harrison observed Para sport and immediately realised this was the real deal. The whole of the Paralympic movement thanks him for his belief and passion in Para sport and the manner in which he has backed the development of the Centre named after him under the direction of Professor Vicky Tolfrey”.

Sir Philip Craven
Former IPC President





The Beginning

By Stuart Biddle

I was approached by Vicki Unwin from the Development Office at Loughborough around 2004. I recollect it was a conversation as we walked past the 1st XV rugby pitch (a location Vicki and I frequented often in our enthusiasm for the student teams). Vicki always had a good eye for possible collaborations for the university with relevant external agencies and stakeholders.

Back then, I was Head of the University's School of Sport and Exercise Sciences (as it was called) and was keen to see if I could facilitate such links, especially if they could help our research or teaching efforts. Vicki mentioned that the Peter Harrison Foundation had a passion for disability sport and was already providing support for student Dan Greaves, later to be a Paralympic gold medallist in athletics. And so, the story began!

Discussions took place between the University and the Foundation, with Dr John Ledlie (the Director of the Foundation back then) being my main contact. It was such a pleasure working with John. A classically educated man with a sharp eye and wit ("Ah, Professor Biddle old chap! How are you?"). He helped shape the collaboration magnificently. The idea of a research centre emerged.

To seal the deal, the Vice-Chancellor at the time, Professor David Wallace, was keen to host Peter Harrison and his colleagues from the Foundation for a dinner near Loughborough. We all travelled out to Rutland Water and had a wonderful discussion and dinner at the exclusive Hambleton Hall. All I can say is that I'm glad I didn't have to pay the bill! But it did the trick – Peter Harrison was happy to sign up to supporting a Centre – The Peter Harrison Centre for Disability Sport (PHC).

Over many years, this became a flagship centre for the School at Loughborough. With a clear shift in focus to Paralympic

sports, when Dr (later Professor) Vicky Tolfrey took over as Director, the Centre secured continued funding from the Foundation as well as other organisations. While high quality research was a priority, the Centre worked tirelessly with Paralympic sports in delivering excellent scientific support. The Centre also expanded to include a wider social science brief as other Loughborough staff showed their interest, expertise, and desire to be involved.

Vicky Tolfrey and I travelled many times to Reigate – not an easy train journey – to update the Foundation and do our best to secure continued funding. I was not an expert in disability sport at all, so continued to be amazed at all of the work and the updates given by Vicky. John Ledlie and I often commented in confidence, "how does she manage to do all this?"! I guess I had the easy job – I did the 'politicking' and handshakes while Vicky did the hard work!

After I left for Australia in 2014, I have enjoyed staying in touch via updates, newsletters, personal contacts, and social media. I continue to be enthused and amazed. I offer my own thanks and congratulations to both the Centre and the Foundation on the achievements to date! It was a pleasure being there and seeing the project develop.

With a commitment to continued funding, the Foundation showed its trust and commitment to the PHC and has created a legacy for British Paralympic and wider disability sport. Long may it continue.



Stuart Biddle (4th right) pictured with John Ledlie, Vicky Tolfrey, Peter Harrison and Peter Lee

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 "Alone we can do so little;
 together we can do so much."

Helen Keller





Lucas van der Woude at Barry's graduation

With John Lenton as a new M.Phil. and later PhD student in 2002, my role became a more formal one as co-supervisor with Neil and Vicky Goosey. Meanwhile, Barry Mason stepped into the arena (and many other PhD students were to follow at the PHC for that matter) and he continued the work on ergonomics, biomechanics, and physiology in wheelchair sports. Both guys made the switch to the PHC at Loughborough University together with their 'boss' Vicky as their successful and focused supervisor, and the ever so enthusiastic new director of PHC in 2009. I simply followed both the lady and the gentlemen who successfully defended their PhDs in 2011 (Barry) and 2012 (John) in very different places, however. 'Inspiring and restless' John had the biggest challenge – often spent sitting by times at my kitchen table in Roden, to tie up the final loose ends of his thesis in Groningen. The 'somewhat quiet and seemingly controlled' Barry followed the more regular path of a successful PhD defense at Loughborough University. These two guys for me formed the reason of many occasions of exchange and collaborative activities between our respective home departments, institutes, and universities, with Vicky always being somewhere in the middle. PHC's work in adaptive sports and rehabilitation sciences helped bring us together

and continues to jump-start many young careers, building knowledge and bringing science into practice. That is what academia at PHC is all about. Looking back today, PHC has taken up this crucial challenge for the international adapted sports and rehabilitation sciences research agenda more than successfully.

Our collaboration opened up the different flavours of the academic world for young talented people and proved to be a strong steppingstone for continued careers of young staff members. I am really happy to see so many of my Dutch students and colleagues (Thomas Janssen, Sonja de Groot, Riemer Vegter, Jan van der Scheer, Ingrid Kouwijzer, Marika Leving, Thomas Rietveld, Monique Berger & Rienk van der Slikke) visiting the PHC, while very much benefitting from the hospitality, the knowledge and skills, the mutual interest in common projects and productive collaboration over a wide continuum of adapted sport and rehabilitation sciences. With me stepping more and more to the side of the 'playing field', others are and have stepped in and continue the great collaborative work at and with the PHC – ever so important with the continuously changing landscapes in Paralympic and adapted sports and the international rehabilitation practice. Keep up the good work!

The Career-long Collaboration

By Lucas van der Woude

Following an email from Neil Fowler and Ian Campbell to act as an external examiner on the PhD thesis of Vicky Goosey an early start of what became a career-long and fruitful collaboration. As a PhD student at Manchester Metropolitan University, Vicky presented at the 2nd State of the Art Congress in 1998 in Amsterdam and has returned to each of these conferences ever since. Most recently with her large group of talented students from Peter Harrison Centre of Disability Sport (PHC) in both Amsterdam and Groningen.



Riemer Vegter (centre) with members of the PHC



PHC members enjoying wheelchair basketball with visitors from the Netherlands



The Push to London 2012

By Christof Leicht

“Ah, Stoke Mandeville!” My Japanese visitor Taka Ogawa points at the sign as we pass it heading North on the M1. I have just picked him up from Heathrow Airport for his first visit to Loughborough, and to my surprise he seems to be familiar with the local geography. His work as a medical doctor in rehabilitation and his background in Paralympic sport work in his favour though, and of course he has heard of the place – a hospital in rural England where a visionary doctor organised the first competition for patients with spinal cord injury in the late 40ies, starting a movement that would result in the Paralympic Games.

My thoughts go back to my first years at the Peter Harrison Centre (PHC) when, preparing for the Paralympic Games in London 2012, we supported the wheelchair basketball and rugby National teams with laboratory and on-court exercise testing. In these days we travelled to Stoke Mandeville quite frequently to collect data during training sessions, getting to know the athletes, and sharing the thrill and anticipation in the lead up to one of the most exciting events of their lifetime.

