



SPORTS TECHNOLOGY & APPLIED RESEARCH SYMPOSIUM (STARS)

26th – 28th October 2022



What it Takes to Innovate

WEDNESDAY 26th OCTOBER 2022, 9:00AM–10:00AM AEDT

Kim Brennan is one of Australia's most celebrated Olympic champions. In the sport of Rowing, she is a living legend with sixteen national titles, two World Championship titles, and she is a three-time Olympian, with silver and bronze medals at the London Olympics, and an iconic Gold Medal in the Single Scull at the Rio Olympics. Since retiring from Rowing, Kim has worked with Ernst & Young and engaged with some of Australia's and the world's most innovative companies and people. From this interaction, Kim has gained insights into what it takes to innovate, and how 'innovation culture' is developed within organisations. As Australia prepares for take-off on the green and gold runway, Kim will propose ways that the national high performance sports system might embrace an innovation mindset, and what might be learned from organisations and people outside sport.



PRESENTED BY:



Kim Brennan
AM

Kim Brennan (nee Crow) is a Management Consultant - Technology Implementation, Defence, and National Security. Kim is the epitome of the modern leader. An Olympic gold, silver, and bronze medalist in rowing, Kim transferred her sporting skills to become an emerging leader in technology implementation for Management Consultancy EY.

Competing at the 2008, 2012, and 2016 Olympics, Kim has won 3 Olympic medals, including gold in 2016. That year she was awarded the Gina Rinehart Award for Leadership, the Australian Female Sportsperson of the Year, the Rowers' Rower of the Year, the Female Rower of the Year, the ACT Sportsperson of the Year, the Victorian Sportsperson of the Year, the Women's Health Sportsperson of the Year, and the flag bearer at the Closing Ceremony of the Rio Olympic Games. While competing, Kim continued her Melbourne University Law Degree remotely, graduating with first class honours and winning the prize for top female graduate of her year.

In 2016 Kim was enticed across to EY to work in the growing field of technology advisory. There, Kim has led large scale technology implementation projects in Defence and National Security, taking a particular interest in the ethics of emerging technology and how to embrace innovation in a changing world. She is a recipient of a Fulbright Professional Scholarship to examine organisational culture through a complex systems lens and was named one of Australia's top 100 influential women by the Australian Financial Review in 2018.

Kim has previously sat on the Australian Olympic Committee Athletes' Commission (Chair), the Australian Olympic Committee High Performance Committee, and the Rowing Australia Athletes' Commission. She has been an ambassador for the Australian Drug Foundation Good Sports Program. She still sits on the Australian Sports Foundation Board. Kim won the prestigious Thomas Keller award for lifetime contribution to World Rowing (one recipient awarded each year globally). Kim Brennan was awarded a Member of the Order of Australia in 2017.



The MIT Sports Lab – How Universities can Solve Sporting Challenges

WEDNESDAY 26th OCTOBER 2022, 11:00AM–12:00PM AEDT

MIT is one of the world's top universities with 98 Nobel Laureates, 26 Turing Award recipients, as well as alumni that have founded Fortune 500 companies like Boeing, Intel, and Raytheon. There have also been 41 astronauts out of MIT including the second man on the moon, Buzz Aldrin.

As one of the world's top universities, focused on solving some of the world's great challenges, it interesting to see that there's is also the MIT Sports Lab. The two founders, Christina Chase and Anette "Peko" Hosoi, will provide background into the establishment and development of the Lab, and the experiences they provide to some of the brightest students in the world.



PRESENTED BY:



Professor
Anette "Peko"
Hosoi

Anette "Peko" Hosoi is the associate dean of the MIT School of Engineering and Neil and Jane Pappalardo Professor of Mechanical Engineering with a joint appointment in the Department of Mathematics. In 2015, she co-founded the MIT Sports Lab with Christina Chase and serves as its faculty director. The MIT Sports Lab is a sports engineering program that seeks to improve athletic performance and advance the state of the art in research, equipment, and actionable insights to help support athletes in their goals to push the limits of human performance through collaborations between industry leaders, students, faculty, alumni, and start-ups.

