جامعة الإمارات العربية المتحدة
United Arab Emirates University

UAEU

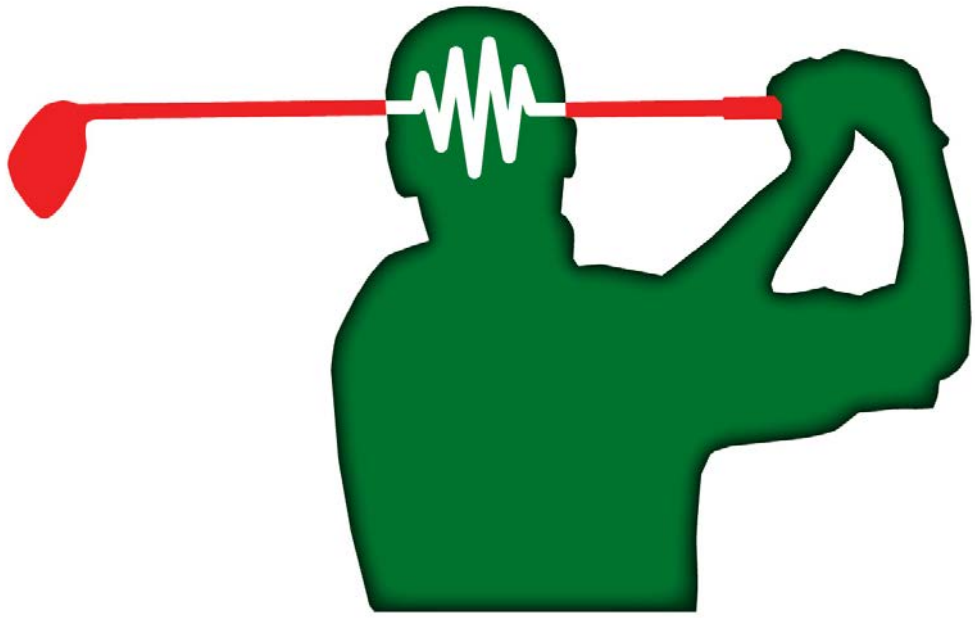
نادي العين للفروسية والرماية والجولف
AL AIN EQUESTRIAN, SHOOTING & GOLF CLUB

مجلس أبوظبي الرياضي
Abu Dhabi Sports Council

Under the Patronage of UAE University
and Abu Dhabi Sports Council

in collaboration with Equestrian, Shooting & Golf Club Al Ain

1st International Conference in



Sport Psychology and Embodied Cognition

24th-27th February 2014 - Maqam Campus, Al Ain, UAE

Note: live interpretation into Arabic will be provided

First International Conference in Sport Psychology and Embodied Cognition
UAE University – Abu Dhabi Sports Council
24th-27th February 2014, Emirate of Abu Dhabi, UAE

Please send any enquiry or request of participation to
Dr Max Cappuccio (UAE University, Philosophy Department):
m.lorenzo@uaeu.ac.ae

COGNITION AND SPORT SCIENCE, A WINNING INTERDISCIPLINARY TEAMWORK APPROACH

This academic conference aims at exploring various important motifs of convergence between the empirical studies of sport psychology and the embodied approach to the cognitive sciences. It will offer a unique occasion of interdisciplinary collaboration, the first of this kind, and foster opportunities of reciprocal learning between theoretical and applied sport scientists, exercise and performance psychologists, cognitive neuroscientists, psycholinguists, philosophers of mind, phenomenologists, and practitioners who work in the sport environment, including coaches, trainers, and athletes of various disciplines.

Embodied cognition theory offers the most suitable paradigm to pursue this integration and cross-disciplinary insemination: successful sport psychologists recognize that the results and the models of embodied cognitive science can allow them develop more effective training methods; reciprocally, attentive cognitive scientists can't overlook sport and exercise psychology, as this field is one of the richest terrains for empirical exploration, experimental discovery, and epistemological validation of models and theories. Cooperation between these two fields promises immediate and tangible translational benefits, as it allows proving the correctness of the theoretical models by testing how effectively they can improve the athletes agonistic results; at the same time, it raises the epistemological value of sport science, proving how the empirical study of athletic performance can inspire and validate new explanatory models of sensorimotor capabilities, control, attention, memory, and language-action interfaces. Sports can provide invaluable insights for the sciences of mind, telling how skills are actually enacted and controlled, through the body, defining dynamical boundaries between mind and world.

THE HOTTEST CONFERENCE OF THE WINTER

This four-day long conference, co-organized and sponsor by UAE University (College of Humanities and Social Sciences and College of Education) and by Abu Dhabi Sports Council, is presumably going to be the hottest of the Winter (up to 25-30 degrees Celsius): it will be held in the Emirate of Abu Dhabi, in a unique landscape framed by the desert dunes, the shores of the Arabian Gulf, and the most futuristic skyscrapers: the first two days (February 24th-25th) will be dedicated to

research themes and theory of the sport sciences, while the remaining two days (Februrary 26th and 27th) will focus on applied issues related to training and coaching. The conference will take place in the brand new state-of-the-art campus of UAE University, the top ranking academic institution of the Gulf region, situated in the ancient oasis city of Al Ain. Al Ain is just 1.5 hour by car from the city of Abu Dhabi, the modern capital of the United Arab Emirates, and from the multicultural and trendy metropolis of Dubai.

ABSTRACT SUBMISSION FOR A PAPER PRESENTATION

Researchers, scholars, and practitionners in the relevant disciplines have been invited to contribute a talk. The program includes the paper presentations by the keynote speakers and the other invited researchers, multiple sessions for submitted papers presentation, testimonies and reports by expert practitioners, interdisciplinary roundtables, and an interactive demonstrative session on the sporting field.