What could have been a better place to celebrate the Paralympic movement? 2012 was a tremendous opportunity to influence public awareness about Paralympic sports and exercise opportunities for people with disabilities. Before the Games, the general public would have been hard pushed to name more than three Paralympic sports, and virtually nobody would have ever had tried out such a sport. To help change that we loaded our van with Paralympic testing equipment – handcycles, wheelchairs, wheelchair ergometers, oxygen uptake measurement devices, timing gates etc. – and set off to host “Pushing to London 2012” in the Stoke Mandeville sport halls.

The response was quite spectacular. Thanks to some pro-active schoolteachers soon the place was heaving with 10-year olds, racing each other in wheelchairs, playing wheelchair basketball instructed by a Team GB player (Emily Scrivener) and trying out the scientific equipment (we soon found out though that the comical looks of wearing the mask used for oxygen uptake measurements trumped the scientific value of the data we so much treasure). Curious locals quizzed Team GB wheelchair Rugby players on their medalling prospects and posed some tricky science questions, unlike the kids who by then had progressed to making Darth Vader noises.

The event left memories I am very fond of. It wasn't just a good day out with the PHC team. It wasn't just a screaming school class pushing wheelchairs until blisters formed, not just seeing kids play Paralympic sports for the fun of it. Not just a couple of Team GB members addressing the curiosity of random visitors. For me it was very much about being part of the Paralympic movement. Covid-19 has thrown a spanner in the works of the Paralympic Games in Tokyo this year – let's hope that Taka and his colleagues will be given that same opportunity in 2021.



“The Peter Harrison Centre for Disability Sport (PHC) has been an invaluable partner of GB Wheelchair Rugby over the last ten years. A combination of imaginative research and support for the practical application of results has enabled PHC to build an unparalleled understanding of our sport and its athletes. The leadership of Professor Vicky Tolfrey has been instrumental in this successful partnership. She is always alert to opportunities for the PHC to further research which has the potential to add value to our performance system and to gain a better understanding of the performance potential of individual athletes with very different conditions and levels of functionality.”

David Pond
Chief Executive GB Wheelchair Rugby

The Elite Athlete's Perspective

By Andy Barrow

I remember first meeting members of the Peter Harrison Centre for Disability Sport (PHC) at some point between the Athens and Beijing Paralympic Games. Athens had been my first games and getting there was all about hard work. Push, push, push. Lift, lift, lift. More is better! Anyone's debut Games is a fantastic moment, but what next? For me, it was good news and bad news. I was honoured to be made captain of the GB Wheelchair Rugby team, but equally frustrated by a long-term shoulder injury. (Remember the lift, lift, lift part?) It was clear to me that my approach needed some "finessing" and the PHC came along at the perfect time.



Andy Barrow piloting one of the many experimental studies in the PHC laboratory



Rehabbing my shoulder gave me the chance to lay a rock-solid conditioning foundation to support my overall performance, and the knowledge that I gained from the PHC's "numbers" were an integral part of that. As well as the standard battery of baseline testing that the PHC provided, Vicky and her team gave me the opportunity to participate in several studies. Crucially, these studies were not only interesting, but also highly relevant to the physiological idiosyncrasies of an elite athlete who happened to have a high-lesion spinal cord injury.

Relatively well-known tests like $\dot{V}O_2$ max and lean muscle mass were adapted to suit us while studies on seating position, base metabolic rate, and heat tolerance gave us a huge amount of data. This allowed us to exploit the marginal gains and really push the boundaries of what was possible for athletes with our level of function.

As well as seeing the obvious benefits of doing all of this, I was lucky in that I was genuinely interested in the science behind the numbers. I'm sure that this wasn't just down to me having an inquiring mind... I also really enjoyed working with the PHC team because everyone had a real passion for what they were doing, and a good dose of humour was never far away. I will never forget John Lenton informing

Christof Leicht that his experiment wasn't rigorous as he had failed to give participants the exact same number of baked beans for their mid-study snack!

The PHC massively enhanced my performance as an elite athlete, but my association with them didn't end there. The marketeers billed London 2012 Paralympians as "super humans", (I'll take it!) but some of my most rewarding work with Vicky and the team has been distinctly "human". After retiring from Wheelchair Rugby post-London, I continued to take part in various studies such as trialling new testing protocols for the next generation of athletes.

However, by far the most important piece of work I've been involved in was working with the PHC and several other key stakeholders around the world to produce a set of evidence-based scientific exercise guidelines for people with spinal cord injury. I'm extremely proud of the small part that I had in this, especially given the increased importance of exercise and fitness in the backdrop of the current COVID-19 Pandemic.

Overall, the PHC has played a big part in my career as an elite athlete and my life as a person with a disability. I'm full of admiration for what they have achieved in their first fifteen years and hugely excited to see what the next fifteen bring!

“Evidence-based research is becoming more of a useful tool for the important area of classification in the Paralympic Movement. Classification is a unique and integral part of wheelchair rugby. The Peter Harrison Centre for Disability Sport is a world-class organisation and it has been a pleasure working with them on various topics over the previous years. We look forward to future projects together to ensure we meet the requirements of the ever-increasing professionalism within sports for individuals with impairments.”

Richard Allcroft

President, International Wheelchair Rugby Federation



The Team Behind the Team: ParalympicsGB

By Penny Briscoe

The Peter Harrison Foundation is the British Paralympic Association's founding supporter and has supported ParalympicsGB's success over multiple Games cycles. Over £500,000 has been provided to help improve the knowledge of Paralympic sport through a wide range of research topics and performance impacting projects, many in collaboration with experts from the Peter Harrison Centre for Disability Sport (PHC).

In 2012, Peter Harrison and the Foundation generously funded our first bespoke Performance and Medical Centre which supported success at our home Games in London. This initiative was not only world leading but provided a performance advantage for the team and set the standard for the future. It was great that Vicky (The Director of the PHC) was part of the journey along with Crystal Lane a PHF Scholar experiencing her first Games while studying at Loughborough University.

Looking back at both London and moving to Rio, continued support from Peter and the Foundation meant we were able to continue to offer an incredible multi-disciplinary Performance Centre staffed by many of the UK's leading Para Sport practitioners. There were sports medicine doctors, physios, sports massage therapists, nurses, psychologists, physiologists, nutritionists, and performance analysts (including Terri Paulson and Jamie Barker from the PHC). All working collaboratively to ensure athletes were able to deliver personal best and medal winning performances at the world's biggest Para Sport event.

It has been a pleasure working with the PHC team on this journey, seeing PHC PhD students develop into practitioners and becoming embedded within Para Sport (eg. John Lenton, Tom Paulson, Terri Paulson, and Ben Stephenson) as we move into the 2020 Tokyo Paralympic Games. Moreover, it is great to see Michael Hutchinson is fully embedded within the PHC as a current Research Assistant, since he worked with us in London as an intern at the ParalympicsGB holding camp at the University of Bath.