Peko's research contributions lie at the juncture of nonlinear hydrodynamics, microfluidics, and bio-inspired design. She is a world leader in the study of the hydrodynamics of thin fluid films and in the nonlinear physical interaction of viscous fluids and deformable interfaces. A common theme in her work is the fundamental study of shape, kinematic, and rheological optimization of biological fluid systems for locomotion and their application to the emergent field of "soft robotics". A unique mixture of experimental work, numerical simulation, and theoretical analysis characterizes her work, and it combines elements of both engineering design and mathematical optimization. Her work is widely known and internationally respected by physicists, biologists, roboticists and applied mathematicians, as well as engineers, and is used to guide the engineering design of robotic swimmers, crawlers, burrowers and other mechanisms.

Peko has served as a member of the Defense Science Study Group and in 2012, was named a fellow of the American Physical Society for "innovative work in thin fluid films and in the study of nonlinear interactions between viscous fluids and deformable interfaces including shape, kinematic, and rheological optimization in biological systems."

When she is not in lab, she can be found at Highland Mountain Bike Park on her downhill rig, snowboarding in British Columbia or monitoring her Fantasy Football team.



PRESENTED BY:



Christina
Chase

Christina Chase is a Lecturer at MIT in the Department of Electrical Engineering and Computer Science with a joint appointment in the Department of Mechanical Engineering. In 2015, she co-founded the MIT Sports Lab with Prof. Anette “Peko” Hosoi and serves as its Managing Director. The MIT Sports Lab is a sports engineering program that seeks to improve athletic performance and advance the state of the art in research, equipment, and actionable insights to help support athletes in their goals to push the limits of human performance through collaborations between industry leaders, students, faculty, alumni, and start-ups.

Christina is an entrepreneur with a track record of success in several industries, starting her first company when she was 18 years old. Most recently she was the CEO and co-founder of Firehoze, an education technology company that focused on online education that involved over a hundred instructors from the most prestigious universities. She has worked with numerous founding teams across industries, including B2B hardware, healthcare IT, materials and coatings, and consumer electronics, and has also led innovation in established companies, such as the photonics company, Labsphere, where as the Director of the Materials and Coating division, in under a year she tripled revenue and led the group to file three key patents for new materials.

In 2013 she was named one of the 25 Most Influential Women in the Boston Tech Community and in 2014 Mashable named her one of the 15 People Shaping Boston’s Tech Scene.

In a past life, Christina was a cyclist where she was one of 12 women selected by the US Cycling Federation to train at the US Olympic Training Center. She has taught downhill skiing in Colorado, summited six of Colorado’s 14-ers across seasons, and her latest sport is kiteboarding.



You Are What You Eat

WEDNESDAY 26th OCTOBER 2022, 1:00PM–2:00PM AEDT

With over 40 years' experience educating, researching, and counselling some of Australia's greatest Olympians and Paralympians, Professor Louise Burke has been at the very frontiers of performance nutrition. As Australia prepares for take-off on the 'Green and Gold Runway', Louise will reflect on her time fuelling athletes, and propose where she believes gains can still be made over the next decade. Given the fundamental nature of elite athlete nutrition to performance, this presentation will challenge, provoke, and question whether our performance environments are doing enough to ensure that athletes are getting what's required to fuel performance.



PRESENTED BY:



Professor
Louise Burke
OAM

Louise is a sports dietitian, academic, and author with 40 years of experience in the education and counselling of elite athletes. She worked at the Australian Institute of Sport for thirty years, first as Head of Sports Nutrition and then as Chief of Nutrition Strategy. She was the team dietitian for the Australian Olympic Teams for the 1996 Atlanta, 2000 Sydney, 2004 Athens, 2008 Beijing, and 2012 London Summer Olympic Games. Her publications include over 350 papers in peer-reviewed journals and book chapters, and the authorship or editorship of several textbooks on sports nutrition. She is an editor of the International Journal of Sport Nutrition and Exercise Metabolism. Louise was a founding member of the Executive of Sports Dietitians Australia, is a member of the Nutrition Working Group of the IOC, and is a Director of the IOC Diploma in Sports Nutrition.

