On behalf of the Department of Physical Education and Sport Sciences (PESS), I wish to welcome you to the next edition of the PESS e-Zine. My thanks to all those involved in the editing and contribution of submissions to the e-Zine.

Through the UL Beo initiative, PESS is supporting the inaugural Pat Duffy Lecture on the 5th October 2015. As you may recall, a tribute to Pat Duffy appeared in the last edition of the PESS e-Zine. The university community is invited to attend the event and Baroness Sue Campbell CBE (Chair of Youth Sport Trust UK and former Chair of UK Sport) and Dr. Keith Wood (former Ireland and Lions Rugby Captain and Chair of the Healthy Ireland Council). Further information on the event is noted in this edition of the PESS e-Zine.

I would like to welcome Dr. Tom Comyns (Lbb in Human Movement Science), Dr. Giles Warrington (SL in Sport and Exercise Science), Dr. Orla Power-Grant (EHS Research Funding Officer), Alan Griffin (Sport and Exercise Science Teaching Assistant), Rosemary Daniel (Applied Sport Experimental Officer) and Sharon Nolan (Senior Administrator) to PESS.

The role of Orla’s post, jointly funded by PESS and GEMS, is to provide dedicated support to researchers within PESS, the Graduate Entry Medical School (GEMS) and the wider EHS Faculty. Orla aims to assist researchers in identifying funding opportunities and supporting them in preparing applications for external research funding. It is envisaged that collaborations across PESS and GEMS and across EHS will lead to synergistic partnerships and make a contribution to the strategic development of faculty research outputs and thus support the EHS Research Strategy and the University’s Strategic Plan. I encourage those interested in exploring research connections and/or collaborations with PESS to contact me at Ann.MacPhail@ul.ie or contact Orla at Orla.Power-Grant@ul.ie.

I would encourage students and staff to forward information on student and staff achievements (your own or others) to Michelle.Hyland@ul.ie so that such achievements can be celebrated and promoted. I trust you will find the sixth edition of PESS e-Zine as informative and engaging as previous additions.

Ann

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Welcome to the 2015 Autumn edition of the PESS e-Zine. This issue looks at the breath of some of the research activities and events that have happened or are ongoing in the Physical Education and Sport Sciences (PESS) Department since April 2015.

We would like to welcome all new students to the department and hope that your academic and personal time will be enjoyable while you are studying at UL. This next edition offers research news about the two recent conferences hosted by the department, ICAMPAM and the PE-PAYS Ireland Forum. In addition a number of staff and postgraduate students presented their research at the ISBS conference in June. Dr. Ross Anderson describes the recent restructuring of the first year Sport and Exercise Sciences programme and what it means for the student experience. In May 2015, some of the 2015 BT Young Scientist & Technology Exhibition participants visited the PESS department to present their research projects to the department. Clare Murphy and Jessie Barr, recipients of a PESS co-operative placement and internship, describe their placements the department. PESS staff and student achievements are acknowledged and celebrated in the latter pages of the e-Zine. Congratulations to the five graduates from the PESS department who have been inducted into the UL Sports Hall of Fame. We would like to thank all our contributors to the Autumn 2015 edition and hope you enjoy this next PESS e-Zine edition.

Rhoda Sohun and Ian Kenny

The PESS E-Zine is published by the Department of Physical Education and Sport Sciences. We would be delighted to receive your comments and ideas for future editions.

The opinions and views in the publication are those of the contributors and not necessarily of the PESS Department. While every care is taken to ensure accuracy in the completion of this e-Zine, the PESS department cannot accept responsibility for any errors or omissions or effects arising thereof. However, such errors may be brought to the attention of the Editors. All material is copyright.
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The 4th International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM) took place at the University of Limerick between the 10th and 12th June 2015. ICAMPAM is the official biennial conference hosted by the newly formed International Society for the Measurement of Physical Behaviour (ISMPB). The conference built on previous meetings hosted in Rotterdam (2009), Glasgow (2011) and Amherst (2013). The conference aims to bring together leading researchers, new investigators and research students whose interests are in the measurement of physical behaviours, including physical activity, sedentary behaviour and sleep.

The 4th ICAMPAM at UL was a global conference, with over 270 delegates from across Europe, North and South America, Africa, the Middle East, Asia, Australia and New Zealand attending. The scientific programme included 5 keynote speakers, 10 invited speakers, 44 oral presentations and 161 poster presentations. There were also 4 pre-conference workshops and 5 symposia hosted throughout the conference. The primary thematic areas of the conference were:

- Physical behaviours and health outcomes
- Measuring and optimising activity in clinical populations
- Engineering and device development
- Data processing, statistics and computational methods
- Validation and calibration

The conference was organised by members of the department of Physical Education and Sport Sciences (Prof. Alan Donnelly, Dr. Kieran Dowd, Dr. Ross Anderson, Dr. Brian Carson, Dr. D.J. Collins, Maeve Gleeson, Dr. Ian Kenny, Dr. Fiona Ling, Dr. Mark Lyons, Rhoda Sohun), the department of Clinical Therapies (Dr. Amanda Clifford, Dr. Susan Coote, Dr. Norelee Kennedy, Dr. Kieran O’Sullivan) and the department of Electronic and Computer Engineering (Dr. John Nelson and Dr. Pepijn Van de Ven).

The conference organisers would like to say a special thank you to the 23 undergraduate and postgraduate students from the PESS department and from across the faculty of Education and Health Sciences that volunteered and helped make the conference a success.

Social Programme:
The conference opening reception was hosted at the Pavilion bar and restaurant on Tuesday evening, where the visiting delegates were treated to a game of Camogie and a relaxing glass of wine in the Limerick sunshine.

The official conference banquet was held in the Strand Hotel, Limerick, where delegates were treated to great food and traditional Irish music and dance. In his welcoming address, Hans Bussmann, President of ISMPB, referred to ICAMPAM Limerick 2015 as “...the best ICAMPAM to date”. A selection of photographs of delegates and organising committee members at the conference banquet are presented below.

Prof Alan Donnelly closed ICAMPAM Limerick 2015 on the afternoon of Friday 12th. Over 50 delegates took the opportunity to visit the Cliffs of Moher on a post conference excursion. Delegates walked the Cliffs, and visited the cliffs centre, which was followed by a trip to Doolin and Gus O’Connor’s pub, where delegates sampled more traditional Irish music, food and drink.
During this keynote presentation, Professor Ekelund discussed the importance of accurate measurement of exposure variables in epidemiological research; whether the magnitude of associations between physical activity and health outcomes is dependent on the intensity; the role of substituting sedentary time with light, moderate and vigorous intensity physical activity in relation to health outcomes and the issue of reverse causality for the associations between sedentary time, physical activity and metabolic health outcomes in young people.

**Professor Kamiar Aminian**
Director of the Laboratory of Movement Analysis and Measurement in the Institute of Bioengineering of Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

**Keynote “Advances in Technology and Algorithms for Activity Monitoring”**

During the presentation, Professor Aminian discussed the development of wearable technologies that are capable of measuring Activities of Daily Living. The main approaches for the detection of Activities of Daily Living were discussed with a particular focus on “event driven” algorithms. The impact of unobtrusive long-term monitoring of Activities of Daily Living was discussed, while results with example from aging populations and patients with stroke and chronic pain were presented.

**Professor James Levine**
Mayo Clinic at Arizona State University

**Keynote “Sick or Sitting – How Chairs Kill”**

Professor Levine is a world authority on obesity, serving as a named expert at the United Nations, an invitee to the President's Cancer Panel, and a consultant to governments internationally. Professor Levine presented the epidemiologic, physiologic, and molecular data which suggests that a sedentary lifestyle can explain, in part, how modernity is associated with obesity, more than 30 chronic diseases and conditions, and high health care costs.