Moving to Rio, 147 medals, 64 Golds, 2nd on the medal table. The most successful Paralympic Games ever, reinforcing ParalympicsGB's status as a world leading National Paralympic Committee and world leading team. This track record of success would not have been possible without the incredible, inspirational athletes and their support teams but also our strong partners and partnerships both commercially and across the UK high performance system whose support led to the best ever prepared team in Rio. The Performance Centre and GB building housed around 450 team members including 264 of the worlds' best athletes across 19 sports. A whopping 731 appointments were made through the online booking system – everywhere you looked services were being



Penny Briscoe proudly standing by the Rio 2016 medal table

accessed from pre-competition pre-rehabilitation to post-competition ice baths. And importantly the medal board had to be kept updated which was a full-time job in itself! Feedback from athletes and staff was exceptional with 100% stating that services were World Class or good. One example, "It couldn't have been better. The environment and service were always first class and professional" Lead Physio, ParaAthletics.

As we look ahead to Tokyo 2020 I can't wait to see the next iteration of ParalympicsGB's Performance Centre come to life... Thanks to continued support from Peter and the Foundation, I'm sure our team of system experts (with the input of the PHC members) will ensure it remains central to our best prepared team strategy, providing once again world leading support to ParalympicsGB when it matters most...





Nik Diaper with members of the conference planning team and Andrew Ross from the Peter Harrison Foundation



The Trials and Tribulations of Conference Planning

By Nik Diaper

Over the last few years and in a variety of roles, I have been fortunate to work with several different members of the Peter Harrison Centre for Disability Sport (PHC). But what stands out the most would have to be the four editions of the UK Paralympic High-Performance Conference held between 2013-2019 which were a collaboration between the PHC, English Institute of Sport, British Paralympic Association and UK Sport.

I must admit that the mere mention of this conference brings a grimace to my face! Those that have ever tried to organise a conference will appreciate the blood, sweat and tears that are involved, particularly when "conference organiser" does not appear in your job title and when you can count the number of fellow planning-group members on less than one hand ($n = 4$ for the 2013 edition). Yet these conferences were a brilliant example of multi-agency collaboration across the high-performance landscape in the UK. They were unique because they broke the mould of previous academic conference formats and brought together front-line practitioners, coaches, athletes, administrators, and academics.

I am happy to admit that for the first conference in 2013, we had completely underestimated the work involved to bring over 100 delegates together for a two-day conference! I will spare you the trials and tribulations that we subjected ourselves to in the preceding months of March 2013, suffice to say that it was a character-building experience. Yet somehow, we delivered something that every single delegate wanted to see as a regular event. If we were ever in doubt about whether to do this again, the answer was very clear. Again, if you have ever organised a conference before you will appreciate that the thought of doing it all over again is more terrifying than the first time because you know what is coming!

You would expect that the more you do something, the easier it should become. However, this does not seem to apply to conferences! If anything, things became even harder because of the expectations

that had now been set. But each year the feedback clearly showed that it was having an impact and was highly valued. That is what mattered most.

Despite the organisational trials and tribulations, the conferences were incredibly rewarding and enriching experiences on a personal level. There are so many highlights that I could share but the stand-out for me will always be the amazing people from different organisations that came together to make it happen. There was the plucky planning group, the brilliant speakers, and the engaging delegates. There were also the unwitting (but always willing) members of the PHC who inevitably were roped into a myriad of supporting activities, without which the conference would not have been a success! And of course, a special mention must go to the Peter Harrison Foundation for their support over the years. To all those people that made it happen, thank you.



The True Partnership

By Jonathon Riall

A true partnership is a great thing; not something transactional or short lived, but a true collaboration based upon a shared task and idea. That is what I feel has been achieved between the Peter Harrison Centre for Disability Sport (PHC) and British Triathlon over the past eight years. Both organisations at the start were taking baby steps but understanding how at each point this partnership could grow whilst being open minded about its possibilities has always been the strength of what has been achieved.

Jonathon Riall



Ben Stephenson conducting physiological testing of the Paratriathlon athletes in the PHC laboratory

The Paralympic Programme at British Triathlon was created in part in 2009. By 2012 we were well and truly on our way to preparing our team, and developing our knowledge, ahead of the Rio Paralympic Games, which formed the stage for the sport's debut in 2016.

This sport is as multifaceted as it comes. Six distinctly different disability categories, three different sports, and no race ever the same. It was with no surprise that there was, and still is, a lot to learn and a lot to be gained when world class physiology comes together with world class coaching. That is what this partnership has always attempted to do – bring together people who have a really keen interest in the human body, the specific impact of disability and the sport of triathlon and immerses them into a coaching team so that all learning has the opportunity to be applied and tested in real time. They are never an outsider to the journey but a critical part of it.

What started as support from a range of practitioners across a number of differing expertise, grew into more immersive partnership roles, with opportunities for students to conduct MSc's in specific questions posed by the sport; all the while supervised by a team who were growing closer to the core task of the sport as we progressed through the Rio cycle and into Tokyo.

Tokyo plus Triathlon was the perfect mix of ingredients to throw up a number of really rich academic questions, that if tackled well, would help benefit the sport and create potentially one of the most effective competitive advantages at the games in 2020 – and that's what the past 5 years has

seen. Ben Stephenson was selected and accepted the task of completing his PhD study exclusively working in partnership with the sport aligned with its challenge of competing in such challenging physiological conditions in Tokyo. This is something that has seen not only the Paralympic Programme benefit from but the Olympic programme too.