Louise was awarded a Medal of the Order of Australia in 2009 for services to sport nutrition, as a dietitian, and through academic, research, and administrative roles. Louise was appointed as Chair in Sports Nutrition in the Mary MacKillop Institute of Health Research at Australian Catholic University in Melbourne in 2014 and took up this position in a full-time capacity in 2020.



The Megatrends in Sport Project

WEDNESDAY 26th OCTOBER 2022, 2:30PM–3:30PM AEDT

The Brisbane 2032 Olympic and Paralympic Games may look very different to the Tokyo Games of 2020/21. Large shifts are occurring in the Australian sports sector that will shape how the Games are prepared for, played, and watched. These shifts, or megatrends, are occurring due to societal, technological, and environmental changes impacting all areas of our lives. CSIRO's Dr Lucy Cameron will present the findings of a new report outlining six new megatrends in Australian sports, and how they intersect with global megatrends. The report, written in collaboration with the Australia Sports Commission, is a decadal update on previous work on Megatrends in Australian Sport released in 2012. These six new megatrends will foretell both opportunities and challenges for the future of all sports in Australia.



PRESENTED BY:



Dr Lucy
Cameron

Lucy is a digital transformation and new industry development expert with CSIRO's Data61 group. Her book, 'Building an Innovation Hotspot' outlines the policy levers used by governments and industry to support new industry development and local innovation. She is also a leading proponent of foresight, digital transformation and innovation in the Asia Pacific region.

Lucy has been the leader and convenor of the Asia Pacific Foresight Group, she led the Vietnam's Future Digital Economy project, a major collaboration between CSIRO and Vietnam's Ministry of Science and Technology, and was one of just four Australian women named as GovInsider's Women in GovTech in Asia in 2018. She was also the inaugural speaker in the Australian Women in Blockchain series.

As a previous Queensland Government Smithsonian Fellow, Lucy has a special interest in policy leading to innovation hot-spots. Commissioned reports, keynote talks, and workshops conducted as part of the Data61 Insights team have advised government and industry on policy and actions to exploit new technology for productivity gains and local business development. This involves combining digital transformation policy with foresight techniques.

Prior to working at CSIRO's Data61 Lucy worked for 10 years in digital economy and productivity policy in the Queensland Government. Her PhD from the University of Queensland studied the impact of broadband on regional development.

Her professional interest lies in determining the geographic patterns of innovation, and what governments and businesses can do to effectively and cost-efficiently promote and exploit innovation.



Research from Aspetar

WEDNESDAY 26th OCTOBER 2022, 4:00PM–5:00PM AEDT

Many Australians in high performance sport will be familiar with Aspetar, and its impressive range of services, facilities and expertise dedicated to athletes. In the lead up to the Football World Cup, which begins in Qatar in November, this presentation will highlight some of the research and technology projects being carried out at Aspetar. Professor Marco Cardinale and his team will present a range of projects that includes:

- Soccer shoes interactions with surface (Athol Thomson)
- Heat therapy to accelerate muscle function (Seb Racinais)
- New methods to assess core temperature live (Tokyo Project - Seb Racinais)
- Using Virtual Reality to assess concussion progression (Rod Whiteley and Marco)



PRESENTED BY:



Professor
Marco
Cardinale

Marco is a Sports Scientist with extensive experience in various fields. He was the Head of Sports Physiology and Research of Aspire Academy in Doha (Qatar) from 2013 until recently. Before moving to Qatar, he led the Sports Science activities for the preparation of Team GB (Great Britain and Northern Ireland) at the Beijing 2008, Vancouver 2010, and London 2012 Olympic Games.

Marco is an honorary reader in computer science in Sport at University College London and an Honorary Senior Lecturer at the University of Aberdeen in the School of Medical Sciences. He has been an advisor to various companies (e.g. Polar Electro, and Technogym), government agencies (e.g. the European Space Agency) and professional sport organisations and national governing bodies in 5 countries (USA, Italy, Spain, Sweden, UK) before working in Qatar. In 2011 he was awarded the honour of “Cavaliere dello sport pontino” by the Italian Olympic Committee for his services to international sports. Dr Cardinale is currently an advisory board member of NIKE (SPARQ) and a member of the scientific commission of the Italian Track and Field Federation. Dr Cardinale holds a B.Sc. from ISEF in Italy, a M.Sc. from the US Sports Academy in the USA and a PhD from Semmelweis University in Hungary.