Professor Levine described the history of sedentariness, and provided evidence of how work environments, schools, communities, and cities can be re-imagined and re-invented as walking spaces, and people thereby offered more active, happier, healthier, and productive lives.

**Professor Lynn Rochester**
Member of Institute of Neuroscience at Newcastle University, Chair in Human Movement Science, Deputy Director of the Clinical Ageing Research Unit (CARU)

**Keynote: “Ambulatory Activity in Parkinson’s – Pushing the Boundaries of Measurement”**

During her keynote presentation, Professor Rochester described how quantitative measurement of gait has an important role to play in neurodegenerative disease to inform disease mechanism and progression, patient management and efficacy of interventions. Work from her laboratory, which utilised body worn sensors to characterise gait at both a micro and macro level, was presented. This work aims to provide a more complete picture and account for attentional fluctuations and environmental demands which place additional constraints on performance. The applications of this work were discussed, and results from a large cohort in people with Parkinson's disease using these approaches were presented.

**Professor Greg Welk**
Professor of Health Promotion and Exercise in the Department of Kinesiology, Iowa State University.

**Keynote “Objective Physical Activity Monitoring: New Directions and New Opportunities”**

Professor Welk is a physical activity researcher with interests in broad epidemiology and public health applications. His primary research interests are on the assessment and promotion of physical activity and fitness in different populations, with a particular interest in the reliability and validity of different physical activity assessment technique. Prof Welk’s presentation summarised lessons learned from systematic evaluations of various activity monitoring technologies and provided guidelines for effective evaluation of new monitoring methods. Specific focus was placed on recent evaluations of new consumer monitoring technologies and wearable sensors as well as applications of monitors for behavioural change and clinical applications.

All the talks were well attended, and were well received by the audience. The additional 10 invited speakers gave short presentations at the conference, providing information in depth to support the key themes of ICAMPAM 2015. The conference provided an excellent showpiece for UL researchers, for UL staff and postgraduates who ran the event, and especially for UL’s campus and facilities. Twitter posts after the conference indicated strong praise for the speakers, the conference organisers and staff, and there were many photographs posted of UL’s beautiful campus in the early Summer sunshine.
Dr. Jaimie McMullen, a lecturer in the Department of Physical Education and Sport Sciences, along with colleagues from Mary Immaculate College, developed a classroom-based movement programme called ‘Moving to Learn Ireland’ for use in primary school classrooms across Ireland. A partnership with Croí Heart and Stroke Centre and the National Institute for Preventive Cardiology, that will assist with the production of the resource, means that the programme has the potential for dissemination throughout Ireland.

The resource was designed to include 30 academically-oriented movement lessons and five general movement activities that teachers could access throughout the school day. The academic lessons included in the programme span all three core subjects (English, Irish and Maths) and were designed to allow teachers to substitute sedentary learning activities with more active ones.

Given that children in Ireland are not meeting physical activity recommendations (Harrington et al., 2014), schools have been identified as an important venue for reducing the amount of time young people engage in sedentary behaviour on a daily basis.

International research has suggested that movement in the classroom is an effective tool to reduce the amount of time children spend sedentary each day, which supports the purpose of this project. The pilot study, which was conducted during the spring of 2015, included teachers and students from two schools in County Galway and provides insight into the programme’s impact on physical activity levels as well as valuable information about the feasibility of the programme in primary schools from both the student and teacher perspective. Throughout the research process, teachers and students were asked to provide their perspectives on the programme and their insights have helped the research team to make adjustments to the resource content and design.

Preliminary analysis of the results indicates that the large majority of the children thoroughly enjoyed taking part in the activities. In fact, they wanted even MORE movement in the classroom, even beyond what they were getting with the addition of the movement lessons!

“I would like more movement in class because it’s more fun and there’s a lot of people in our class that probably go home and they don’t do much physical activity and even if you don’t know them, you can kind of tell. In school, they struggle after half an hour of PE. They might be kind of wheezy or really sweating and then there will be some people that it won’t bother. There’s a big difference in our class, so I’d like if that kind of difference was closed in more. That there was a smaller difference between the less athletic people and the more sporty people.”

5th girl

Teachers also reacted favourably to the movement integration activities and described the resource as relevant and easy to implement. The teachers in the study particularly enjoyed the maths lessons because the movement was integrated easily with the concepts they were teaching.

“I found it a really positive experience, the children really took to it. I thought they loved the maths activities in particular. They loved that there was activity during maths, because normally it’s very sedentary. Sitting down and they’re using concrete materials, with just their hands. So they never really had a chance just to get up and move during maths so they loved that in particular. It was very positive.”

1st class teacher

The development of the resource will likely see the programme including a physical resource as well as an online component so that it can be easily accessed by primary school teachers all over Ireland. There are plans in place to look at developing a similar project for secondary school classroom teachers. For more information about Moving to Learn Ireland please contact: jaimie.mcmullen@ul.ie

Reference

Let’s Race for Maths!

Example of Maths Resource for Moving to Learn.
The Hall of Fame was established in 2013 during the UL 40 celebrations with the purpose of recognising and acknowledging those who have made a considerable contribution to sporting and athletic excellence at the University of Limerick. In 2013, eleven of the inductees were either graduates of the department of Physical Education and Sport Sciences or formerly Thomond College of Education, or were teaching faculty of the department.

On the 22nd August 2015, seven outstanding individuals were inducted into the UL Sports Hall of Fame. Five of these individuals were graduates of the Physical Education and Sport Sciences Department. The achievements of these five inductees are described in this feature. The department would also like to acknowledge the other inductees and congratulate them on their sporting achievements. They are as follows:

- Keith Wood (Rugby)
- Brian Lohan (Hurling)
- Fiona Coghlan (Rugby)
- Fiona O'Driscoll (Camogie/Gaelic Football)
- Liam O'Brien (Athletics)
- Ruth Algar (Athletics)
- Seán McGrath (Paralympian)

Fiona Coghlan graduated in 2005 with a Bachelor of Science in Physical Education. Winning her first cap in 2003 and playing 85 times for Ireland, Fiona captained the Irish women’s rugby team to its first Six Nations Grand Slam in 2013. Fiona has three interprovincial titles (Leinster), eleven All-Ireland titles (UL Bohemians), four intervarsity titles (UL) as well as numerous awards including ‘The Irish Times/ Irish Sports Council Sportswoman of the Year Award 2013’ and ‘The Life Style Sports Special Merit Award 2015’.


Liam O'Brien graduated in 1977 with a Bachelor of Education in Physical Education. Olympic athlete Liam O'Brien began running competitively in the 1960's and his speciality was the steeplechase. He won his first national title in 1977 and claimed 10 more titles by 1995 with a number of records still standing today. He qualified for the 1984 Los Angeles Olympics and reached the semi-final of the men’s 3000m steeplechase.

Fiona O'Driscoll graduated in 1995 with a Bachelor of Arts in Physical Education. Fiona holds six All-Ireland Senior medals and was nominated to the All-Stars Football Team (1997 and 1995) and the inaugural All-stars Camogie Team (2003). O'Driscoll captained the UL camogies team to victory in the Ashbourne Cup (1995) and played on three O'Connor Cup winning football teams (1993-1995). As coach, O'Driscoll led the Cork senior camogie team to All-Ireland titles in 2005 and 2006.

Ruth Algar graduated in 1976 with a Bachelor of Education in Physical Education. A national champion in the 100m, 200m, 100m hurdles, 4X100m relay and pentathlon, Ruth was part of the Crusaders team that won the National Premier Division League five times (1974-1978). Ruth represented the National College of Physical Education/Thomond College of Education with great distinction in intervarsity events.

Fiona Coghlan graduated in 2005 with a Bachelor of Science in Physical Education. Winning her first cap in 2003 and playing 85 times for Ireland, Fiona captained the Irish women’s rugby team to its first Six Nations Grand Slam in 2013. Fiona has three interprovincial titles (Leinster), eleven All-Ireland titles (UL Bohemians), four intervarsity titles (UL) as well as numerous awards including ‘The Irish Times/ Irish Sports Council Sportswoman of the Year Award 2013’ and ‘The Life Style Sports Special Merit Award 2015’.