The topics of the talks will include, but will not be limited, to:

- The definition of skill. Is a skill just a potential for unreflective intelligent actions? Why and when are skillful performances damaged by self-monitoring? Are expert performers always mindless? Are mindful performers always disadvantaged?
- What is mindfulness? Does attentive presence essentially imply a representational modality of cognition (contextual, based on correspondence conditions), or it is underpinned by another, more fundamental form of bodily awareness?
- The paradigm of choking under pressure as paralysis-by-analysis versus the other explanatory models (cognitive overload and distraction theories). Alternative or complementary accounts? What are the differences across different kinds of sports and motor tasks?
- What are the best training methodologies to improve active control, practical intelligence, and problem-solving capabilities on the sporting field? Are these reflective capabilities a constitutive part of the embodied skills, or rather a different kind of process externally added to performance in order to supervise and control it?
- Emotions, attention, and mental toughness: is adrenaline beneficial or disruptive to skillful performances? Is performance anxiety produced by the disturbance of purely cognitive/informational processes, or does it testify to affectivity implicit in embodied intelligence?
- Pre-performance routines and ritual-like gestures: how do they work and how do they help athletes to familiarize with novel or stressful circumstances?
- Preparatory speeches and motivational talks: What is the interface of language and action? Both the received verbal commands and the self-generated declarative descriptions of the tasks can facilitate better performances, but they can also be disruptive for the execution of fluid movements. Why?
- Visualization and motor imagery: is covert simulation of motor performances always beneficial to athletic preparation? How do visualization skills and executive motor competences interact?

* * * * *

Please send any enquiry or request of participation to Dr Max Cappuccio (UAEU):
m.lorenzo@uaeu.ac.ae

Note: live interpretation into Arabic will be provided

CREDITS

The *First International Conference in Sport Psychology and Embodied Cognition* is the outcome of a partnership between UAE University, Abu Dhabi Sports Council, and Equestrian, Shooting & Golf Club Al Ain. The scientific project falls under the umbrella of two new educational programs offered by UAE University: the new Interdisciplinary Program in Cognitive Science and the new program in Physical Education. The conference is held under the patronage of Abu Dhabi Sports Council, the Dean of the College of Humanities and Social Sciences, Prof. Saif Salim Al-Qaydi, and the Dean of the College of Education, Prof. Steven Bossert.

Scientific board:
Massimiliano Cappuccio (chair); Khalid Abdulnasser Al Maflahi (Abu Dhabi Sports Council); Nasser Al-Ameri; Mohamed Al-Ghorani; Fadwa Al-Mughairbi; Jamal Al-Nuaimi; Sami Boudelaa; Roland Carlstedt; Tom Carr; Tom Loney; William McDonald; Manfred Malzahn; Thomas Patrick; Gareth Picknell; Mark Scott.

Organizing committee:
Massimiliano Cappuccio (chair); Nasser Al-Ameri; Mohamed Al-Ghorani; Khalid Abdulnasser Al-Maflahi (Abu Dhabi Sport Council); Ahmed Al-Qubaisi (Abu Dhabi Sport Council); Fadwa Al-Mughairbi; Noora Al-Tenaiji; Ateeq Jakka; William McDonald; Ahmed Osman; Aysha Musabbeh.

List of speakers (by provenience)

UAE University Faculty Members:
1. Nasser Al-Ameri (UAEU, Physical Education Dept. Chair);
2. Fadwa Al-Mughairbi (UAEU, Psychology Dept.);
3. Sahla Azzi (UAEU, Linguistics Dept.);
4. Sami Boudelaa (UAEU, Linguistics Dept.);
5. Tom Loney (UAEU, College of Medicine);
6. Mark Scott (UAEU, Linguistics Dept.).

The chairmen:
7. Mohamed Al-Ghorani (UAEU, Psychology & Counseling Dept. Chair);
8. Massimiliano Cappuccio (UAEU, Philosophy Dept.);
9. William McDonald (UAEU, Philosophy Dept. Chair);
10. Manfred Malzahn (UAEU, English Literature Dept.).

UAE residents:
11. Tom Buchanan (AESGC, Al Ain);
12. Fabio Cannavaro (Al Ahli Club, Dubai);
13. Caren Diehl (Up And Running, Dubai);
14. Tadhg MacIntyre (University of Limerick, Dubai);
15. Fraser McLaughlan (AESGC, Al Ain);
16. Martin Kramar (University of Middlesex & Healthcare City, Dubai);
17. Gareth Picknell (UAE Armed Forces, Abu Dhabi).

From Qatar:

18. Matthew Cullen (Aspire, Doha);
19. Thomas Patrick (Aspetar, Doha);
20. Nektarios Stavrou (Aspetar, Doha).

From Overseas:

21. Benjamin Aguda (Memphis, USA);
22. Roland A Carlstedt (American Board of Sport Psychology & Harvard Medical School, USA);
23. Tom Carr (Michigan State, USA);
24. Alberto Cei (CONI & Tor Vergata Italy);
25. Dan Hutto (Wollongong, Australia);
26. Jesus Ilundain (Linfield College, USA);
27. Mauro Maldonato (Basilicata, Italy);
28. David L Mann (Vrije University, Holland);
29. Albert Newen (Bochum, Germany);
30. Zuzanna Rucinska (Hertfordshire, UK).