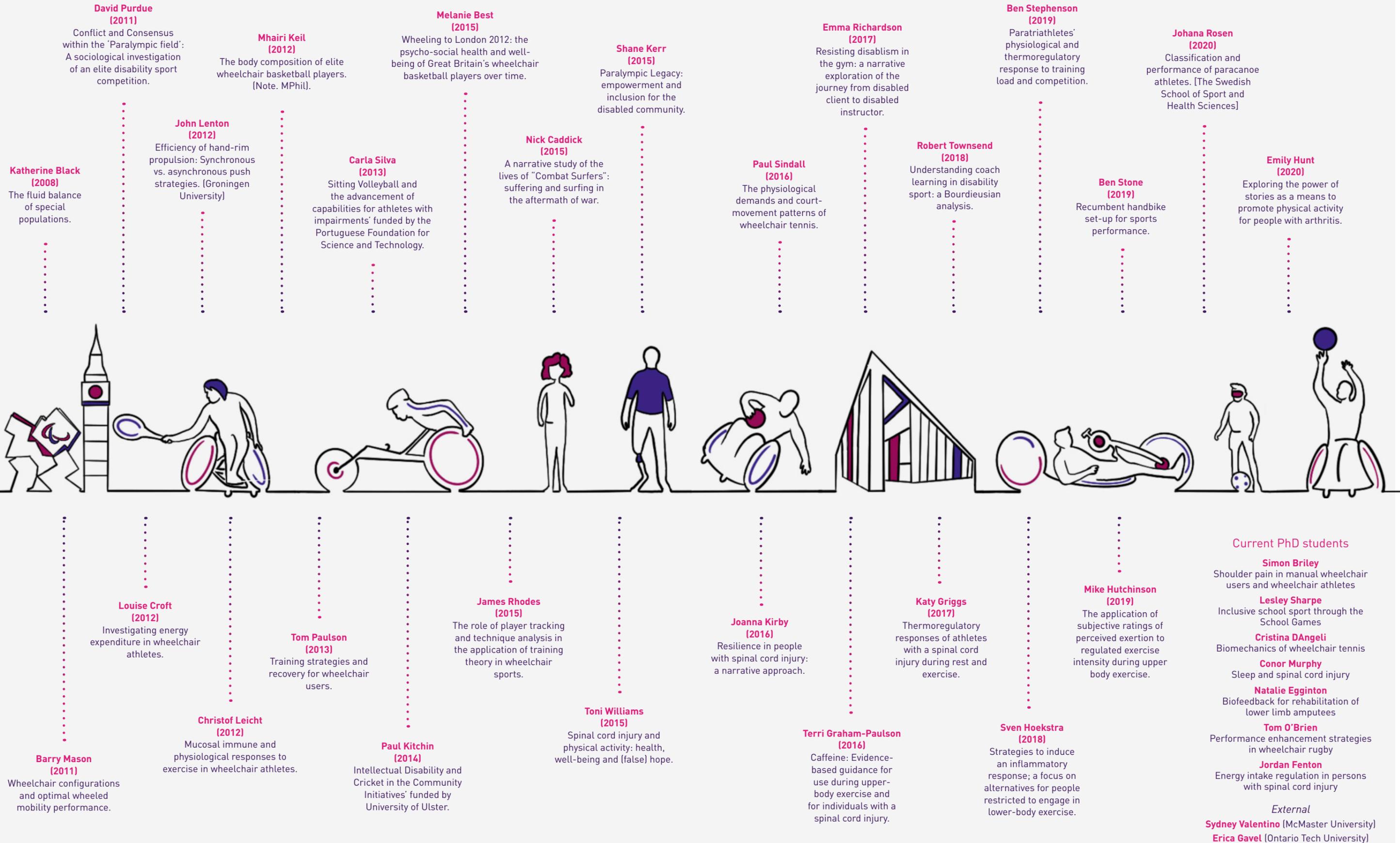
The critical challenge of Tokyo's potential heat stress on the body has pressured this question and enabled British Triathlon, and the PHC, to better understand an athlete's physical preparation, their default response to heat stress, and how across all elements of their training and preparation they can better prepare their body for the task ahead. In total, seeing the conditions not as something to fear but something to crave as it creates the divide between British athletes and their competition.

Understanding that research and partnerships should have the ability to benefit more than just medal tables British Triathlon and the PHC have engaged Ben into the International Triathlon Unions research group. This has further extended Bens experiences, whilst also strengthening the relationship between the sport and its international federation.

With Ben's PhD now complete the partnership has evolved but is as strong as ever, with the PHC, British Triathlon and the EIS collaborating further to ensure Ben can continue to utilise his knowledge effectively across the system. Further, this partnership is also providing both the PHC and British Triathlon with the foundations to continue to collaborate into the future to benefit students, and the sport for years to come.



15 years of The Peter Harrison Centre in PhDs



The Storyteller's Stories

By Brett Smith

I am proud that I was part of the Peter Harrison Centre for Disability Sport (PHC) for 6 years. The research environment was one that promoted freedom to explore ideas, creativity, and opportunities to engage in interdisciplinary debates and projects. It was also fun. I could share stories about our 'Away days' – Go Karting being the highlight for me.

I could share stories about our various trips to restaurants together. I could share the many times I tried to persuade people to enjoy a drink in the Swan in the Rushes, rather than go to one of the trendy bars in Loughborough. I could also share stories about our many conference trips together. This included an amazing set of experiences in Japan at The International Symposium of Sport Science in Athletes with Spinal Cord Injury, with perhaps the highlight a sauna with Christof Leicht. Speaking of Christof, he once gave me a homegrown courgette. A small gesture you might say. But it touched me. Every time I cook with a courgette – which is now frequently – I think of Christof and smile. Little acts of generosity matter. There were many of those acts throughout my time in the PHC. People cared, and what discipline you were did not matter. I could extend my stories to the "Duct Tape Man" who sat next to Vicky on a flight to a conference. Ask Vicky about this next time you see her! And before I leave readers with one story I would like to share, I will add that the PHC provided me opportunities to make lifelong friendships. Two in particular still touch my life in amazing ways – Anthony Papathomas and Toni Williams, thank you.

Now a short story.

"Vicky, I think we better get to the gate", I said with a little anxiety in my voice whilst sat in a dining hall in Rio de Janeiro Airport.

"Yes. Gate 26 I think", responded Vicky casually.

"I think we better hurry. We're boarding in 20 minutes. It could be quite a walk to the gate," I said eager to move Vicky along. We checked our tickets and confirmed it was Gate 26.

After an incredibly brisk walk to catch our internal flight to Florianopolis to attend the International Para-Sports Conference (Brazil), we found Gate 26. No one was queuing, but an attendant was there waiting to check our ticket and usher us onto the plane quickly. With tickets 'checked', we boarded the packed plane.

"Excuse me Sir," I said to the person in seat 12a. "I think you're sat in my seat".



Brett Smith with the PHC team members at the competitive Go-kart event

"I think you're sat in my seat too" said Vicky to the passenger in seat 12b. They both looked at us. They didn't speak English. We didn't speak Portuguese. The attendants were at the front checking to close the door and preparing for take-off. Suddenly the person in 12a plucked his ticket from his jacket and thrust it into our faces. He pointed at the seat number on it. It read '12a.' My heart leapt. My brain rushed to make sense of this. Cold sweat trickled down my back. Vicky then pointed to the left of the ticket. It read, 'Vitória', a 22hr drive from our intended destination. We looked at each, half smiled with fear and amazement that we had actually boarded the wrong plane, grabbed our bags and ran through the plane, rushing past the attendants, clambering out, and dashed to the Gate Board. Sweating, worried we might be stuck in Rio de Janeiro Airport, we found the Gate Board. 'Gate Change' it read. Gate 26 was erased and replaced with 'Gate 24. Boarding in 5 minutes'. We eventually made it. This was how we travelled! But we made more memories. It was a fun and intellectually vibrant time. Thank you all.