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In recent years, the term super foods has gained a lot of media interest and consumer attention and a variety of foods now carry this tag on their product label. Protein is a nutrient that has received mixed press over the years and is in the spotlight again but for a good reason. It has recently been dubbed a super nutrient. The nutritional and scientific focus on protein has shifted to the source and type of protein and also the functional benefits of certain protein rich foods.

## How Much Protein?

Muscle is a metabolically active organ and constantly undergoes remodelling through protein turnover. Therefore, sufficient dietary protein must be consumed to replenish intracellular amino acid stores. A new perspective is gaining momentum and recent scientific studies suggest that in order to maximise the potential for muscle growth it is best to consume protein throughout the day (Mamerow et al., 2014). This type of meal based approach recommends consuming ~30 g of high quality protein at breakfast, lunch and dinner (~90 g over the course of three meals) in order to maximise delivery of the key nutrients to the muscle. The essential amino acids and leucine, in particular, has been found to be the primary regulator of the protein synthetic response which ultimately helps in maintaining muscle mass.

## Protein

Protein is the major structural component of all cells in the body. The body requires a steady supply of the nine essential amino acids from dietary protein for growth and repair. Skeletal muscle is the largest reservoir for amino acids in the body, making it an important regulator of whole body protein metabolism. Consuming a protein containing meal increases muscle protein synthesis and decreases muscle protein breakdown. In reality, this should help to maintain muscle mass, enhance muscle function, mobility and ultimately prevent chronic diseases such as sarcopenia, the age related loss of muscle mass and strength. So whether you are a top class athlete, an everyday fitness enthusiast, a weekend warrior or just looking to remain active, as you age, you need to consider your dietary protein intake.

## The Important Role of Protein

Dairy proteins are a naturally rich source of essential amino acid including leucine. However, not all food protein sources contain equal quantities of this vital nutrient. For example, in order to deliver 2.5 g of leucine (a quantity identified as a threshold for muscle protein synthesis) you need to consume ~37 g of wheat gluten or 13 slices of whole wheat bread. Due to the superior amino acid profile of whey protein this dose can be achieved from ~25 g of whey. Strategies can also be adopted during processing to naturally enrich milk proteins in leucine. In addition to the favourable amino acid profile, milk protein derived peptides have shown beneficial health effects including some which may help to build or preserve muscle mass.

Recent scientific studies have shown that milk derived peptides have the added benefit of multifunctionality, meaning they produce more than one health effect including antioxidiant, anti-inflammatory and glucoregulatory effects. These biofunctional peptides could prove more effective as they target multiple physiological pathways.

## Food for Health Ireland Research Programme

These bioactive peptides are the focus of research within the Food for Health Ireland (FHI) research programme. FHI is a dairy innovation consortium investigating milk derived biofunctional peptides. FHI is investigating strategies to release these peptides from milk proteins and then evaluate their efficacy, initially in the laboratory and ultimately in human studies with sports participants or those who are looking to maintain a healthy and active lifestyle as they age. This type of approach brings together scientists from diverse disciplines such as food scientists, biochemists, exercise scientists and molecular biologists along with the commercial expertise of five leading Irish dairy companies. Within the FHI consortium there is a team of researchers focused on designing and testing a range of milk derived functional ingredients that will maximise muscle growth, repair and restoration of muscle function after exercise. Research is underway and it seems likely that milk proteins pack a real punch, so watch this space!

### Further Research


### Dr Orla Power-Grant

**Role:** Provide dedicated research funding support to researchers within the faculty of Education and Health Sciences with a strong focus on the research activities of the Department of Physical Education and Sport Sciences and the Graduate Entry Medical School.

Orla's role involves:

- Scoping and investigating funding opportunities
- Providing support during the proposal development, review and submission process
- Facilitating faculty wide research collaborations
The 2nd year Sport and Exercise Sciences class, as part of their ‘Coaching Science and Performance’ module this year organised the Jacinta O’Brien 10k race, an annual run in memory of Jacinta O’Brien, a former member of the teaching staff in the PESS Department. Jacinta passed away in her sleep from sudden adult death syndrome and this year marked the 11th anniversary of her death. As a student, teacher and colleague, Jacinta had a major influence on the UL campus and its people. Teaching was her passion and she was particularly enthusiastic about Sport Psychology and women’s involvement in sport. Jacinta was a “leading light” in women’s sport, running events including the Fitzgibbon Cup as well as coaching the Ashbourne Cup team. She was instrumental in organising previous Plassey 10K races and her memory will live on in this race which is named in her honour.

Each year, the race generates much needed funds for very worthwhile charities which are chosen by the students. This year the chosen charities were Barretstown and Aware. The charity Aware aims to help those affected by stress, depression, bipolar and mood disorders to be understood, supported and free from stigma. Aware also encourages those affected by mental illnesses to access appropriate therapies. Aware relies heavily on public donations which fund 91.5% of their services. Barretstown offers a free service to sick children and families affected by serious illnesses. It costs €4.5 million annually for Barretstown to run its services, and these costs are largely met through charitable donations.

In the 10 weeks leading up to the race, postgraduate students Cormac Powell and Hannah McCormack chaired numerous planning meetings with the 2nd year class to ensure all aspects of the race were meticulously planned including race communication and entertainment, registration, race management, safety, facilities and budget. A launch day was held on the university campus which proved to be a huge success with over €1,000 raised from selling wrist bands, cakes (baked by the students), and proceeds from raffles with various prizes. The race was promoted through local radio stations, newspapers, a race website, Facebook and Twitter.

The race took place on Sunday 12th April 2015. An enthusiastic Richie Clifford put the runners through their paces beforehand to ensure everyone was warmed up in advance of the race which commenced at 11.15am at Kilmurry student village. In wet conditions, over 250 runners and walkers of various levels and abilities took part in the race, encouraged by the 2nd year Sport and Exercise Sciences students who marshalled the entire 10K route. The route took in the spectacular UL campus including Thomond Bridge, the Pavilion, Irish World Academy, the Medical School and Living Bridge before finishing on the UL Sport running track. There were prizes on the day for the top 4 male and female runners with Niall Shanahan and Stephanie Johnson winning the male and female categories. A total of €5,000 was raised in total this year with €2,500 going to each of the two charities, Aware and Barretstown. The charity Aware aims to help those affected by stress, depression, bipolar and mood disorders to be understood, supported and free from stigma. Aware also encourages those affected by mental illnesses to access appropriate therapies. Aware relies heavily on public donations which fund 91.5% of their services. Barretstown offers a free service to sick children and families affected by serious illnesses. It costs €4.5 million annually for Barretstown to run its services, and these costs are largely met through charitable donations.

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The University of Limerick’s Biomechanics Research Unit were strongly represented at the July 2015 International Society of Biomechanics in Sports (ISBS) Conference in Poitiers, France. Dr. Drew Harrison, Dr. Ross Anderson and Dr. Ian Kenny hosted the conference at UL in 2009. Five PhD students joined them this year: Roisin Howard, Niamh Whelan, Michelle Norris, Robin Healy and Richie Bolger. The conference attracted over 380 delegates who presented expert workshops, presentations and keynote lectures on sensor technology, coaching biomechanics, injury, muscle and tissue mechanics, sports medicine, sports performance and gait modelling to name just a few topics.

Michelle Norris’ research was awarded the ‘Force & Motion’ US$500 travel award for best scientific poster. A University of Sydney PhD student John Warmenhoven who collaborated with BRU and Drew Harrison for his ISBS 2015 work was also winner in the prestigious New Investigator category. The week concluded with the prestigious presentation of ISBS Life Member to Dr. Drew Harrison. It is an award reserved for members who have made outstanding contributions to the Society and is elected by the Executive Council. Drew served as ISBS Secretary General 2006-2007 and was elected ISBS President 2011-2013. See page 17 for more detail on ISBS Life Member award to Dr. Drew Harrison.