Note: live interpretation into Arabic will be provided

CONFERENCE PROGRAM - First Part (Maqam Campus, Al Ain), February 24th and 25th:
"Embodied Cognition and Sport Psychology. Theoretical perspectives and Scientific Research"

Day1 - Monday 24th February. Venue: CIT Building Male Side Auditorium

"25 Years of Applied Sport Psychology" – Introductory Session and Opening Ceremony

Chairman: William McDonald (UAEU, Philosophy, Chair)

8.00-9.00 Registration and preparation

9.00-9.20 Official introduction in Arabic (reader: Nasra al Rahma);
Salutation by the Dean of the College of Humanities and Social Sciences, Saif Salim Al-Qaydi

9.20-10.00 Keynote: Roland Carlstedt (American Board of Sport Psychology and Harvard Medical School, USA) - *The Theory of Critical Moments and Athlete's Profile Model of Peak Psychological Performance: A Mind-Body, Biomarker-Based Explanatory and Investigative Framework with Links to Embodied Cognition*

"Body, Experience, and Skills" - Cognitive Science and Philosophy of Mind session

Chairman: William McDonald (UAEU, Philosophy, Chair)

10.00-10.40 Keynote: Dan Hutto (Wollongong, Australia)
Winning Minds: Radically Enactive Cognition and Sport Psychology

10.40-11.20 Coffee break and poster session

11.20-12.00 Keynote: Albert Newen (Bochum, Germany)
Knowledge and sport abilities. Types of knowledge and their interdependencies

12.00-12.40 Jesús Ilundáin-Agurruza (Linfield College, USA)
From Clumsy Failure to Skillful Fluency: A phenomenological analysis of and Eastern solution to sport's choking effect

12.40-14.00 Lunch break

"Research on the Field: Golfers Minds in Action I" – Theoretical session

Chairman: Massimiliano Cappuccio (UAEU, Philosophy)

14.00-14.40 Keynote: Tom Carr (Michigan State, USA)
Strengths and weaknesses of reflection as a guide to action: Pressure assails performance in multiple ways

14.40-15.10 Tadhg MacIntyre (University of Limerick, Republic of Ireland)
Visualization, Simulation and Action: Lessons for Sport from Neuroscience

15.10-15.30 Bus transfer to Golf Club

"Research on the Field: Golfers Minds in Action II" – Practical and demonstrative session

15.30-15.40 Introduction and salutation of the representatives of Golf Club

15.40-16.10 Tom Buchanan & Fraser McLaughlan (AESGC, Al Ain)
Theoretical golf session

16.10-16.30 Tea Break

16.30-17.10 Tom Buchanan & Fraser McLaughlan (AESGC, Al Ain)
Demonstrative golf session

17.10-18.10 Tom Buchanan & Fraser McLaughlan (AESGC, Al Ain)
Practical golf session on the driving range

18.20-19.00 Bus transfer to Hotel Mercure Grand Jabel Hafeet

19.30-21.30 Social dinner at Eden Rock on Terrace Restaurant, Hotel Mercure

Day 2 - Tuesday 25th February. Venue: CIT Building Male Side Auditorium

"Research Trends in Sport Psychology" – Theoretical Sport Psychology Session

Chairman: Mohamed Al Ghorani (UAEU, Psychology and Counseling, Chair)

9.00-9.10 Salutation by the Dean of the College of Education, Steven Bossert

9.10-9.50 Keynote: Thomas Patrick (Aspetar, Qatar)
Using Lived Experience In Optimizing Athletic Development

9.50-10.30 Keynote: Alberto Cei (Tor Vergata and CONI, Italy)
Improving Concentration in Football Teams

10.30-11.00 Caren Diehl (Up And Running, Dubai)
Sport Psychology and Embodied Cognition: Emotional Intelligence in Sports from theory to intervention

11.00-11.20 Coffee break

11.20-12.00 Keynote: Gareth Picknell (UAE Armed Forces, Abu Dhabi)
See is believing: A justification for the inclusion of PETTLEP imagery with a Modern Pentathlete

12.00-12.30 David Mann (Vrije University of Amsterdam, Holland)
Do as I do, not as I say: Elite athletes and their awareness of the visually-guided actions they perform

12.30-13.50 Lunch break

"Science, Sport, and the Mind" - Interdisciplinary Session

Chairman: Manfred Malzahn (UAEU, English Literature)

13.50-14.00 Manfred Malzahn (UAEU, English Literature)
Sport and Life Through Finite Provinces of Meaning

14.00-14.40 Keynote: Mauro Maldonato (Basilicata, Italy)
The Predictive Brain and Anticipation in Sport

14.40-15.10 Mark Scott (UAEU, Linguistics)
Forward Models in Speech and Sport

15.10-15.40 Fadwa Al Mughairbi (UAEU, Psychology and counseling)
Sport it Out: An Overview of the Effect of Sports on Mental Health

15.40-16.10 Tom Loney (UAEU, Medicine and Health Science College)
Beyond Smoke and mirrors: The power of the placebo effect and personal beliefs in elite sports performance

16.10-16.30 Tea break

Submitted papers session

Chairman: Dan Hutto (Wollongong)

16.30-17.00 Benjamin Aguda (Memphis, USA)
Grounded cognition and choking: Shared neural resources in simulation

17.00-17.30 Zuzanna Rucinska (Hertfordshire, UK)
Radically Enacted Creativity in Sports

17.30-18.00 Sahla Azzi (UAEU, Linguistics)
Epistemology and research methodology in sport studies: the impact of a multidisciplinary approach

18.10-18.30 Bus transfer to Hotel Rotana and (19.50) to Hotel Hilton

20.00-22.00 Dinner for the guest speakers at Flavors Restaurant, Hotel Hilton

CONFERENCE PROGRAM - Second Part (Maqam Campus, Al Ain), February 26th and 27th:
"Sport Psychology for Coaches and Practitioners. An Applied Science to Improve Performances"

Day 3 - Wednesday 26th February. Venue: CIT Building Female Side Auditorium

Morning session: "Education to Sport: the Psychology of Young Players"

9.00-10.00 Registration and preparation
10.00-10.20 Official introduction in Arabic (reader: Nasra al Rahma);
Salutation by the representatives of Abu Dhabi Sport Council
10.20-10.50 Foreword in Arabic by Nasser Alameri (UAEU, Physical Education, Chair)
ما هو علم النفس الرياضي؟
10.50-11.30 Keynote: Roland Carlstedt (American Board of Sport Psychology and Harvard Medical School, USA) - *Evidence-Based Athlete Assessment and Mental Training for Sport Psychologists, Coaches and Athletes: Practical and User-Friendly Approaches to the Mental Game*

11.30-11.50 Coffee break

11.50-12.30 Keynote: Thomas Patrick (Aspetar, Qatar)
Optimizing Youth Development in the GCC: Lessons from Qatar
12.30-13.10 Keynote: Tom Carr (Michigan State, USA)
Practicing, Playing, and Playing Well Under Pressure: What Do Cognitive and Sport Psychology Have to Say to Coaches and Athletes?