A former Handball player and coach, he has been involved in coach education in various countries in the area of strength and conditioning and exercise physiology. A widely published and cited author in the scientific literature on various aspects of human performance, he has also patented an innovative exercise device consisting of a vibratory biofeedback system which received research awards from NESTech and the Design Council.



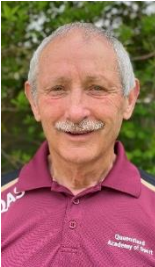
'From CRC Research Project to ASX Listed Company' – The Catapult Story

THURSDAY 27th OCTOBER 2022, 9:00AM–10:00AM AEDT

The statistics on successful start-up companies are not great. In the US, around 90% of new start-up companies fail. Indeed, in the US it appears to be a badge of honour to be associated with a failed start-up. In Australia, the support for start-ups has improved over the years, and there are now some 600 companies that identify as sport technology companies in Australia. However, back in the middle of 2006, before there was much support for start-ups, a little company emerged out of the CRC for Microtechnology in a small part of that CRC labelled, 'Project 2.5'. In 'Project 2.5', the AIS collaborated with various organisations to develop technologies aimed at sport. Catapult is now listed on the ASX and is a major market leader in sports technology with over 2,500 clients including some of the biggest names in world sport. So, how did this all happen? This session will Q&A with Catapult founders Shaun Holthouse and Igor van de Griendt, and the man who led the AIS's involvement in the CRC, Professor Allan Hahn.



PRESENTED BY:



Professor
Allan Hahn
OAM

Allan Hahn was appointed by Dick Telford as a senior physiologist at the AIS in 1984. After the success of Allan's talent identification work, he turned his attention to altitude training where he and his colleagues conducted research that eventually led to altitude training becoming a mainstay in athlete preparation in Australia.

In 1994, Allan became Head of AIS Physiology and was part of a team of scientists that undertook extensive research into maximising performance in the hot conditions expected at Atlanta. This led to the first use of cooling vests by Australian athletes. In 1998, AIS Physiology commenced a major research project to develop a test for EPO. The work resulted in IOC approval of the test for the Sydney Olympics.

After the Sydney Olympics, Allan recognised the potential for emerging technologies to enable increased measurement of athletes in the field. He successfully led the AIS into a CRC for Microtechnology that yielded the first combined use of inertial sensors and GPS in Australian high performance sport and laid the foundation for the establishment of spin off company Catapult Sports. Allan continues his work today in a role that guides research at the Queensland Academy of Sport.



PRESENTED BY:



Shaun
Holthouse

Shaun co-founded Catapult in 2006 and led it as CEO for 11 years before appointing a new CEO in 2017 and retiring to board and strategy responsibilities.

Prior to this Shaun spent 5 years as Technology manager at the CRC for Microtechnology where in conjunction with the AIS the original technology that underpinned Catapult was invented.

In building Catapult, Shaun created and developed the company's strategy and business plan, sourced seed funding, negotiated technology licenses, and undertook procurement.

He then managed Catapult's early sales, establishing a distribution network and then Catapult's own offices around the world. He led Catapult through numerous acquisitions (GPSports, playertek, XOS digital, AMS) and funding rounds culminating in listing on the Australian stock exchange in 2014, where Catapult grew to be valued at more than \$600m.

Catapult now employs approximately 500 people, has offices in 15 countries, generates revenue of more than \$100m, and supports more than 3000 sports teams globally.

Shaun holds a Bachelor of Engineering (Hons) from the University of Melbourne and is the author of numerous patents. He currently provides advice to start-ups and founders predominantly in the technology space.



Igor van de
Griendt

Igor is Co-Founder and Non-Executive Director of Catapult. Prior to co-founding Catapult, he was a Project Manager for the Cooperative Research Centre (CRC) for Microtechnology. In collaboration with the Australian Institute of Sport, his team developed several sensor platforms and technologies, ultimately leading to the foundation of Catapult.