It has been proposed that the foot contact events can be estimated using peak impact related accelerations of the leg using accelerometers. The aim of this study was to develop a method for identifying peak impact accelerations in the anterior-posterior axis using the Delsys Trigno System during running and compare this with initial contact via force plates. Seven national and international sprinters completed runs across a force platform with an accelerometer fixed to their shin. The results showed the acceleration of the anterior-posterior axis approximated foot-strike within ±0.017 s of the foot-strike event detected by the force plate. For further information contact niamh.whelan@ul.ie

The purpose of this study was to investigate stride rate (SR) dynamics of a recreational runner participating in his debut marathon. Tibial accelerometry data obtained from accelerometer data (during a half marathon (R1) and marathon (R2) were utilised. SR data were extracted utilising novel computational methods and descriptive statistics were utilised for analysis of R2, and comparison of the first half of the marathon (R2½) to R1. Results indicate that the participant employed comparable SR strategy in R1 and R2½. For R2 a combined decreasing trend in SR and increased variance in SR from 30 km (R2 =0.0238) was observed. Results indicate that the participant had the ability to maintain SR strategy for the first half of the marathon, however as fatigue onset occurred this ability decreased. Running strategies on SR during fatigue may be of future use to recreational runners. Michelle, also presented a second poster titled ‘Comparison of accelerometry stride time calculations method’. For further information on this research contact michelle.norris@ul.ie


The University of Limerick’s Biomechanics Research Unit were strongly represented at the July 2015 International Society of Biomechanics in Sports (ISBS) Conference in Poitiers, France. Dr. Drew Harrison, Dr. Ross Anderson and Dr. Ian Kenny hosted the conference at UL in 2009. Five PhD students joined them this year: Roisin Howard, Niamh Whelan, Michelle Norris, Robin Healy and Richie Bolger. The conference attracted over 380 delegates who presented expert workshops, presentations and keynote lectures on sensor technology, coaching biomechanics, injury, muscle and tissue mechanics, sports medicine, sports performance and gait modelling to name just a few topics.

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The purpose of this study was to measure putting outcome performance when different length putters were used with an anchoring mechanism. 72 skilled golfers each executed a total of 60 putts using standard, belly and long putters from two distances. Putting mechanics were assessed using SAM PuttLab™. From 1.83 m (6 ft) participants holed 80.3% of putts with a standard length putter, dropping to 78.6% and 75.3% for belly and long-handled putters. At 3.66 m (12 ft) participants holed 51.7% of putts with a standard length putter, and 50.8% and 46.9% for belly and long-handled putters. Shot performance showed no significant differences between clubs. There were significant (p<0.05) between-club differences for swing time, putter head rotation and putter face impact spot. While anchoring may reduce putter head rotation it does not sufficiently limit rotation. For further information contact ian.sherwin@ul.ie

This study compared the lower limb coordination of the previously injured leg of ACL injured participants (ACLr, n=18), against their non-injured leg and a control (nACL, n=18) leg. The lower limb joint and segment couplings were calculated during maximal drop-jump land and unanticipated cutting task. Differences between the previously injured and nACL control leg were present in all but one of the lower limb joint and segment couplings. Differences between the previously injured and nACL control leg were present in the hip rotation - knee abduction adduction, and knee rotation knee abduction adduction couplings. The hip and thigh were the main areas where differences were reported. Altered proximal neuromuscular function may be the origin of these altered coordination patterns. For further information contact sarah.clarke@leedsbeckett.ac.uk

The purpose of this study was to assess the OptoJump™ photocell system (Microgate, Bolzano, Italy) in measuring step length and ground contact time during running. In two separate investigations, eight individuals repeatedly ran through a three metre section of OptoJump™ track. Ground contact times were compared to concurrent force platform measures whereas step lengths were compared to physically measured lengths from foot imprints left in powder. Estimates of step length showed excellent validity with only 0.4% difference between methods and an intraclass correlation coefficient of 0.999. The OptoJump™ systematically overestimated contact time with a mean bias of 2.7% compared to force platform measures. These results suggest that the OptoJump™ can be effectively used to estimate step characteristics in real time. For further information contact robin.healy@ul.ie

The purpose of this study was to provide a descriptive analysis of the phasic muscle activity of 8 lower limb muscles during performance of the shot put field event in track and field athletics. Six shot putters performed 3 standing and 3 full linear glide technique throws. Electromyography (EMG) of 8 lower limb muscles was recorded during the trials and the distance thrown was also measured. A comparison between standing and glide techniques are important from a coaching perspective. An increase in peak muscle activity of the Rectus Femoris was observed between the glide and standing throw, all other lower limb muscles showed no significant increases between the techniques. Results show significant increases between performances of standing and glide throws in female athletes however the mean differences were smaller in the male athletes. For further information contact roisin.howard@ul.ie

The PESS department at the University of Limerick has a proud tradition of innovation in sport and exercise sciences education. Since the first cohort of students enrolled on Ireland’s first Sport and Exercise Sciences degree programme in 1993 the course has been continually revised and improved. It is likely that our first graduates of 18 years ago not only wouldn’t recognise the new PESS building and most of the new PESS staff but would not recognise the actual degree programme itself!

It is widely accepted that third level education has changed over the past two decades. One of the internationally recognised challenges is managing the transition from second level education to the cultures and habits of third level; this can be a challenging time for our new students. In 2013 a small team of PESS academic staff (Ross Anderson, Brian Carson, Ian Kenny, Mark Lyons, and Tadhg MacIntyre) began discussing a new first year structure that would engage and excite our new recruits right from their first day as students of PESS and UL. Not only would this aid the transition to third level, it would ensure that the new first years, and our future graduates, would experience true sport and exercise science from the very start of their adventure into this exciting discipline.

After much deliberation, discussion and numerous prototype programme structures a finalised structure was presented by the sub-team to the University for approval in late 2013. It gained unanimous support throughout the University and was rolled out to our new first year students for the 2014-2015 academic year. The final model consists of a very intensive multidisciplinary module delivered over the first six weeks of each semester; Sport & Exercise Sciences – Transition (SS4541) in semester one and Sport & Exercise Sciences – Immersion (SS4552) in semester two. In addition, as themed modules they both are scaffolded around a current theme within the discipline. Currently these themes are team triathlon (one of the fastest growing sports in the world) and track and field sprinting (a truly worldwide sport). As truly themed modules all the theoretical content and applied skills are taught through the perspective of that specific sport.

This exposes the first year students to the true interdisciplinary nature of sport by emphasising the importance of, and connection between, all the major disciplines. In addition, the new structure stimulated early adoption of the traits of a good scientist; the ability to question, analyse and assess – in fact the level of questions often surprised our academic staff!

The sub-team has had time to reflect on the first roll out of this pioneering structure over the summer months. The level of engagement by the first year students was exceptional and the level of excitement during classes was clear to those delivering the modules. Our retention rate (i.e. those students who make it through to year two of the degree) has never been better and early indications this academic year seem to illustrate the increased engagement continues into year two.

The engagement of the new cohort was unmistakable when they were requested to engage in multiple activities outside of the formal structure of the modules. As an example, the non-elite sportsperson often has a lack of context as to how excellent elite performers really are. Consider that the marathon world record holder would cover a lap of the University 400m track in around 70 s (and repeat this another 104 times!). Members of the class were challenged to complete one lap in this time (no easy task) and tweet their results; the level of collegiality and engagement of our new students less than six weeks into their third level education was astounding.

We believe that this new structure leads the way for education in the truly multidisciplinary area of sport and exercise sciences and our future graduates will continue to thrive and compete on a truly international stage.