13.10-14.30 Lunch break

Afternoon session: "Mind in Sport, Sport in Mind: Attention, Emotions, and Choking effect"

14.30-15.10 Keynote: Martin Kramar (Health Call Clinic and Middlesex University, Dubai)
The Effects of Mental Interventions on Competitive Anxiety, Stress Resistance, Cardiovascular Activity and Sport Performance of College Athletes
15.10-15.50 Keynote: David L Mann (Vrije University of Amsterdam, Holland)
Strategies for the Implicit Training of Visual-motor Skills

15.50-16.10 Tea break

16.10-16.30 Albert Newen (Bochum, Germany)
Self-deception in professional sports: How to stay away from doping
16.30-16.50 Jesús Ilundáin-Agurruza (Linfield College, USA)
Beyond Expert Failure: A Comparative Phenomenological Analysis of Sport's Choking Effect
16.50-17.10 Dan Hutto (Wollongong, Australia)
Expert Thinking about Expert Sport Performances: Lessons from Embodied Cognitive Science

"Interview with testimonial" special session

17.10-18.00 *TBA*

18.10-18.30 Bus transfer to Hotel Rotana
19.30-21.30 Social dinner at Min Zaman Restaurant, Hotel Rotana

Day 4 - Thursday 27th. Venue: CIT Building Female Side Auditorium

Morning session: "Sport Psychology in UAE and in the Gulf: Challenges and Opportunities"

9.00-9.10 Introduction to the last day of the conference

9.10-9.50 Keynote: Tadhg MacIntyre (University of Limerick, Republic of Ireland)
Saving Lives on the Road: A Strength-Based Approach to Understanding Driver Fatigue

9.50-10.30 Keynote: Caren Diehl (Up And Running, Dubai)
Applied Sport Psychology: Peak Performance Every Time

10.30-11.00 Gareth Picknell (UAE Armed Forces, Abu Dhabi)
Where are we now and where are we going? A review of coaching practices and approaches to knowledge attainment in sport

11.00-11.30 Coffee break and survey time

11.30-12.10 Keynote: Matthew Cullen (Aspire, Qatar)
The Psychological Characteristics of Developing Excellence: Academy Coaches retrospective reflections on elite youth athletes

12.10-13.10 Roundtable "Why We Need a Science of Sport"
With: AD Sport Council representatives; Roland Carlstedt (Harvard Medical School); Thomas Patrick (Aspetar); Tadhg MacIntyre (University of Limerick); Gareth Picknell (UAE Armed Forces); Caren Diehl (Up And Running); Matthew Cullen (Aspire); Martin Kramar (University of Middlesex).

13.10-13.30 Open questions by the audience and conclusive remarks by Abu Dhabi Sports Council representatives and conference organizers

13.30-13.40 Award ceremony and conclusion of the conference

13.40-15.00 Buffet lunch and goodbye to the speakers

Collected titles and abstracts

Nasser Al Ameri (UAE University, Department of Physical Education, Chair)

ما هو علم النفس الرياضي؟ [Day 3, 10:20]

انطلاقا من تجربتي كمستشار سابق للأندية الرياضية المحلية، يتناول بحثي هذا معلومات عن منافع علم النفس الرياضي. و من ضمن النقاط الهامة التي يتضنمها العرض: مكونات علم النفس الرياضي و أفرعه، و قياس الرياضة كأداء، و كذلك أهمية الاتقان في تدريب العقل للحصول على أداء أفضل. و يعرض البحث أيضا بعض الإيضاحات للمهتمين حول فرص التدريب والعمل في مجالي البحث وتطبيقات علم النفس الرياضي، وحول أهمية التمييز بين علماء النفس الرياضيين من جهة و المستشارين في علم النفس الرياضي من جهة أخرى.

Fadwa Al Mughairbi (UAEU, Department of Psychology and Counseling)

***Sport it Out: An Overview of the Effect of Sports on Mental Health* [Day 2, 15:10]**

Do you have mild depression? Are you stressed? Or may be angry? Then sport it out! Sometimes it is complicated, but sometimes it is actually that simple.

The relationship between sport activities and mental health have been documented in the literature. Previous studies had showed that group exercises increased happiness in students and lead to mental wellbeing (Gatab & Pirhayti, 2012). Furthermore, research data suggest that physical activity and team sports reduce depressive symptoms in adolescents with moderate to high depression symptoms (Sabisto, O'Loughlin, Brunet, Chaito, Low, Barnett, and O'Loughlin, 2013). An overview of the relationship between physical sports and psychological wellbeing will be presented, with an emphasis of the role of certain neurotransmitters such as Dopamine on stress reduction and mental health.