Before his time at the CRC, Igor was a Director of a consulting business that provided engineering services to technology companies such as Redflex Communications Systems (now part of Exelis, NYSE:XLS), Ceramic Fuel Cells (ASX:CFU), Ericsson Australia, NEC Australia, and Telstra.

Igor holds a Bachelor of Electrical Engineering from Darling Downs Institute of Advanced Education (now University of Southern Queensland). He is the author of numerous patents and patent applications in athlete tracking and other sensor technologies.



A Life in Swimming

THURSDAY 27th OCTOBER 2022, 11:00AM–12:00PM AEDT

By any measure, Michael Bohl is one of the all-time coaching greats in Australian Swimming. Two of his most recognised athletes, Stephanie Rice and Emma McKeon, account for an incredible eight Olympic gold medals.

In this Q&A, 'Bohly' as he is affectionately known will talk about his life in swimming, his connection to the AIS, and his views on the use of science and technology.



PRESENTED BY:



Michael Bohl
OAM

Michael Bohl is head coach of the Griffith University Swim Club and a member of the Australian Dolphins coaching team. Michael is best known as the coach of Emma McKeon, Australian's most decorated Olympian, and the former coach of triple Olympic gold medallist Stephanie Rice. Michael has coached at five Olympics, getting swimmers to the podium at every summer Olympics from 2008 to 2020.

Prior to moving to Griffith University in 2017 Michael was the head coach of St Peters Western Swim Club for 14 years, one of the highest performing swim clubs in Australia.

Michael's accolades include receiving the Australian Sports Medal in 2000, recognising him as a "Long Serving ASI Committee Member". In 2010 Michael was awarded a Medal of the Order of Australia for "service to swimming as a competitor and coach". In 2015 he was named Coach of the Year at the Australian Institute of Sport Awards. In 2021 he was the recipient of the "Coach of the Best Female Swimmer" award from FINA and "Olympic Program Coach of the Year" award from Swimming Australia.

Prior to his life as a coach Michael was a swimmer at the AIS, competing at the Brisbane Commonwealth Games in 1982.



NBA Academy and Intersections with Sports Technology

THURSDAY 27th OCTOBER 2022, 1:00PM–2:00PM AEDT

NBA Academy is a year-round elite basketball development program that provides top high school-age athletes from outside the U.S. with a holistic approach to player development and a predictable pathway to maximize their potential. The NBA Academy program includes four academies across Australia, India, Mexico, and Senegal. NBA Academy builds on the league's other international basketball development programs, including Basketball Without Borders (BWB), that has seen more than 90 former campers join an NBA team. 13 NBA Academy participants played, are playing, or have signed to play professionally. With a background working with elite athletes at the Scottish Institute of Sport, ASPIRE Academy, and the University of Oregon, Andrew Murray is well versed in the effective deployment of sports science across the development pathway. In this presentation, Andrew will provide STARS with his approach to athlete development, and how various sports technologies are being deployed and / or trialled in the NBA Academy.



PRESENTED BY:



Dr Andrew
Murray

Andrew Murray has been with the NBA for four years with the International Basketball Group. As the Head of International Basketball Performance he oversees many aspects of the NBA Academy system and contributes to domestic operations through projects such as the Draft Combine, NBA Launchpad, and working with G-League Ignite. Prior to the NBA, Andrew was the Director of Performance & Sport Science at the University of Oregon. Andrew also spent two years at ASPIRE and five years at the Scottish Institute of Sport where he worked with Olympic athletes to provide Exercise Physiology support to world class athletes in team and individual sports across the athlete development pathway.



‘Sport Performance Optimisation’, Working with the Leaders in Sport to Support their Competitive Edge

THURSDAY 27th OCTOBER 2022, 4:00PM–5:00PM AEDT

The MIT Sports Lab collaborates with sports organisations around the world, from professional sports clubs, to leagues, federations, and governing bodies. Recent advances in data collection have rendered sports an ideal testing ground for new analyses and algorithms; this enables sports to serve as a controlled microcosm in which to explore broader societal issues. Yet those in the field may not have experience collaborating with academic institutions to solve organisational challenges.