Launch of the UL Beo Initiative and the Pat Duffy Lecture

UL Beo, is a new initiative by the University of Limerick to create a world leading environment for the practice and research of sport and physical activity. The UL Beo initiative will support community, high performance and research projects in the areas of physical activity, health, lifestyle and sport.

The initiative will be launched with the inaugural Pat Duffy Lecture in Coaching and Leadership. This annual lecture has been initiated to acknowledge and celebrate the life’s work of Dr. Pat Duffy, a UL graduate and former Chair of the National Coaching and Training Centre.

This year’s lecture will be delivered by;
- Baroness Sue Campbell CBE - Chair of Youth Sport Trust UK and former Chair of UK Sport
- Dr. Keith Wood - Former Ireland and Lions Rugby Captain

The launch and lecture will be held on 5th of October 2015 in room CSG01 (CSIS Building) from 6.30-8pm

The lecture is open to the public just please register by September 30th at;
https://www.eventbrite.ie/e/ul-beo-launch-and-the-pat-duffy-lecture-tickets-18305918495

To find out more about UL Beo or the Pat Duffy Lecture visit https://www.facebook.com/ulbeo
Imagine a therapy that had no known side effects, was readily available, and could improve your psychological functioning and well-being at zero cost. Well imagine no more as playing golf could be such a therapy and here is why. A round of golf involves the following therapeutic ingredients: exercise, time in nature, the fostering of new and prolonging of existing relationships, recreation, relaxation and stress management. These ingredients have become known as TLCs or Therapeutic Lifestyle Changes and considerable evidence now points to their effectiveness in both clinical and normal populations. In fact, TLCs are sometimes as or more effective as either psychotherapy or medication!

Playing a round of golf will take approximately four hours and circa 18,000 steps. Being physically active for 30 minutes and over offer serious psychological and physical benefits. For example, following an exercise session of 30 minutes or more we can see a reduction or amelioration in the risk of developing depression, Alzheimer’s, Parkinson’s, or anxiety disorders. We also see significant reductions in age-related memory loss. Indeed we even see important gains around cognitive functions such as processing speed, planning, coordination and working memory.

Exercise even increases brain volume and blood flow, self-esteem, enhances sleep and mood and reduces negative thoughts and rumination. Essentially our brains are better regulated and function at a higher level post exercise. Everyone seems to benefit, both, young and old, clinical and non-clinical and women look to gain more than men. Playing golf and being in natural settings has been shown to enhance cognitive, attentional, emotional, spiritual and subjective well-being. The added bonus of this is the social element of playing golf.

Developing and maintaining relationships enhances happiness, quality of life, resilience and even wisdom! Mental health care professionals often target enhancing the number and quality of individuals’ relationships and golf is the ideal sport to foster and develop such quality relationships. Finally, golf is a challenging sport requiring extensive decision-making, planning and executing precise skilled movements. Playing such a wonderful sport entails learning to develop effective self-management skills which can foster greater emotional stability and psychological maturity, both of which are key ingredients of well-being both on and off the golf course.

Based on the above information I hope you have a new sense of the layers of benefits that can be gained from playing golf. For me it certainly seems to bring new meaning to the term- happy golfing!

For more on this and a summary of the evidence please see the following link & excellent summary of TLC research by Prof Roger Walsh https://apa.org/pubs/journals/releases/amp-66-7-579.pdf

Mark is the current Sport Psychologist to the Leinster men’s team and lecturer in Psychology at the University of Limerick. Contact details mark.campbell@ul.ie

The statistical workshop was held (July 1st-3rd, 2015) at the Vrije Universiteit Amsterdam (VUA) to facilitate data harmonisation objectives within the DEDIPAC Knowledge Hub. The workshop was jointly organised by UL, VUA and the University of Oslo. Workshop objectives were as follows:

- To provide an overview of the potential and challenges of harmonising data.
- To provide an overview and hands-on work with relevant advanced statistical techniques.
- To provide time for work-packages (WPs) to discuss specific methodological issues.

Harmonisation (Data Alignment) is a process which involves using definitional and statistical procedures to enhance the comparability of different studies and/or datasets. The use of harmonised datasets brings many benefits which include, greater sample size, increased generalisability, standards for data inclusion, valid comparative research and forms the basis for multi-centre collaborative research. Harmonisation can occur at any stage (input, output) of a study lifecycle. Attendees were from all four WPs (Diet; Physical Activity; Sedentary Behaviour; Social Inequalities) in thematic area 2 of DEDIPAC (TA2 – Determinants of dietary behaviour, physical activity and sedentary behaviour across the life course and in vulnerable groups). Keynotes examined the utility of the following for harmonisation/secondary data analysis: Bayesian analysis, meta-analysis, mediation/moderation analysis, longitudinal and multilevel analysis. Various approaches to harmonisation and tailored software platforms were considered. A further focus on the research questions which may be answered by harmonising existing EU data was achieved. 12 research questions have been proposed within the physical activity and sedentary behaviour WPs – a busy time ahead for all involved!
The Physical Education, Physical Activity and Youth Sport (PEPAYS) Ireland Research Centre was established in 2005 and over the last ten years PEPAYS Ireland has helped to build research expertise in physical activity and youth sport across the island of Ireland. The 2015 PEPAYS Ireland Research Forum was jointly hosted by the University of Limerick (UL) and Mary Immaculate College (MIC) and took place in the Physical Education and Sport Sciences (PESS) building on the UL campus. There were three keynote speakers, twenty oral presentations, eight posters and three roundtable discussions. All presenters had been asked to consider the policy and practice applications of their work, an emphasis that PEPAYS Ireland is looking to promote over the next number of years.

The PEPAYS Ireland Co-Directors Dr Elaine Murtagh (MIC) and Dr Ann MacPhail (UL) opened the Forum by welcoming almost 100 delegates from Ireland, the UK and Norway. The new PEPAYS Ireland logo was officially unveiled along with the new website (www.pepaysireland.com). Professor Stewart Trost (Queensland University of Technology, Australia) was the first Keynote speaker, titling his presentation ‘Applying Research to Practice and Policy for Promotion of Lifelong Physical Activity’. Formal responses to Professor Trost’s presentation were delivered from Marie Clonan (Margaret Aylward Community College, Dublin) and Dr. Jaimie McMullen (UL).

There were two parallel sessions on ‘Curriculum Changes’ and ‘Promoting Physical Activity in Schools and the Community’ with presentations from eight different Institutes of Technology and universities. Delegates enjoyed the opportunity to network over lunch followed by a 30-minute ‘Walk...Talk...Engage’ session on which delegates were asked to discuss topics and issues they had been exposed to through the morning’s programme and post their thoughts on the ‘web of activity’ afterwards.

The afternoon session commenced with the second keynote on ‘What Youth Sport and PE can learn from High Performance and vice versa’ delivered by David Passmore (Dublin City University) with Ian Sherwin (UL) acting as the respondent. Two more parallel sessions on ‘Leading by Example: New Approaches’ and ‘Examining our Understanding of Physical Activity Engagement’ preceded the poster presentations and the final keynote address, ‘Reflections on applying research to policy and practice’ delivered by Ronan Toomey from the Department of Health. At the closing of the forum it was announced that the Institute of Technology Tralee will host the next PEPAYS Ireland Forum in June 2016.

If you’d like to receive the PEPAYS Ireland electronic newsletters (3 per annum) please contact admin@pepaysireland.com to register your interest.
The NCEF is the only fitness instructor qualification in Ireland which is awarded by an Irish University (a statutory award). It is mapped through academic pathways to the European Qualifications framework and to European Industry standards through the European Health Fitness Association body (EHFA) fitness industry standard, who have rebranded to Europe Active.

It is the aim of the NCEF to provide the highest possible standard of education and training deeply rooted in industry and practical application, whilst meeting the vigorous requirements of academic standards of the University of Limerick world renowned for its Physical Education and Sports Science (PESS) programmes.