Anthony Papathomas with John Lenton at a ParalympicsGB Sports Festival

The Man in a Van

By Anthony Papathomas

The transit van skids across the damp surface towards the queue of cars ahead. I close my eyes and brace for impact. Three... Two... One... Nothing.

It was our 4th near miss, and we were barely a mile from campus. London seemed a long way away. The driver, who is also my new colleague, is unperturbed by our frequent brushes with death. He continues to fiddle with the Sat Nav and the radio, occasionally sparing attention to trivialities like other cars.

Once on the motorway we hit traffic. Against all odds, not literally. It was an opportunity to catch my breath and get to know the complex character that is John Paul Lenton. We were on our way to Stanmore Royal Orthopaedic Hospital to present a photography exhibition portraying spinal cord injured people's experiences of physical activity and exercise. The photographs originated from a visual methods study I led; one part of the Peter Harrison Centre's (PHC) £300,000 Coca-Cola grant, awarded in 2012. John had volunteered to help me set the exhibition up, having developed a keen eye for photography during his recent wedding – something I would hear about extensively during our 3-hour road-trip.

The plan was to get everything set-up at the Hospital the night before, then grab some food before a good night's sleep. With John at the helm, set-up took longer than anticipated. We unloaded the poster boards and images into the exhibition room in less than an hour, but little did I know we had barely begun. John insisted that every photograph had to be spirit level straight. Thoughts of an evening pint slipped away as he developed a laborious ritual of adjusting by a mm, viewing from 10 paces back,

adjusting again, viewing again. It was 10pm, I was starving, and we hadn't even checked in to our hotel. But the exhibition looked phenomenal.

The next day, John's attention to detail continued. I dumped the buffet lunch on the table and left it; he returned to organise it into sections of meats, sandwiches, pastries, and fruit. He made a few more adjustments to the photographs. He engaged with attendees and ensured they had a drink. We planned to return home at 6pm but John delayed us by packing the remnants of food into perfectly secure doggy-bags for our guests to take home. It occurred to me that John could have taken no more pride in his work than had it been his own project.

A true professional and a true team player. And this is the reason I chose to tell this particular story. Professionalism and teamwork are values synonymous with everything the PHC has become. Colleagues past and present have always combined to create an atmosphere of collegiality and a spirit of working towards a cause bigger than our own personal goals. It's a unique and powerful quality and one that is instrumental to its success these last 15 years. It also makes it a hugely enjoyable group to belong to.

By 9pm we finally set off back to Loughborough. As we weaved from lane to lane at speed, I took comfort in the knowledge that this was a perfectionist at work. I kicked back, unwelmed my food-box, and awaited the beginning of Chapter 29 of "The Wedding Day". Good times.



The Journey to Global Impact

By Kathleen Martin Ginis

Despite sitting more than 7,000 km apart, the Peter Harrison Centre for Disability Sport (PHC) is one of my lab's most valued academic partners. We have been collaborating since 2010 and established a formal partnership in 2013. Over the past decade, students and faculty have crossed the pond in both directions, making memorable visits and forging friendships and lasting collaborations between our two groups.

Our most impactful work (so far), has been the 'internationalization' of the spinal cord injury physical activity guidelines that originated in Canada in 2010. The international SCI exercise guideline project brought together PHC members and partners from the UK and Europe, with my lab's Canadian and international partners and colleagues. Together, we produced a set of scientific guidelines for the use of exercise to improve fitness and cardiometabolic health in adults with SCI. As an indicator of the importance of this work, our paper documenting the guideline development process has been accessed over 22,000 times and received the 2019 Readers' Choice Award for best review paper published in the journal *Spinal Cord*.

Over the past two years, my lab (www.sciactioncanada.ca) has been hard at work to translate the scientific exercise guidelines into Canadian community and clinical practice guidelines (see www.sciguidelines.ubc.ca). By engaging

stakeholders throughout the guideline translation and adaptation processes, we can properly address the needs, preferences and concerns of the people who will use the guidelines. We believe that adopting a community-engaged approach results in physical activity knowledge products that are meaningful for potential end-users.

Our strong connections with the PHC have facilitated the reach of our knowledge translation activities. PHC alumna Dr Toni Williams visited us in Canada to learn more about our community-engaged knowledge translation processes. Toni is using those lessons to develop and implement a process for working with UK-based SCI physiotherapists to formulate a clinical version of the SCI exercise guidelines. Developing the clinical guidelines in collaboration with UK rehabilitation professionals, will result in guidelines that are meaningful and appropriate for use in UK spinal cord injury rehabilitation centres.



Members of the International Spinal Cord Injury Guidelines Group at a meeting in Loughborough



Kathleen hosting Vicky and Asian colleagues at the University of British Columbia



Kathleen Martin Ginis visiting Loughborough University and members of the PHC

Our connections with the PHC extend beyond the UK. Through Prof Vicky Goosey-Tolfrey's strong collaborations with Wakayama University in Japan, we are now working together to validate and translate the SCI scientific exercise guidelines for use in four Asian countries: Indonesia, Japan, Korea, and Thailand. A highlight of these collaborations was hosting Prof Vicky Goosey-Tolfrey, Dr Yukio Mikami, and Dr Kyungsu Jung at the SCI Action Canada Lab at the University of British Columbia, Kelowna, in November 2019. During this visit, we held a half-day event to showcase our groups' exercise-related SCI research and to further our scientific and knowledge-translation collaborations.

The SCI Action Canada lab congratulates Prof Vicky Goosey-Tolfrey and the PHC on 15 remarkable years of scientific innovation and impact in disability sport. We admire your vision, value your leadership, and we are grateful for your collegiality. Here's to the next 15!





Maureen MacDonald and her family in Quorn



Like many opportunities, this one began with a serendipitous introduction. In July 2012, my husband and I were starting to plan our applications for yearlong research leaves from McMaster University in Canada. Those leaves were scheduled for July 2013-July 2014 and we were looking for a location that would provide a great research environment for us both and an adventure for our family of 3 boys aged 13, 11 and 7. My colleague at the time, Prof Kathleen Martin Ginis, offered to introduce me to Prof Vicky Tolfrey and, Vicky's welcoming nature shone through in her first reply: "We would very much like to welcome you to the PHC for Disability Sport during your stay here in the UK."

Collaborative research visits to both Canada and the UK have certainly been the central theme since that first meeting with Vicky Tolfrey, Terri Graham, Anthony Papatomas, Michael Hutchison, Jan Van Der Sheer, and Sven Hoekstra all visiting McMaster and Maureen MacDonald, Jason Au, Sydney Valentino and Jem Cheng all visiting Loughborough. In addition, Vicky and I have managed to meet with colleagues around the globe, and even over Niagara Falls!