Massimiliano L. Cappuccio & Sami Boudelaa

***Beyond the speed-accuracy tradeoff. Sporting skills in unfamiliar scenarios* [TBA]**

Various experiments show that asking an expert athlete to perform as fast as possible without sacrificing accuracy doesn't negatively affect his/her performances: in fact, the typical speed-accuracy trade-off is experienced only by novices. In turn, the performances of expert athletes are negatively affected when they are asked to take as much time as they want to perform. These data are often used to argue that choking under pressure is the effect of self-monitoring, not of cognitive overload, as extra time would apparently offer to both novices and experts more computational resources for planning and motor control. However, in all of these experiments, the temporal factor is merely instrumental to measure the variation of the performance level (or the lack thereof); I propose a different experimental setting in which time is itself a structural component of the performance level, defined as the athlete's capability to quickly adapt to unfamiliar or problematic environments. In the new experimental setting, skill level is not measured as mere capability to replicate ideal actions in standardized scenarios, but also as problem-solving capability required to effectively deal with atypical scenarios. I will argue that, even if it is true that self-monitoring can paralyze expert skills in standardized scenarios, this is only part of the story, because self-monitoring can well be a constitutive component of certain sporting skills, especially when they must be deployed to efficaciously deal with atypical and problematic scenarios. The main difference between these two kinds of scenario is that, in the first one self-monitoring constitutes an artificially imposed meta-task, one that interferes with fluid performances, while in the second self-monitoring is a legitimate part of the task itself, one that is required for the efficacious expression of expert skills.

Roland A. Carlstedt (American Board of Sport Psychology & Harvard Medical School/McLean Hospital)

1) The Theory of Critical Moments and Athlete's Profile Model of Peak Psychological Performance: A Mind-Body, Biomarker-Based Explanatory and Investigative Framework with Links to Embodied Cognition **[Day 1, 9:20]**

The Theory of Critical Moments and allied Athlete's Profile model provide an individual-differences-based explanatory framework and ecological, mind-body/biomarker-based research paradigm, to account for and investigate performance phenomena, including zone or flow states, choking and peak psychological performance under competitive pressure (mental toughness). While such response tendencies have been extensively researched their neuropsychophysiological mediating dynamics have yet to be adequately delineated especially in the context of actual official competition, in real time, using instrumentation supported methodological approaches to isolate and quantify brain-mind-heart-motor response relationships during critical moments of competition. This presentation explicates the Theory of Critical Moments including its macro and micro sport-specific psychological performance statistical procedures that quantify psychological pressure metrics over the course of an entire competition. Thereafter, the Athlete's Profile (AP) model and its neurocognitive/cognitive components will be discussed in relationship to specific constellations of three crucial AP performance mediating primary higher order traits and behaviors that have been shown to reliably predict differential critical moment performance (hypnotic susceptibility, neuroticism and repressive coping). Specific constellations of these measure are associated with distinct brain and heart rate variability (HRV) responses and patterns at baseline, during routine and critical moments of competition. The aforementioned models will be further elucidated within an ecological athlete assessment, mental training and intervention efficacy testing procedural and methodological framework and an investigative approach that takes the mental game beyond theoretical, allowing for high evidentiary hypothesis testing and analytics within the realm of real competition. First time data from a long line of research on these models will be presented and discussed.

2) Evidence-Based Athlete Assessment and Mental Training for Sport Psychologists, Coaches and Athletes: Practical and User-Friendly Approaches to the Mental Game **[Day 3, 10:50]**

Traditional and even most current approaches to the mental game, including the psychological evaluation of athletes and mental training are inadequate and have not kept up with an advancing knowledge and research base. They also fail to incorporate advanced (but user-friendly) technology and biomarker-based approaches that are crucial to serious and credible applied sport psychology. In this presentation I will discuss and demonstrate the American Board of Sport Psychology-Carlstedt Protocol (ABSP-CP) a validated, systematic and comprehensive approach to the mental game. The ABSP-CP is based on over 25 years of research. Its origins can be traced to my time on the professional tennis tours and subsequent graduate and post-graduate research of mind-body-motor responses of athletes during competition, especially critical moments. Key psychological factors that impact peak performance will be introduced to attendees. They comprise the so-called Athlete's Profile (AP), measures that reliably predict who is more or less likely to rise to the occasion or falter during critical moments of competition. The AP is the first step in the athlete evaluation process. It is followed by Mind-Body response testing off the playing field. Thereafter, various sport-specific psychological pressure response testing is carried out on the playing field (to date the ABSP-CP has been applied to soccer, tennis, golf, basketball, rugby, volleyball, track & field, bowling, equestrian, cricket, baseball, cross-fit, wrestling, martial arts and weight-lifting). Subsequent to initial testing athletes' mind-body responding is monitored and analyzed on the playing field, in real-time and during time-outs (using instrumentation including telemetry/wireless systems). After a pre-mental training phase, mental training is initiated and tested for effectiveness during training and actual competition. Psychological performance

statistics serve as outcome measures to determine to what extent an athlete is exhibiting ideal performance responses and whether mental training is working. This presentation will include demonstrations and is designed to illuminate the athlete psychological assessment and mental training process within an accountability model that is designed to demystify applied sport psychology (bring it to life in a practical and understandable manner). Coaches and athletes alike will gain new insight into high level approaches to applied sport psychology that are embodied in the ABSP-CP. Collaborative opportunities will be discussed.

Tom H. Carr (Michigan State University)

1) Strengths and weaknesses of reflection as a guide to action: Pressure assails performance in multiple ways **[Day 1, 14:00]**

What is the role of reflection in the performance of a goal-directed action: To think or not to think, when, and about what? Golfers debate whether, when a shot really matters, they should bear down and concentrate on the action, or relax and go with the flow. Basketball players argue with coaches about what to do during practice, as in this pithy exchange from the movie *Hoosiers*: A player says "When do we scrimmage?" The coach says "We don't." The player says "Aw, that ain't no fun." The coach says "My practices are not designed for your enjoyment." Football players squirm during film sessions when forced to view, remember, and analyze the mistakes they made in the last game. These common sports occurrences raise many questions about the nature of skilled performance, its development, maintenance, and improvement, the conditions under which it is more or less likely to be maximized, and the impact of pressure. Evidence from mental chronometry, self report, and neuroimaging suggests that correct answers to these questions will vary greatly depending on the cognitive and functional architectures of the skill (different stories for different skills); the amount of skill-relevant knowledge and practice possessed by the performer (different stories for different levels of experience); and the performer's facility with attentional control and emotional regulation (different stories for different amounts of experience under the particular conditions of performance, different degrees of "performance anxiety", different motivational orientations, and different ages). I will argue that all this complexity arises because of interactions among three simultaneous impacts that pressure exerts on the cognitive, motivational, and emotional processes of the performer: (1) increased competition for working memory created by consciously-entertained thoughts about the situation and its consequences; (2) increased attention to task detail, aimed (sometimes inappropriately) at ensuring proper step-by-step planning and execution of real-time performance; and (3) excessive motivation and over-arousal, which together reduce attentional capacities, increase aversion to loss, and eventually promote task disengagement. If this argument is correct, then there is no simple account of the role of reflection in guiding action. At the very least, one must ask what counts as reflection and one must talk about reflection when, on what, and by whom in order to build and apply an adequate theory.