Since its inception 25 years ago the NCEF strives for excellence in all areas, from recruitment and selection of students, to preparation, and provision of course materials and to delivery and examination of students. The quality and standard of each and every graduate is assured through rigorous quality assurance in the administration, delivery and assessment of all courses. NCEF students can pursue courses in many locations throughout Ireland and can also take e-learning modules whilst travelling or living abroad.

The NCEF pathway from Level 6 Certificate to Level 8 Honours Degree can be taken consecutively over 4 years. Alternatively, students can opt for an exit option which allows flexibility to step out of formal education and work, travel, gain more experience, deal with life and then step back into education again and continue on the pathway from where they left. All areas of specialist modules can be taken as a registered Certificate/Diploma/Degree student or also on a module ‘link in ‘basis. There are many and varied options available.

European Industry Standards
NCEF has completed the mapping of the Certificate in Exercise and Fitness (CEHF) and Higher Certificate in Exercise and Fitness (HCEHF) Level 6 EQF to European industry standards Exercise for Health Specialist EQF Level 5.

EHFA standards commenced mapping the Fitness Industry minimum standard with individual training providers throughout Europe. This has aligned industry standards to academic Qualification structures and has agreed what the jobs and skills required are for today and for the future. Qualification for fitness occupations as implemented by the EHFA standards look at the specific job requirements.

The first level to be mapped in 2005 by EHFA was ‘Level 3 EQF, followed by Level 4 EQF and then in 2012 EQF Level 5, Exercise for Health Specialist. The NCEF through Central YMCA Qualifications (CYQ) completed the industry mapping process facilitated by REPS Ireland who are operating a register of fitness professionals, and in tandem developing and maintaining a list of approved industry providers of education and training in the fitness industry in Ireland.

Initially the mapping process began in spring 2014 culminating in a notification of successful completion in August 2014, thus resulting in the NCEF becoming the first and only organisation in Ireland offering training and qualification for graduates. This met both the academic QQI/National Framework of Qualifications at Level 6 and the European industry standards Exercise for Health Specialist EQF Level 5.

The CYQ representative demonstrated an excellent understanding of industry requirements and the mapping process balanced with an understanding of the NCEF and intricacies of such a complex organisation. Queries were focused and direct relating to EHFA Standards Learning outcomes. It was without doubt a challenge as the NCEF is a complex and all-encompassing training organisation, providing training to meet the industry needs while also meeting academic requirements.

NCEF courses which are awarded by the University of Limerick are placed from Level 6 to Level 8 on the National Qualifications framework and Level 5-7 on the European Qualifications framework. The European Qualification Frame work (EQF) is a translation tool that helps communication and comparison between academic qualifications systems in Europe.
Co-op Activities Undertaken: As part of my work programme I worked on a resilience programme, called HORMP (Hope, Optimism, Resilience Programme) with the Munster Rugby Academy, which included devising, planning and implementing workshops as part of an EHS Faculty funded study. For HORMP I had to create original material including graphics, written content (evidence based) and various other tools and handouts for the workshops.

In another role I helped organise workshops and seminars as part of a British Psychological Society funded project. I have since joined the research group as a member of the Meta-cognition research group with members from the University of Limerick, University of Wolverhampton, Queens University Belfast and other institutions. As part of the research group I planned, organised and attended conferences and seminars.

At the RIO Group meeting in the University of Stirling, I presented a conceptual paper proposal on a study entitled ‘Understanding Imagery use, Imagery abilities and Meta-Imagery Abilities among athletes and support staff’.

In addition I successfully applied for and was awarded grant funding from an independent board of COGG (An Comhairle um Oideachas Gaeltachta agus Gaelscolaíochta) to study the effect that meta cognition can have on the ability to learn a language. The purpose of this study is to promote the Irish language learning and usage in secondary schools.

What is a PESS Internship
The PESS internship is an opportunity for individuals to spend up to eight weeks in PESS gaining experience in one of four research areas:
(1) Food for Health,
(2) Physical Activity and Health
(3) Sport and Human Performance
(4) Sport Pedagogy

The internship allows individuals an opportunity to work with PESS faculty, explore further their interest and disposition to postgraduate study and / or to consider working in a university setting. The internship allows individuals to gain experience in working on a project that entails collecting and processing preliminary data. It may be that a PESS faculty member already has data that requires further analysis and, in such circumstances, the internship would contribute to an already established project.

What is the focus of your PhD project?
My PhD will focus on the stigma of mental health in elite sport. The perceived stigma attached to mental health issues has been found to act as a major barrier to help-seeking as people seek to avoid being negatively labelled. This is particularly prevalent among athletes, where the perception is that mental health problems equate to weakness, and this may not match the ideal image of the physically and mentally tough athlete. Current measures of mental issues, depression, for example, are predominantly self-report measures, which are notoriously flawed in that participants can easily report untrue answers. This act of reporting false information in order to appear more favourably is known as the “social desirability bias”. In order to counteract this bias, we proposed to monitor the existence of depressive symptoms among athletes using novel implicit measures, i.e. mental and motor rotation tasks, which cannot be consciously influenced by the participant, and so will not be influenced by social desirability bias or by stigmatised beliefs.

Internship Activities Undertaken: We are at the early stages of pilot-testing potential tests and tasks for testing with an athletic population. This research will be the first of its kind to use a non-clinical, athletic sample. Working alongside Dr. MacIntyre during the internship has opened doors to exciting opportunities. In July we presented our research proposal at the Mental Health in Sport – Game Changing Mental Health Conference hosted by the Maudsley learning group, in London. This was a great opportunity to network with key stakeholders who had a shared interest in athlete mental health, listen to other experts, make connections for future and to practice my presentation skills which were recently put into action at the 9th Neuroscience Ireland Conference in DCU in September.

JESSIE BARR
PESS Internship

Why did you apply for the internship?
I recently graduated from an MSc in Sport and Exercise Psychology from the University of the West of England in Bristol. During my two years of study I developed an interest in athlete mental health, and I decided to write my dissertation on the topic of depression among elite male athletes. Afterwards I decided to pursue a structured PhD in U.L. to examine mental health in sport, under Dr. Tadhg MacIntyre’s supervision. Dr. MacIntyre suggested I apply for a PESS internship as it would open doors to some excellent opportunities and experience and provide access to the excellent facilities at PESS.

Clare Murphy
Co-op PESS

JESSIE BARR
PESS Internship
Dr. Drew Harrison Awarded Life Membership of the International Society of Biomechanics

Dr. Drew Harrison, Senior Lecturer in the Physical Education and Sports Sciences Department was awarded honorary life membership of the International Society of Biomechanics (ISBS) at their annual conference in Poitiers, France, in July 2015. Dr. Harrison received the honour for his lifelong contribution to ISBS and to the field of Sports Biomechanics.

This is the second major recognition from ISBS that Dr. Harrison has received. He previously had been honoured with the Geoffrey Dyson award which traditionally recognises sport scientists who, throughout their professional careers, bridge the gap between biomechanics research and practice in sport.

Along with his contribution to research and teaching in Biomechanics it is his application of this knowledge in the field of athletics that has set Dr. Harrison apart. Along with his wife Hayley, he has coached athletes in UL for the past 20 years and in that time, four of their athletes have competed at the Olympic games, won two world championship medals, broken dozens of Irish records and won over 100 national titles.

Dr. Harrison helped lead the formation of the Biomechanics Research Unit (BRU) http://www.ul.ie/pess/bru, has authored or co-authored over 100 peer reviewed articles and 5 book chapters and is a former president of ISBS.

Drs Ann MacPhail and Missy Parker Awarded Lifetime Achievement Awards

At the AIESEP (International Association for Physical Education in Higher Education) Conference in Madrid in July 2015, Dr Ann MacPhail and Dr Missy Parker from the Department of Physical Education and Sport Sciences were awarded the AIESEP Fellowship for outstanding academic recognition. The AIESEP Fellowship recognises scholarly excellence in research and professional practice in physical education, physical activity and sport pedagogy across the lifespan.