Those visits and interactions have provided me with the opportunity to form a research collaboration and grew it into a friendship that is based on common values, aspirations to expand our research mandates and our shared love of lists! I have learned so much about inclusive excellence from Vicky and all the members of the PHC and the lasting relationships that have formed between our research groups and families. What shines through in all the experiences is the capacity of Vicky and the PHC to take a group of individuals and move them from an organization to a team, and a team to family. I am so happy to have had the chance for me and my team to become part of that very special family.

The Sabbatical

By Maureen MacDonald

[July 3, 2020], It is very fitting that I am writing this reflection on my relationship with the Peter Harrison Centre for Disability Sport (PHC) today, as Facebook reminded me that 7 years ago today, my family moved into our new home for the year at 27 The Pingle, Quorn, UK. It is hard to believe that 7 years has gone by since starting that adventure, but the reminder prompted me to reflect on how my collaborations with the PHC began and the wonderful places they have taken me, my family and my research team.



Maureen and Vicky take a walk over the Niagara Falls



The Unexpected Gifts

By Fumihiro Tajima

From 1986 to 1990, I conducted a study on the exercise physiology of athletes participating in the Oita International Wheelchair Marathon and the pathophysiology of persons with cervical spinal cord injury. Since these achievements were highly evaluated, I succeeded to get a New York State scholarship, which enabled me to work in the Department of Rehabilitation Medicine, State University of New York, for two years and settled in Amherst, Buffalo, NY.

In early spring, I went on a ski trip to Arapahoe Basin Ski Area, Colorado, with my wife. We took several gondola connections and reached the summit at an altitude of 4000m.

There was a group of chair skis. One of them looked at me and approached me.

"Are you Japanese?"

"That's it"

"I've been to Japan. I'm a wheelchair marathon runner."

"Really? You were in Oita?"

"Sure."

"I did a medical check on the players there."

"I thought I had seen you. Where do you live?"

"In Amherst, Buffalo, NY."

"Really? My hometown. By the way, do you like Buffalo Bills?"

"Oh, I saw the live game in the stadium that overturned the 32-point behind in this year's playoffs. It should be the No1 game in the history of American football."

"Yeah, the quarterback Frank Reich made a miracle!"

"I agree."

"Okay. I'll be going to Oita again next year, so I'll take a cereal cone with Frank's photo there."

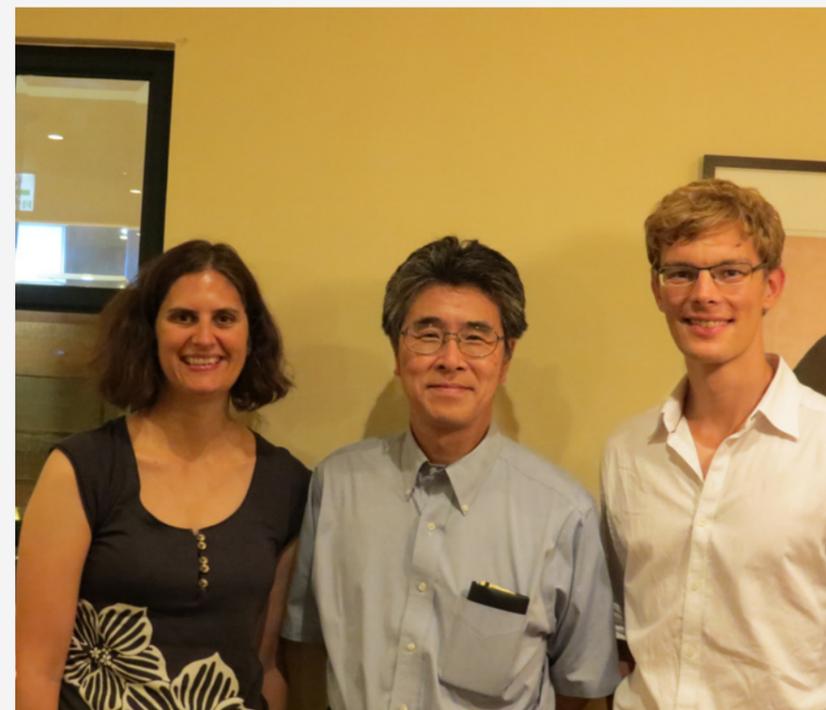
As soon as he said this, he ran down the 10km downhill. The next year he really came to Oita with cornflakes.

A para athlete doesn't lie.

The partnership with the PHC started back in April, 2010. I received an e-mail from an active young researcher working in the field of spinal cord injury at Loughborough University. "I read the abstract of one of your studies with great interest. Unfortunately, I cannot get the original article and was wondering whether you would be able to pass me a version of this paper?" I felt that the guy seemed to be serious and nice, and sent it over. This guy was Dr. Christof Leicht. Since then, he visited and collaborated with us in Nach-Katsuura, Wakayama. His dedicated research spirit connected me to Prof. Vicky Tolfrey, the Director of PHC and our two universities have become a regular collaborating team in a wide range of studies including the data-collection at the Oita marathon since then. Loughborough became the main stream in our research activities after another Loughborough alumna, Dr. Kyungsu Jung, also joined our centre as a sub-coordinator.

The international conferences with members of the PHC in 2018 are events I like to recall. We enjoyed scientific discussions, but also barbeques and parties. It was a collaboration that was based on mutual respect and kindness. My story in the States also reminded me of a present that Vicky and her team brought to Wakayama in 2018. It was a Chelsea football club jersey for Dr Yoshi-ichiro Kamijo, who visited Loughborough the year before and said that he was a football fan. Like the Para athlete, Vicky remembered.

I know that researchers studying sports science in persons with disability are so kind and nice. If they would like to seek reward and fame, they will study other subjects. From the bottom of my heart, I would like to say "Congratulations".



Fumihiro Tajima (centre) with Vicky and Christof Leicht



The PHC team in traditional Japanese clothing. Dr Kamijo is wearing the Chelsea jersey





Pete Carruthers with members of the PHC and Sydney Valentino visiting from Canada

The Pete Carruthers Story

By Jan van der Scheer

The first time I spoke to Pete Carruthers, it was over the phone to hear if he would be interested in joining an international expert panel to discuss exercise guidelines for people with spinal cord injury.

I had heard from Vicky about Pete: a retired Paralympian wheelchair racer, gold medalist winner and record holder at the 1988 and 1992 Paralympic games, former owner of a bespoke wheelchair and handbike company, and someone who had advised and participated before in PHC research projects. Pete kindly said yes to our request to join the expert panel, but emphasised he thought he would not have much to offer. We had coffee to discuss the project, and I was now even more impressed. Pete was very modest about what he had achieved in his career and the contributions he thought he could provide. He had clear and insightful views on the development of these exercise guidelines. Also impressive was his commitment – despite his doubts about his potential contributions, he was more than happy to dedicate a lot of time and energy towards the project.