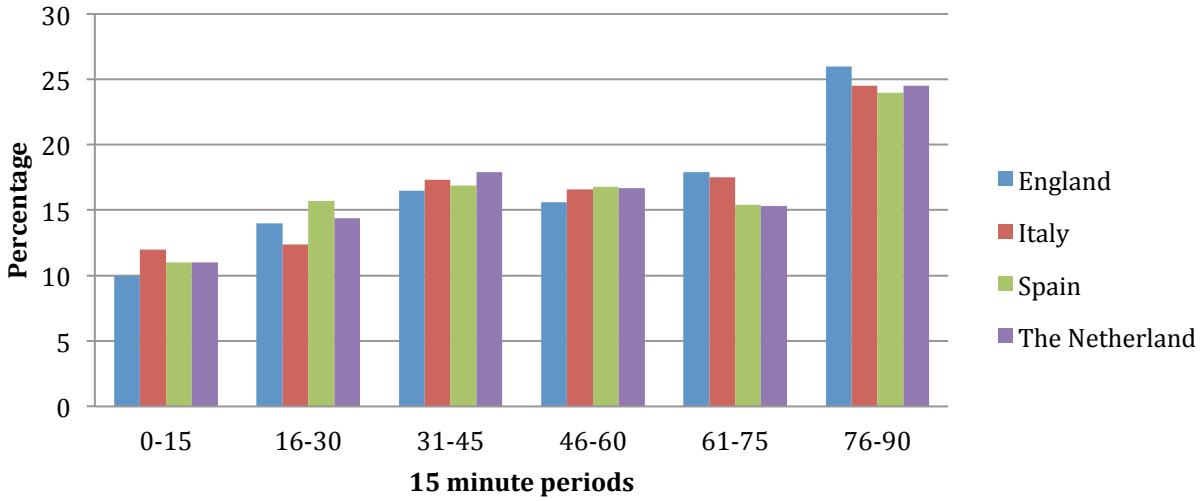
2) Practicing, Playing, and Playing Well Under Pressure: What Do Cognitive and Sport Psychology Have to Say to Coaches and Athletes? **[Day 3, 12:30]**

Athletic performance requires effective practice to develop skills, knowledge, and wisdom. Success in competition depends on automatic deployment of well-practiced skills when circumstances are routine, on flexible, creative, and sometimes thoughtful adaptation of one's skills when circumstances are uncommon, and the wisdom to know the difference. Golfers debate whether, when a shot really matters, they should bear down and concentrate, or relax and go with the flow. Basketball players argue with coaches about what to do during practice in order to improve, as in this pithy exchange from the movie *Hoosiers*: A player says "When do we scrimmage?" The coach says "We don't." The player says "Aw, that ain't no fun." The coach says

"My practices are not designed for your enjoyment." Football players squirm during film sessions when forced to watch, reflect on, and analyze the mistakes they made in the last game. To think or not to think, when, and about what? Cognitive and sport psychology has made progress on these questions, and this talk discusses some of that progress.

Alberto Cei (Italian National Olympic Committee, University Tor Vergata Roma)
Improving concentration in football teams **[Day 2, 9:50]**
Main issues in football talking about attention are: (a) how can measure on the pitch the team focus and (b) how can understand that the team has focused during the different match periods. This study proposes to use as concentration index the goal distribution, dividing the football match in 6 periods of 15 minutes each one. The study has analyzed three different championships, first League, from 2006 to 2009 in four European countries as England, Italy, Spain and The Netherland. The data collected shown that there are no differences among all the four championships, most of the goals are scored in the second half-time and mainly in the last 30 minutes (Figure 1). Concerning the Italian Serie A when the match finish with a draw or with one or two goals more of the opponents, the goals are again mainly scored in the last 30 minutes of the games. The study has shown that the *team concentration index* could be defined by the reduction of goals scored by the opponent team in the last time period. Example of specific Italian Serie A teams are reported to show the relevance of the goal frequency, scored in the last period of the match, on the final results.

Figure 1. Goals scored in different time periods during the football matches (2006-2009) in first League



Matthew Cullen (Aspire, Qatar)
The Psychological Characteristics of Developing Excellence: Academy Coaches retrospective reflections on elite youth athletes **[Day 3, 11:30]**
The purpose of this investigation was to explore the psychological attributes that facilitate the successful development of elite youth athletes. In recognizing the role of psychological characteristics of developing excellence (PCDE's) in elite youth athletes the authors were able to highlight key psychological characteristics at certain developmental stages that support talent development. Data were collected from a sample of national level athletics coaches. The

participants (n = 6) in this study, ranging in age from 35 to 65 years, were all employed as national youth coaches. A semi-structured interview was employed to investigate coaches perceptions of the PCDE evidenced in their most successful student athlete to graduate from the national sports academy. The interview guide approach (Patton, 2002) was employed because it specifies topics to be covered during the interview but does not necessarily specify the exact sequencing of the questions. Pilot interviews were conducted with an Olympic coach and a national team youth football coach. Data were analysed using a thematic narrative approach. Psychological factors were highlighted by the coaches as key determinants of those who emerged as talented and maintained excellence. Key psychological factors were identified consistently among coaches. The PCDEs appear similar to those employed in other performance domains and support increasing empirical evidence of the development of psycho-behavioural characteristics as a core feature of talent development processes.