To facilitate potential collaborations, the MIT Sports Lab has worked to refine a process over the years to help establish trust, identify organisational challenges, classify potential impact, then work with the organisation to determine those topics that could be “quick wins” whilst also providing steppingstones to more challenging research questions. They will share insights into their process as well as considerations and potential pitfalls.



PRESENTED BY:



Professor
Anette "Peko"
Hosoi

Anette "Peko" Hosoi is the associate dean of the MIT School of Engineering and Neil and Jane Pappalardo Professor of Mechanical Engineering with a joint appointment in the Department of Mathematics. In 2015, she co-founded the MIT Sports Lab with Christina Chase and serves as its faculty director. The MIT Sports Lab is a sports engineering program that seeks to improve athletic performance and advance the state of the art in research, equipment, and actionable insights to help support athletes in their goals to push the limits of human performance through collaborations between industry leaders, students, faculty, alumni, and start-ups.

Peko's research contributions lie at the juncture of nonlinear hydrodynamics, microfluidics, and bio-inspired design. She is a world leader in the study of the hydrodynamics of thin fluid films and in the nonlinear physical interaction of viscous fluids and deformable interfaces. A common theme in her work is the fundamental study of shape, kinematic, and rheological optimization of biological fluid systems for locomotion and their application to the emergent field of "soft robotics". A unique mixture of experimental work, numerical simulation, and theoretical analysis characterizes her work, and it combines elements of both engineering design and mathematical optimization. Her work is widely known and internationally respected by physicists, biologists, roboticists and applied mathematicians, as well as engineers, and is used to guide the engineering design of robotic swimmers, crawlers, burrowers and other mechanisms.

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When she is not in lab, she can be found at Highland Mountain Bike Park on her downhill rig, snowboarding in British Columbia or monitoring her Fantasy Football team.



PRESENTED BY:



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Could Coach Wellness and Personalised Health Intersect using Technology like InsideTracker?

FRIDAY 28th OCTOBER 2022, 9:00AM–10:00AM AEDT

There is little doubt that high performance coaching is stressful. Often coaches must balance the daily needs of their athletes, the demands of training and competition, the administration of their programs, international travel, sleepless nights, eating on the run, aggressive press conferences, and the occasional scandal. All these demands frequently see coaches neglect their own health and wellbeing which may end up compromising their own performance as coaches.

More generally, as humans seek ways to combat daily stress, many minds are turned to the opportunities that cutting-edge research and technology might provide. There's genuine interest in various biomarkers and how they might inform how people exercise, eat, sleep, and repeat – without the scourge of illness.

Trying to personalise interventions based on the various biological processes in each person is easier said than done. One company in the United States, InsideTracker, is making news with a unique offering in personalised health. The company is founded on combining rigorous, peer-reviewed science with cutting-edge technology that can provide individual personalised interventions based on biometric data. Founded in 2009 by experts in aging, genetics, and biometric data from Harvard, MIT, and Tufts, this presentation will discuss how the company can implement the latest science to provide individualised feedback, including recommendations on diet, exercise, and other lifestyle choices.

Could this kind of technology support high performance coach wellness?



PRESENTED BY:



Dr Gil Blander

Gil is internationally recognised for his research in the basic biology of aging and translating research discoveries into new ways of detecting and preventing age-related conditions. Gil is the founder and CSO of InsideTracker, where he leads a team of biology, nutrition, and exercise physiology experts, and data scientists. Gil has been featured in CNN Money, The New York Times, Forbes, Financial Times, and The Boston Globe to name a few.

Gil received a Ph.D. in biology from the Weizmann Institute of Science and completed his Post-Doctoral fellowship at MIT, before going on to found InsideTracker. InsideTracker was founded in 2009 by top scientists in the fields of aging, genetics, and biology from acclaimed universities including MIT, Harvard, and Tufts University. InsideTracker is a truly personalised nutrition and performance system. Their mission is to help people add years to their lives and life to their years by optimising their bodies from the inside out. By analysing your body's data, InsideTracker can give you a crystal clear picture of what's going on inside you, along with a science-backed action plan for improving your health and becoming your best self.