The Fellowship acknowledges Ann's and Missy's international recognition of academic and professional practice. Ann is Head of the Department of Physical Education and Sport Sciences and Missy is Course Director for the Professional Masters in Education (Physical Education). Both are active members of the Physical Education, Physical Activity and Youth Sport (PEPAYS) Ireland Research Centre, with Ann in her role as Co-Director and Missy as the Teaching and Learning cluster chair.

Rachel Clancy
Irish Research Scholar

Congratulations to PESS PhD student Rachel Clancy who has been awarded an Irish Research Council (IRC) PhD Scholarship for her project titled ‘The motivation of elite athletes: a longitudinal analysis of relevant psychological and physical characteristics’. Rachel is working with primary supervisor Mark Campbell and co-supervisors Matthew Herring and Tadhg MacIntyre.

MSc Sports Performance Finalist National Best New Postgraduate Programme 2015

Congratulations to PESS lecturers and graduates from the Masters in Sports Performance postgraduate programme in helping shape a high quality programme. The MSc programme was shortlisted for the 'national best new course' at the Postgraduate Course Awards held in Mansion House, Dublin in May 2015. The MSc. Programme, established since Spring 2010, was pipped to the post by the overall winner at the awards night (MA Festive Arts, UL) but commended for the design, accreditation and industry collaboration involved. Dr. Ian Kenny, steps down as Course Director for the postgraduate programme and is replaced by Dr. Mark Lyons.

Achievements

L to R - Professor Hans-Peter Brandl-Bredenbeck, Board Member, AIESEP, Professor Mirja Hirvensalo, University of Jyvaskyä, Finland, Dr Ann MacPhail, University of Limerick, Dr Missy Parker, University of Limerick, Professor Marc Cloes, President, AIESEP

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Sport and Exercise Sciences Graduates Receive Fulbright Scholarships

Denise McGrath (SES, 2000) and Susan Crawford (SES, 2001) were recognised as 2015 Fulbright Scholars in June 2015 at the Irish Fulbright Alumni Association event, held at Dublin Castle. Denise (pictured right) currently lectures at UCD in the School of Public Health, Physiotherapy and Population Science. She graduated from PESS in 2000 with a BSc in SES and went on to complete an MSc in Biomedical Engineering at UL. For her Fulbright scholarship Denise is going to Harvard University to explore wearable technology solutions to help people with Parkinson’s disease. Susan Crawford (pictured left) graduated with a BSc in Sport & Exercise Sciences in 2001. She obtained her PhD from UL in 2007. Since then Susan has been working as a lecturer at UCC in the School of Education on the Sport Studies and Physical Education programme. For her Fulbright scholarship Susan is going to the University of San Francisco to explore the development of computerised technology to facilitate people with Autism to develop fundamental motor skills.

Dr. Peter Francis, PhD graduate from PESS (2014) and Senior Lecturer at Leeds Beckett University was appointed as Team Manager for Athletics Ireland at the 2015 European Athletics Junior Championships in Sweden. Dr Peter Francis (pictured right) has been a senior lecturer in sport and health science at Leeds Beckett University since September 2014, having previously worked in the same area at the University of St. Mark and St. John, Plymouth. Peter works across programmes in the area of sport and exercise therapy and physiotherapy. Awarded the Roadbridge Medical Research Scholarship at the University of Limerick in 2010, Peter conducted research which investigated age-related change in muscle quality (mass, strength, function). Subsequently, as part of a research team, Peter investigated the role of exercise and nutrient support in improving muscle quality. This work was submitted for the award of PhD in June 2014.

Thomas Barr, age 23 earned a gold medal at the World University games (WUG) in South Korea in July with a time of 48.78 sec in the 400m hurdle final. He has qualified for Olympics in Rio 2016, and recently stated that his goal for Rio is to run under 48.5 sec.

His more recent performances at major championships reads like this:

- 2013- 400m hurdles finalist at European U23 Championships in Ostrava.
- 2014- 400m hurdles semi-finalist & 4x400m relay finalist at European Championships in Zurich.
- 2015- 4x400m relay semi-finalist at the World Relay Championships in Nassau.

The 5th Annual President’s Volunteer Award (PVA) ceremony took place on September 25th at the University of Limerick Concert Hall. The PVA has been established to harness, acknowledge and support the contribution that students at the University of Limerick make to their communities. The PVA draws on a strong tradition of student volunteering both on and off campus. The total recorded voluntary hours contributed to community projects and initiatives during AY14/15 is over 12,000. The highest number of PVA applications (38%) came from Education & Health Science students.

Saoirse Flannagan (4th year SES and pictured right) received a bronze award for her volunteer work with Hope in Motion and University of Limerick Students’ Union.

There are many more PESS students involved in volunteering in sporting and nonsporting capacities, but students maybe unaware that they can apply for this award. PESS would like to encourage all PESS students who are involved in volunteering to visit www.ulpva.ie.
In June 2015, UL had the pleasure of competing against the Harvard-Yale Squad for the 5th time. Every four years a team from Harvard and Yale travel to Ireland to compete against the University of Limerick. The history behind this meet starts with Professor Michael H. B. Hayes. Upon taking an appointment in the University of Birmingham in 1960, he began to organise a meeting of the Ivy League colleges against the past and present athletes at Birmingham. In 1998, Michael commenced work at the University of Limerick and in 1999 the Harvard-Yale team travelled to Ireland for the first time. At this meet, a selection of PESS students, past and present, competed at this meet. Róisín Howard, UL athletics captain, and part of the organising committee came 3rd in the high jump. Alana Frattaroli, recent Sport and Exercise Sciences graduate was also involved in the organising and achieved 2nd position and a new personal best of 12.45m in the shot putt. Niall Touhy (centre of picture above) Sport and Exercise Sciences graduate 2013 and current student on the Gradate Entry Medical School in UL won the 400m in a time of 47.86s.

James Ledingham, also a Sport and Exercise Sciences graduate student came 3rd in the 800m in a time of 1.54.96s. James is currently enrolled in UL doing a Masters. David McCarthy (Physical Education graduate) was 3rd in the 400m (pictured top left in photo above) and 2nd in the 400m Hurdles.

Laura Kavanagh and Eoin Synnott both current PE and Sport and Exercise Sciences students competed in the triple jump and 100m respectively. Unfortunately we were missing two PESS PhD students, Niamh Whelan and Jessie Barr due to injury. Thomas Barr, (Sports Performance Masters Student), could also not compete due to the clash with the European Team Championships.

There were great performances in all the events, especially in the some of the throws: 60m in the men’s hammer, 40m in the women’s javelin, 15m in the men’s shot and 12m in the women’s shot. The sprints also saw some great performances in the 100m and 200m. The meet finished with a closing banquet at the Sports Bar, with entertainment again by DJ Ber. Prior to this there were some wonderful and inspiring speeches by the head coach of Yale, the respective team captains and Professor Michael Hayes himself. Vice President Paul McCutcheon and UL Sport director David Mahedy also spoke and thanked Michael for his longstanding contributions to UL athletics.

It is hoped that this athletics meet continues for many years to come. We have such talented athletes in UL and such an event really showcases what the University has to offer. However an investment in the track is urgently required to restore it to its previous ‘world class’ facility. Not all lanes could be used in the meet due to problems with the track surface. However, overall it was a very successful meet with all the athletes and coaches enjoying the week and making new long lasting contacts and friendships.
On May 15th 2015 PESS hosted an event for schools that presented sport science related projects at the 2015 BT Young Scientist & Technology Exhibition, held at the RDS Dublin. Students from nine schools around Ireland attended the event in PESS, and all students were category award recipients. The secondary school students presented their projects to PESS faculty and staff and other students and teachers attending the event.