Caren Diehl

1) Sport Psychology and Embodied Cognition: Emotional Intelligence in Sports from theory to intervention **[Day 2, 10:30]**

This research tested the relationship between Emotional Intelligence (EI) and mood states prior to performance, using two culturally diverse populations and using a mixed methodology. The objective was to explore whether there were cultural differences between the two samples thereafter exploring whether EI can be enhanced in the two cultures, using a psychological skills intervention. Phase 1 and 2 used the BRUMS-32 (Terry et al., 1999), and the EIS (Schutte et al., 1998) to investigate mood states and EI among a sample of UK wheelchair basketball players, and Ghanaian footballers. In phase 3 interventions (goal-setting, self-talk, relaxation and daily diaries) were used to enhance EI in a sample of UK wheelchair basketball players (n = 6) and Ghanaian football players (n = 8). Self-talk questionnaires, daily diaries, EIS and structured interviews were used to collect data during the intervention. Phase 1 MANOVA results showed that EI was related to mood states associated with optimal and dysfunctional performance (Wilks' Lambda 8.7 = .01, F = 74.76, P = .00, Partial Eta2 = .99) and indicated that optimism and utilisation of emotions contributed significantly to variation in mood by performance. Phase 2, MANOVA results showed that EI was related to mood states associated with optimal and dysfunctional performance (Wilks' Lambda 8.40 = .50, F = 7.82, P < .00, Partial Eta2 = .50) and indicated that emotion regulation and appraisal of other's emotions contributed significantly to variations in mood by performance. When seen collectively, results of phase 1 and 2 indicate that there were cultural differences between the two populations.

Phase 3 indicated that in both populations EI could be enhanced for some of the participants. Culture could be an explanation for the intervention only partially working. The EI theory or the EIS may only work in the culture it was developed in as it did not seem to detect changes in the Ghanaian sample. This phase will be touched on briefly and expanded in the talk done in Abu Dhabi.

2) Applied Sport Psychology: Peak Performance Every Time **[Day 3, 9:50]**

This will cover the importance of sport psychology how it can give athletes and coaches that extra edge to improve performance and strive for excellence. This will cover techniques that will help to reach peak performance every time. The talk will also be linked in with the previous day so looking at the intervention study in more detail and how to enhance emotional intelligence and how it benefits players and coaches to become more aware of their EI.

Dan Hutto (University of Wollongong and University of Hertfordshire)

1) Winning Minds: Radically Enactive Cognition and Sport Psychology **[Day 1, 10:00]**

Thinking about one's actions while performing them is always detrimental to their performance. Even today this tenet remains a cherished assumption about how skills are acquired and deployed. Figuratively, the effect of such intellectual interference is described as a kind of *choking* (Beilock 2010; Beilock & Grey 2007). The claim that thinking brings on choking finds it most prominent support in the work of Hubert Dreyfus, a non-representationalist inspired by phenomenological tradition (Dreyfus & Dreyfus 1986; Dreyfus 2002). Yet many sport psychologists - who endorse traditional representationalism – also accept the cherished assumption, only they attempt to explain it differently. For example, Masters and Maxwell attempt to explicate is root causes in terms of implicit versus explicit learning, invoking the concept of *reinvestment* (Masters & Maxwell 2008; Masters, Maxwell & Eves 2009). Or, again, Gabriele Wulf seeks to explain it in terms of comparison of an internal versus external focus of attention (Wulf and Shu 2007; Stoate & Wulf, 2011). Others doubt its general truth. Thus it has been plausibly argued that it is possible to enhance embodied performances by thinking about them in the moment, if the context and ground for this is properly prepared (Cappuccio and Wheeler 2011).

Approaching the phenomena of choking from a radically enactive point of view that distinguishes basic mind from scaffolded minds, this paper reviews and questions the underlying assumptions of traditional representational models. Nevertheless, we make room for the possibility that occurent thinking about a performance might, if conditions are right, enhance it. By proposing an alternative model of the relation of basic and scaffolded minds, radical enactivism is well placed to enable us to conceive of cases where occurrent thinking about a performance might, under different conditions, enhance (as well as sometimes impair) performances. Mastery of in the moment thinking is itself the mastery of crucial skill. Our analysis will proceed in three consecutive steps: (1) a review and challenge of traditional assumptions of skill acquisition and skill performance on the issue of 'thinking while acting'; (2) explicating the distinction between of basic and scaffolded minds, as a way to introduce a more adequate understanding how 'thinking' might 'inform' 'acting' during performances; (3) consideration of how a radically embodied account of mind can allow for 'scaffolded performances' in which 'in the moment' representational strategies might be used in a performance enhancing way.

2) Expert Thinking about Expert Sport Performances: Lessons from Embodied Cognitive Science **[Day 3, 16:50]**

The sciences of mind have taken a decisively embodied turn. The fact that the mind is embodied in important and surprising ways is now beyond serious dispute. For this reason prominent sport scientists, such as Beilock, are actively calling for theories about expert performance to be informed by the embodied cognition framework. This presentation identifies some pivotal, but not obvious, lessons of direct practical importance for improving expert skill acquisition and athletic performance. It also shows how failure to fully embrace this new line of thinking, due to conceptual blindspots, can prevent a full appreciation of these important lessons.