The InsideTracker platform tracks and analyses key biochemical and physiological markers, then applies sophisticated algorithms and large scientific databases to determine personalised optimal zones for each marker. InsideTracker's expert system offers science-driven nutrition and lifestyle interventions, which empower people to optimise their markers. When optimised, marker levels have been scientifically proven to increase vitality, improve athletic performance, and extend life.



Reimagining the Role of Technology: How Artificial Intelligence (AI) Technologies can Support the Performance Development of Amateur and Elite Sport Officials

FRIDAY 28th OCTOBER 2022, 11:00AM–12:00PM AEDT

Sport officials operate within settings that dynamically change and shift. While they gather, synthesise, and store experiences related to task, performer, and environmental constraints, their internal mental models of judgement and decision-making individually evolve as they perform in different contexts. However, while a large body of work in psychology and the behavioural economics sciences has attempted to capture the way humans make real-world decisions in laboratory contexts, there is a growing realisation among researchers, evaluators, and educational designers that quality performance measures improvement interventions cannot be understood outside of the context in which they occur. In this futuristic presentation, we put forward our vision of how artificial intelligence and machine learning technologies can unpack and authentically support the performance development of sport officials in areas related to decision-making, field positioning, communication, and physical/mental preparedness.



PRESENTED BY:



Dr Kath
O'Brien

Dr Katherine (Kath) O'Brien is an educational leader. Her research seeks to understand how to improve the operational environment and performance practices of sport officials. Using digital technology such as 360-video and artificial intelligence (AI), Kath's work has been nationally recognised for its impact in the sport development space. By replicating real-world experiences through 360-video and AI technologies, learners experience and interact with virtual content, providing a more authentic and vivid online learning experience. Data generated from broadcast vision and wearable technologies also provide Kath's research with a unique live testbed for incorporating advanced Machine Learning (ML) technologies into the restructuring of officiating performance parameters. Her work is creating a compelling new narrative for how to design educational environments that provide choice, student-centred learning, active involvement, and a sense of performance presence. Kath recently won an Australian University Award for Teaching Excellence, and her currently funded projects include examining the quality of educational pathways open to female sport officials, the creation of conversation profiles for enhancing the performance of elite sport referees' decision-making, and the impact of digital technology for learning hands-on, skill development in online university settings.



Proposed National Data Analytics and AI Hub

FRIDAY 28th OCTOBER 2022, 1:00PM–2:00PM AEDT

The demand from high performance sport to generate data in the field, rather than in the laboratory, has led to the development and deployment of more and more technology to collect data. Vast amounts of data from wearable sensors, instrumented equipment, and the increasing use of computer vision to extract more granular information from video, the competitive nature of high performance sport has seen an explosion in the amount of data that can be collected. However, there are compelling questions as to whether our capabilities to analyse and action data has kept pace with technology hardware development?

At least year's STARS, Professor Kerrie Mengersen from QUT's Centre for Data Science asked, "Is the time right for a National Sport Data Analytics Hub"? This year Kerrie joins us to discuss the progress made in creating a national sport data analytics and AI hub in collaboration high performance system partners, and to showcase some of the collaborative work undertaken with the Hub's partners.



PRESENTED BY:



Professor
Kerrie
Mengersen

Professor Kerrie Mengersen is an applied statistician with around 30 years of experience in areas of modelling and analysis of data in health and medicine, environment and ecology, biosecurity, business, and industry. She has developed close engagements with government and private organisations. As Director of QUT Centre for Data Science, Kerrie also links to experts in data science from other domains across the University and to other Centres of Data Science through our Australian Data Science Network.

In 2016 Professor Mengersen received two prestigious awards: the Statistical Society of Australia's Pitman Medal, the highest award presented by the Society and the first time it has been presented to a woman, and the Research Excellence award by the Cooperative Research Centre for Spatial Analysis (CRCSI).

In 2018 Professor Mengersen has been elected a Fellow of the Australian Academy of Science (AAS); a Fellow of the Academy of Social Sciences in Australia (ASSA); and an Invited Fellow of the Queensland Academy of Arts and Sciences (QAAS).