The project became a success, and this is to a large extent related to the efforts and contributions of people like Pete. It was also the continuation of a long-lasting friendship between Pete and the PHC. A friendship characterised by mutual respect, valuing each other's contributions, enjoying the teamwork, and sharing of productive work times combined with fun social time off. We co-produced exercise guidelines, celebrated its successful production with a night out, joined up for a public talk about the guidelines, enjoyed seeing GB's wheelchair rugby squad play, and had good fun during birthday parties.

This story I'd like to dedicate to Pete. Pete was an extraordinary man, touching the people around him in many different ways, and in ways I think he did not always realise. He passed away far too early, in 2019, after a stroke. I miss him, and I believe many others do as well.

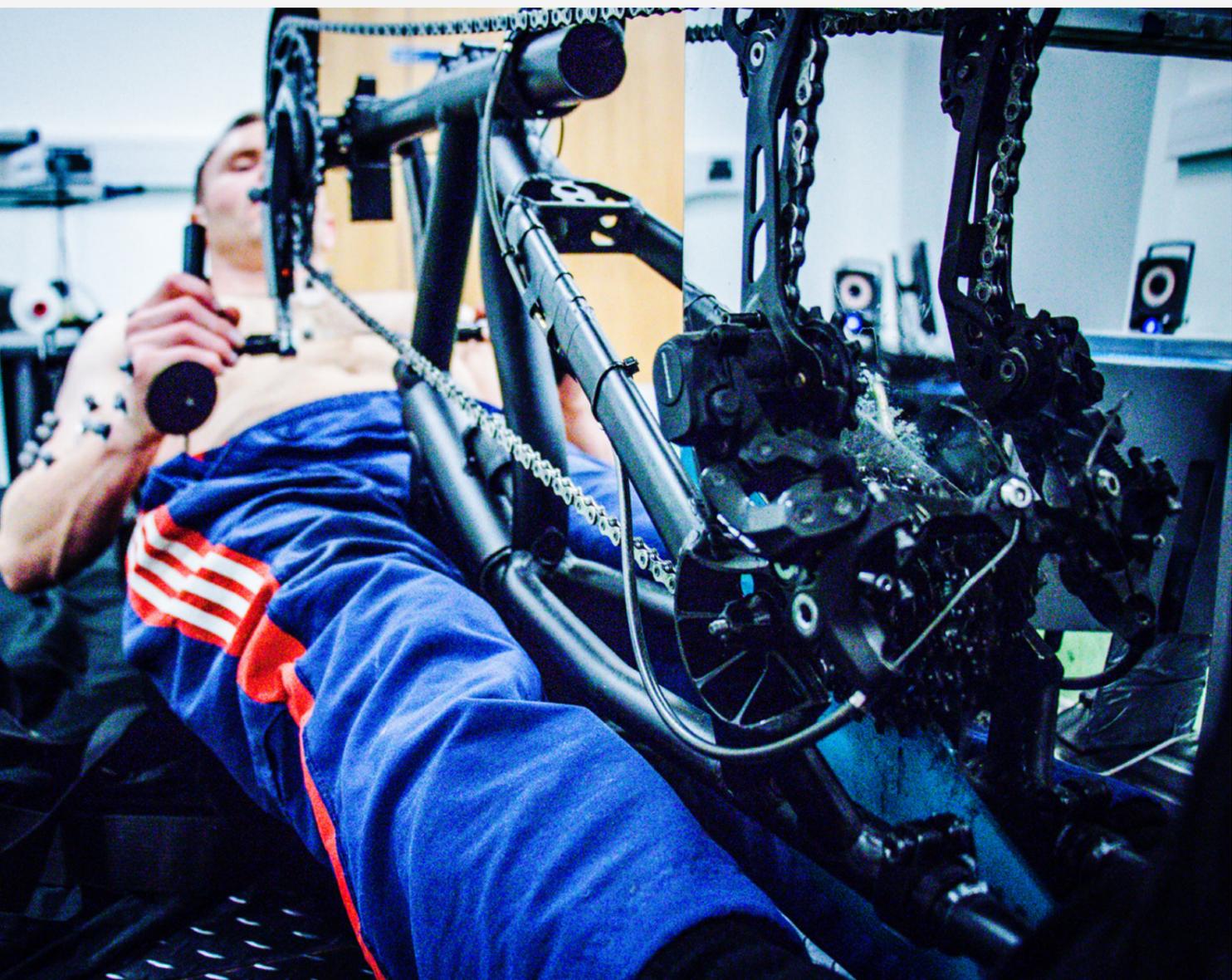
It's also a story that for me characterises the values and spirit of the PHC: to ensure we do the highest-quality research together with the people whom our research concerns, to work in a way that's both productive and fun, and to really see and value each other – both in our professional and private lives. These are among the characteristics that I have always deeply enjoyed and appreciated while working at the PHC. The PHC that took their chances in 2015 with a tall Dutchman who just graduated with his PhD, taking him onboard to work on a project in Japan. That was also the start of a friendship and a work relationship that has shaped me, both as a professional and as a person. I am very grateful for all the opportunities the PHC has created for me. Working with so many fantastic international and national collaborators in the UK, Japan, Korea, Canada, and the Netherlands, just to name a few. The team spirit I was and am part of. The friendships that build over time.

The PHC story of the last 15 years is a success story, and one that I look forward to celebrating, now and in the future.



“The Fit for Life Toolkit is a great piece of work produced by members of the PHC. Its guidance around spinal cord injury is excellent.”

Brian Carlin
Chief Executive ASPIRE



“The handbike set-up for optimal performance PhD conducted through the Peter Harrison Centre for Disability Sport has been a valuable research project to begin to understand in more detail the impact of handbike configuration on performance. It has established new knowledge that we can look to implement with not only our current cohort but future hand-cyclists. Additionally, British Cycling has worked with the PHC to provide performance support testing opportunities with hand-cyclists who have demonstrated potential in the sport. These projects have dovetailed very well and led to a successful transition of two male hand-cyclists progressing onto the World Class Performance Programme to target success at the 2024 Paralympic Games in Paris and beyond.”

Dr John Lenton
GBCT Para-Cycling Pathway Manager

The Bike Ride

By Rienk van der Slikke

The first few months of my PhD on wheelchair basketball, I delved into the literature that appeared to be completely dominated by a certain Prof Tolfrey and Dr Mason, who I imagined as a professor nearing her retirement and an old absent minded, grey bearded, mumbling doctor, given the massive number of papers published already.

When I actually met them a few months later at, I was flabbergasted. Vicky was this young and lively person and Barry... well he did not have a beard at all. I proudly presented the first results of my wheelchair measurements with all kinds of incomprehensible Matlab plots, like a 5-year-old showing his latest scribbled drawing. Nevertheless, a few weeks later we were invited to visit the Peter Harrison Centre for Disability Sport and discuss possible collaboration. So, together with my colleagues Monique and Annemarie we were warmly welcomed at Loughborough University, where we explored all kinds of options for wheelchair sports research. Sure enough, about a year later a nice opportunity arose, measuring the effect of small-sided game formats on performance in wheelchair basketball.