Projects were diverse with emphasis ranging from whether PE should be examinable in schools (Lisa Daly, Heywood Community School, Ballinakill, County Laois) to the ‘ultimate kicking tee’ (Daniel Enright, Briain O’Riordan and Ben Ryan, Gaelcholaiste Luimnigh Limerick) to the media publicised ‘An Tionchar, the impact hurling boot’ (Shiofra Ryan, St. Brendan’s Community Schoo, Birr).

The presentations demonstrated the students’ passion for their research as they showcased their scientific strengths, knowledge and inventiveness. The students took inspiration from problems or issues that were intriguing to them and with guidance from teachers and external experts answered research questions with rigour. Some students were in the process of securing agreements with external organisations to take their product/idea to the next developmental level. Other students who had developed physical prototypes for their projects had plans to continue to work on the design of the product.

Students attended workshops on exercise physiology, exercise psychology or sport biomechanics which were expertly organised by PESS postgraduate student Robin Healy and PESS Teaching Assistants Caoimhe Tiernan and David Kelly. Guest speakers also presented to the secondary students on the role sport and exercise science plays in their professions today. Guest speakers: Dr. Ian Kenny (PESS), Alan Swanton (Irish Institute of Sport), Dr. Mark Campbell (PESS), Dr. Lynne Algar (Triathlon Ireland) and Joe McGinley (Munster Rugby).
This short course will help you gain an understanding of team sports performance through various technical aspects of coaching and application of video notational analysis.

It will examine:
- game tactics
- offensive and defensive game-play
- practical video data capture
- video analysis coding development
- mobile and app solutions
- coach and player feedback systems

**Awards**

On the satisfactory completion of the course you will be awarded: NFQ Level 8 (6ECTS) in Video & Performance Analysis.

**ISPAS Professional Accreditation**

The course leads to International Society of Performance Analysis of Sport (ISPAS) accreditation through submission of a completed case-study.

**PROGRAMME OF STUDY / DELIVERY**

Offered both in the Autumn and the Spring over three Saturdays from 10am to 6pm, spaced three weeks apart. Early September until November, or early February until April at the Physical Education and Sport Sciences Building (PESS), at the University of Limerick. The course is a blend of tutorials, laboratory practicals and field work. The course can accommodate twenty (20) students per semester.

A minimum of ten (10) registrations are required to run this course. Confirmation of the course running, for any particular semester, will be made three weeks prior to start date.

**FEES**

€495 which includes ISPAS membership accreditation fee. Your fee includes a temporary video notational analysis software license as part of the course.

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**PROGRAMME CONTENT**

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<td>Performance indicators; player profiling</td>
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<td>Notational analysis; key performance indicators; manual systems</td>
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<td>Camera skills; video formats and requirements</td>
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<td>Digital solutions, software analysis, Apps and mobile systems; software training and tagging; coding panels</td>
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<td>Feedback systems; creating dashboards; presenting video; reporting and data management</td>
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**ENTRY REQUIREMENTS**

A pass in five subjects in the Irish Leaving Certificate or an equivalent examination. For those not possessing a pass in five subjects, relevant experience and/or evidence of other part-time courses may also be considered as part of Recognised Prior Learning (RPL).

**FOR MORE INFORMATION**, please contact:

Physical Education & Sport Sciences
University of Limerick
Web: http://www.ul.ie/pess
Email: PESS@ul.ie
Tel: +353 61 202896

**HOW TO APPLY**

The link-in application form is available to print on www.ul.ie/CPE/short-courses

Please complete the form and return with fee to Continuing & Professional Education
ER1-030, Engineering Research Building, University of Limerick
Limerick
Congratulations to PESS Staff and postgraduate students who have been appointed to the following positions:

**David Diggin**
Assistant Professor in Strength and Conditioning
Ithaca College

**Dr. David Kelly**
Junior Lecturer in Sport Science
Athlone Institute of Technology

**Dr. Michelle Dillon**
Senior Lecturer in Physical Education and Sport Pedagogy
Leeds Beckett University

The PESS Department is one of the most sought after departments at UL for incoming ERASMUS, Study Abroad and International Exchange students!

During the Autumn 2015 semester, PESS has welcomed 55 incoming ERASMUS, Study Abroad and International Exchange student module registrations. Students studying in PESS this semester come from Holland, England, the United States, Brazil, and Canada - to name a few.

This semester also sees six year three Physical Education students on exchange to California State University Long Beach and Slippery Rock University in Pennsylvania.

**PESS SUMMER GRADUATIONS 2015**

1. Dr. Jaimie McMullen (PESS), Cailt Devane, Eabha Howard and Claire Hughes, BSc. Physical Education
2. Julia White, BSc. Physical Education.
6. Scott Kinevane, BSc Physical Education.
7. Dr. Lynne Algar, PESS Department.
Congratulations to all PESS students who graduated in August 2015. Well done the following students who received awards for the highest grade (QCA) within the various PESS programmes:

- Cillian McDowell: Highest grade (QCA) in Sport and Exercise Sciences and Silver Medal for first place in EHS.
- Jack Neylon: Highest grade (QCA) in Physical Education.
- Alan Griffin: Highest grade (QCA) in MSc. Sports Performance.

Congratulations to current PESS students who fared brilliantly in this year’s GAA championship season.

Congratulations also to PESS faculty and staff who were involved as player management in the GAA championship season - Gary Ryan (Tipperary senior hurling strength and conditioning coach), Dr Mark Lyons (Limerick senior hurling selector & head strength & conditioning coach), D.J. Collins (Banaisteor UL senior ladies football and coach of Monaghan senior ladies football), Brian Carson (Limerick senior football selector and football coach).

Well done to Mark O’Donovan (MSc Sports Performance 2014) half of the Irish lightweight pair who won the B final at the World Rowing Championships today. Mark and Shane O’Donovan are now placed 7th in the world and well poised for Olympic qualification.


Congratulations to Eanna Madden (4th year BSc SES Student) and Kieran Elliott (2nd year Business Student) who were team members of the 4X100m relay quartet that set a new U23 National Record of 39.89s in the European Under 23 Championships in Tallinn Estonia in July 2015.

Well done to Kris Beattie (PESS PhD student) who was awarded third place, in the category of Applied Case Studies, for his poster presentation on “Monitoring maximal and reactive strength in distance runners: A 40 week case study” at the UK Strength and Conditioning 2015 Conference (31st July - 3rd August).

Congratulations to Dr. Lynne Algar who was selected as Triathlon Ireland coach of the month in August 2015. Lynne was nominated for her work with Limerick Triathlon Club, coaching both age group and high performance athletes. In addition, Lynne also works with Triathlon Ireland as the Limerick Performance Coach.

Congratulations to MSc Sports Performance Students, Thomas Barr (Athletics), Dylan Mernagh (Men’s Football) and Chris Bryan (Men’s Football) and Kris Beattie (Swimming) who competed in the World University Games Gwangju, Korea in July.

Well done to PESS faculty, research staff who presented research at the International Conference on Biochemistry of Exercise in Sao Paulo, Brazil in September. Pictured below (L-R) Dr. Brian Carson, Sylvia Murphy, Dr. Phil Jakeman, Dr. Will McCormack and Dr. Maevie Kiely.

The PESS department promotes staff, student and graduate achievements. If you are aware of student and/or staff achievements (your own or others) please inform the department administrator Michelle.Hyland@ul.ie or pess@ul.ie so that such achievements can be celebrated and promoted.

PESS PUBLICATIONS SINCE APRIL 2015

Book Chapter

Journal Publications
6. Carson, B.P & Egan, B. 2015. Motion to dismiss: Insufficient evidence to mount a case against protein synthesis as the dominant mechanism.
causing disuse muscle atrophy in the elderly. J Physiol 592, s8.


Conference Publications