Is the Time Right for an ‘Athlete Entrepreneurship Program’?

FRIDAY 28th OCTOBER 2022, 4:00PM–5:00PM AEDT

Elite athletes spend an extraordinarily long time perfecting their craft, and mastering the various skills required to win. Along their journey, which can typically take over a decade, they test, they experiment, and they try different ideas. Is it beyond the realms of possibility that some of these athletes will stumble upon ideas that may have a commercial market? This session asks the question whether an ‘Athlete Entrepreneurship Program’ should be considered to enable athletes to work through a process of establishing whether their ideas might become the businesses of the future and importantly, where support might come from to fund ideas that show commercial promise.



PRESENTED BY:



Cameron
McKenzie-
McHarg

Cameron McKenzie-McHarg is a two-time Olympian and Olympic Medalist, having claimed Silver in the Rowing Men's Four at the 2008 Beijing Olympics.

At the age of 18 Cameron was recruited by the Western Bulldogs for the AFL. Cameron returned to rowing in 2001 with the goal of representing Australia at the Olympic Games. Cameron has rowed for Victoria and represented Australia at twelve world championships, winning multiple World Cup and World Championships medals. Cameron has also represented Australia at two Olympic Games; Beijing 2008 and London 2012, with his career highlight claiming Silver in the Men's Four at the Beijing Olympics.

Having spent 15 years as an elite athlete and 10 years working in the finance industry Cameron co-founded 776BC. 776BC works with the world's best athletes to create a range of specialised performance apparel for the water, road, and track that stands up to the toughest training programs.

776BC is the official apparel supplier and sponsor of Rowing Australia and the Australian Rowing Team.



Rhiannon
Green

Rhiannon Green first played AFL in high school and fell in love with the game. After playing for many years she competed in her first official season in the Victorian Amateurs Football Association. In her maiden season she won the premiership flag, the Premiership Best on Ground, her club's Best and Fairest, along with taking out the VAFA Best and Fairest. Rhiannon was also recruited to play in the VFLW after her first season.

In 2018 Rhiannon co-founded Player Armour. Player Armour is a new concept in athlete protection and injury prevention, allowing athletes to play harder, stay stronger, and enjoy their game even more. Pioneering the way for protection, Player Armour's unique silicone filled foot armour protects your toes and your upper foot, whilst at the same time improving kicking efficiency.



PRESENTED BY:



John Persico

John R Persico is a world-leading expert on Sports Technology, Sports Web 3.0, and "Future of Sports". John provides strategy, research, data analytics, and deep expertise to governments, international cities, major sports organizations, major events, sports investment funds, academies, and fast-growth sports innovators on how to thrive in new data-driven world economy of Sports, Media, Entertainment, Esports and Digital Health. John works alongside leading CIOs, CTOs, and technology executives on the digitization of sports -- with a real personal passion for artificial intelligence, video analytics, OTT, wellness and health, sponsorship, wearables, stadiums and venues, and youth sports talent identification/scouting with technology. John's mission is to accelerate the world's transition to the new sports economy.

John co-founded the Australian Sports Technology Conference. He founded the Sports Technology World Series, the world's largest professional network for sports technology professionals across 115 countries with 57,000 members. John is also an Adjunct Industry Fellow at Swinburne University, Sports Innovation Research Group, and was a winner of Young Melbourne Entrepreneur of the Year.

John previously worked and studied in investment banking, private equity, law, and management consulting.



Ben Sandhu

Ben Sandhu spent his career advising start-ups and accelerators in both the UK and Australia before joining Ida Sports. He is passionate about using business as a force for social change, most recently as Adjunct Professor at Monash University's Business School. He was a semi-professional cricketer who deeply understands the athlete experience, helping Ida land contracts with some of the US's largest sports retailers. Ben and the Ida team were recently accepted into the Trailblazer Venture Studio, a collaboration between the Billie-Jean King Foundation, the LA Dodgers, Elysian Park, and R?GA Ventures focusing on start-ups delivering change for female athletes.



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