At the legendary site of Stoke-Mandeville we ran around for 24 hours straight, setting up video cameras, the tracking system, inertial sensors, and tags on the wheelchairs, and so on. Mike with one arm in a sling still being more productive than Barry, my two students and me together... Fortunately, it was just as successful as it was stressful, so we ended up with enough data and video footage to chew on for months. To discuss the final results and experience some Dutch hospitality, Barry came over to The Hague. Staying at the classy NH Hotel, Barry was about as relaxed as he will ever be. Being a good host, I decided to treat him to a truly Dutch transportation experience. So, the next morning in front of the hotel I was standing surrounded by a queue of limousines, with two bright yellow-blue bicycles... I have seen the look on a kids face that drop their ice-cream, students failing their final exam by only 0.1%, athletes missing out on their gold medal in the final seconds of a game... but never ever in my life have I seen a look of such disappointment, disapproval and disgust as Barry seeing me with the bicycles. Swearing and ranting, he arrived a little bathed in sweat and rain at the campus after a ride of a few hundred yards, only to find out that more bicycle rides were scheduled for the day. We had to move from site to site, but no statistically significant improvement could be measured in the reduction of sway in Barry's cycling. After an exhausting day, we ended up in a pub, with some typical Dutch fish and chips, and proper Belgian beers. Finally, it was time to call it a day and go home. Convinced he was able to find his way in The Hague, Barry headed to the hotel. Sure enough, cycling straight as an arrow, crossing tram rails like he was born and raised in the Netherlands. This particular collaboration resulted in two published papers about wheelchair performance, yet the effect of either beer or fish and chips on the straightness of a cycling path has never found its way to the scientific literature.



Rienk van der Slikke at Stoke Mandeville with his students and Mike and Barry



The Q and A

By Terri (Graham) Paulson and Tom Paulson

One person within Paralympic Sport/Academia who has inspired me.

Terri: Dr Claudio Perret. Claudio was one of my supervisors during my PhD and aside from his wealth of knowledge in Paralympic sports nutrition, I always admired his ability to take a step back and logically process information/results. His ability to take a 'balcony view' is something I continue to use in my role as a nutritionist today. I will always be grateful for his (and Vicky's) belief that I could do it. It, being complete my PhD!

Tom: Nik Diaper. I first spent time with Nik at the 2011 IPC VISTA conference in Bonn. His dedication and passion for Para sport and strong relationships within the Paralympic community were immediately evident. Nik has been incredibly generous with his time and sharing his passion with me and other young practitioners developing through the system, from job applications to contributing to project groups. He is constantly looking for opportunities to improve the athlete experience and emphasising the need to identify the unique performance support requirements of Paralympic athletes. I'm fortunate to still work closely with Nik and value his support and friendship more than ever.

One journal article or book that I think all sport and exercise scientists should read linked to Para Sport.

Terri: The Paralympic Athlete: Handbook of Sports Medicine and Science and Sports Nutrition for Paralympic Athletes.

Tom: Current perspectives on profiling and enhancing wheelchair court sport performance, International Journal of Sport Physiology and Performance.

One moment that changed the course of my career while in the PHC.

Terri: The flexibility the PHC allowed me to pursue my Performance Nutrition Career at the same time as continuing my PhD part-time. This enabled me to get hands-on experience as a practitioner while continuing my research and gave me a foot on the ladder at the English Institute of Sport (EIS) where I still work.

Tom: Starting to work for GB Wheelchair Rugby in Autumn 2013 following the completion of my PhD. This was such an eye-opening moment as to how challenging it is to truly translate research into performance impacting practice with coaches and how spending time talking to athletes can teach you more than reading any journals/books. This was the springboard in my career and I still regard James Rhode's PhD using the indoor tracking system to quantify and design training practice with the Head Coach and S&C coach as a model of how applied research should be completed. I will always be grateful to Vicky Tolfrey and Lorraine Brown for the opportunity to work with the squad up to Rio 2016, including winning the Test Event and visiting the Paralympic Village during the games.



Terri Paulson gathering data with wheelchair rugby as part of her PhD studies



One great thing that the PHC has achieved.

Terri: The PHC is a leader in Paralympic & Disability Sport Science research and so it is hard to choose one great thing. However, from a selfish point of view (I was involved in the project!) I would choose the Coca-Cola funded Fit & Healthy resources as these provided guidance for individuals with a range of impairments at all levels of activity from grassroots to elite level. This is one of the strengths of the PHC, its ability to translate research into a useable format for the end user.

Tom: The volume of BSc, MSc and PhD students across disciplines that have been exposed to Paralympic sport and have continued to work in the field of Para sport is amazing. My MSc project with Christof Leicht in 2010 was the beginning of my career and to have such exposure to testing and supporting elite athletes was invaluable. Let's hope this continues for the next generation of Practitioners and Leaders in Para sport too.

One thing I do now that I did not in my early career.

Terri: Flex my style. As a young practitioner or researcher, it is easy to think that you can approach a problem or topic in the same way every time and this is simply not true, or at least you wouldn't achieve as much success. We all learn in different ways, have different motivations and barriers, and hence nutrition support needs to reflect this. Working in Paralympic Sport highlights this even further as it is often an n=1 scenario.

Tom: Keep in mind my own strengths and weaknesses and preferences for ways of working. By identifying these and keeping them in mind I can identify where certain tasks or conversations in the week may require more energy and attention than others. For example, I know now that when I'm stressed or tired my attention to detail is poor (Barry Mason experienced this a lot over the years!) – so if something requires careful planning or accuracy, I know I need to give myself more time or involve someone else to help.



Final word

“These 15 individual, inspirational stories give us a glimpse of the impactful work, collaborations and relationships that have been established within the Peter Harrison Centre for Disability Sport (PHC). The PHC is a key part of the world-leading ecosystem of sport at Loughborough. In recent years all aspects of Para Sport at the University have seen a step-change in scale and ambition, underpinned by the excellent research and partnership work at the Centre. It is thanks to the vision and generosity of the Peter Harrison Foundation that we are celebrating the 15th anniversary of the Centre. I thank the trustees for their long-standing support for our shared mission to enhance the lives of all people with a disability through sport and exercise.”

Professor Robert Allison
Vice-Chancellor



The Vice Chancellor with Peter Harrison and Lord Sebastian Coe



Crystal Lane (Paralympic Athlete and PHC Scholar Centre) with Vicky and Peter

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Vicky Tolfrey, Christof Leicht, Barry Mason,
Tom O'Brien and Anthony Papatomas.

Artwork Lesley Sharpe.