Jesús Ilundáin-Agurruza (Linfield College)

1) From Clumsy Failure to Skillful Fluency: A phenomenological analysis of and Eastern solution to sport's choking effect **[Day 1, 12:00]**

Underperformance under stress is ubiquitous in many practices such as the arts (writer's block, a composer's or musical performer's equivalent), academic performance, and even sexual activity. But the paradigm is found in sports' choking effect, the focus of this study. Reduced to its simplest expression, in physically active endeavors it entails a failure to perform to levels already achieved when agents intend to be at their best. Choking is seen as a consequence of conscious self-

monitoring that the pressure to excel brings into play. Significant elements the psychological literature identifies are pressure or anxiety and self-awareness, and prevalent theories to account for this entail attentional views, viz., distraction, the self-focus approach, and cognitive overload (Baumeister, 1984; Beckmann et al., 2012). Thus, choking is often construed as a case where normally pre-reflective expert performance turns to novice-like rule following due to distraction or self-focus. The present study, while informed by said literature and views, proposes an alternate conceptual and phenomenological account and advances a solution derived from the Japanese arts of self-cultivation.

After the introductory overview, the second section diagnoses and describes the choking effect in sporting scenarios and formally comparable activities (martial and performing arts) via a phenomenological analysis vetted and illustrated by personal experiences and those found in sports literature. Consistent with Cappuccio's assessment that performance entails "flexibly adaptive dispositions and a holistic responsiveness to practical contexts," it argues that choking is dynamic and practice specific. Thus, underperformance manifests variously among different activities: visuomotor processes are crucial for biathlon competitors or archers, and putative solutions correspondingly on center quiet eye gaze (Vickers & Williams, 2007), but said analysis and solution are largely irrelevant for apnea freedivers or swimmers, while other factors such as level of strenuousness may be relevant (Hill, 2013). Once this variability is explored, a phenomenological analysis finds a common, underlying structure based on kinetic and kinesthetic invariants of our animate experience (Sheets-Johnstone, 2011). Close attention to the felt qualities of our moving bodies results in more discriminating analyses of the choking effect. The crucible of (under)performance lies in the recursively reflective and corporeal feedback of kinetic and kinesthetic resonances.

Enhancing the understanding of choking, a third section contrasts it with its performative and conceptual counterpart: exceptional performance. This expands on Dreyfus views on skill acquisition, where experts who successfully cope with difficult circumstances operate pre-reflectively (1988). In studies, expert ascription is often based on agents' longevity of engagement in the activity, with a mean spread of five to seven years. However the level of expertise begs for further refinement between those average individuals who become experts as a matter of course, given enough time and sufficient but ordinary talent, such as car drivers for Dreyfus, and the exceptional skills of elite athletes and similarly extraordinary and talented performers. While coping is applicable to the struggles most of us undergo trying to perform well, it fails to capture truly superior performances, which are better conceptualized in terms of *skillful fluency* (Ilundáin, 2014). Such fluency toggles between awareness and deliberate monitoring of one's actions and pre- reflective automated responses (Breivik, 2007), moving effortlessly but *intentionally* between attention and orientation (Ilundáin, 2014; Krein & Ilundáin, forthcoming). Dynamic systems theory, which sees the brain as a self-organized system governed by non-linear dynamical laws, further refines this analysis (Kelso, 1995). Exploring a key suggestion highlighted by the editor, whether the cognitive processing of expert motor skills is entirely pre-reflective in nature, or rather compatible with reflective self-awareness and attentive monitoring of one's own actions, this framework argues that the latter is true in cases of skillful fluency, but not all cases of expertise.

The fourth and last section proposes a remedy to choking based on Eastern views of the body and Japanese *do*—ways of self-cultivation such as various martial arts, the way of tea, or *Nõ* theatrical performance (Carter, 2008). The Japanese (and Chinese) conceptualize the body not as an ontologically static entity, a soma, but as an animate, organic, and dynamically holistic *bodymind* that is cultivated through practice (Yuasa, 1987; Nagatomo, 1992). Whereas choking is predicated on a dissonance where purported psychological stress results in somatic dysfunction, the praxis sought by the Japanese arts of self-cultivation expressly addresses this, and crucially finds indirect

ways of achieving a skillful fluency they refer to as *mushin*—no mind. Rather than mindlessness, it entails extreme concentration but no distraction (Takuan, 2002). It results in skilled individuals who achieve a greater unity and integration of bodily and mindful processes. This type of kinetic and kinesthetic awareness in perfect attunement even in chaotic circumstances serves to insightfully explore the hypothesis that Cappuccio forwards whereby explicit focus encumbers execution *only when* it is not an active component of the performance but which may benefit expert execution. Three types of texts inform this section: 1) Canonical Buddhist texts, e.g., Kukai's and Dogen's, whose keen phenomenological examination of psychosomatic phenomena favors bodily practice to achieve this integrated bodymind (Heisig et al., 2011). 2) Narratives such as Herrigel's account of his *Kyudo* apprenticeship (1999). And 3) *kenjutsu—swordsmanship*—manuals, combining Buddhist phenomenological insights and practical know-how into a diaphanous reflexive practice that epitomizes the main thrust of the argument (Chozan 2006), and validate findings that perceived control rather than self-focus copes best with choking (Otten, 2009). In conjunction with sections 2 and 3, this considers mindfulness, argues for a more fundamental bodily awareness where affectivity as embodied intelligence is central, and helps elucidate the role of active control in complicated situations. After all, a life and death duel is the ultimate testing ground where anxiety may result in a deadly choking, yet this martial tradition, within the context of *Bushido*, was predicated precisely on successfully handling such scenario.

2) Beyond Expert Failure: A Comparative Phenomenological Analysis of Sport's Choking Effect **[Day 3, 16:30]**

Underperformance under stress is ubiquitous in art, academics, and even sexual activity. But the paradigm is expert sports' choking, the focus presently. Reduced to its simplest expression, it entails a failure to perform to levels *already* achieved. Choking is seen as a consequence of conscious self-monitoring that the pressure to excel brings into play, and is often construed as a case where normally pre-reflective expert performance turns to novice-like rule following. While informed by current literature, I propose an alternate phenomenological account and advance a solution derived from the Japanese arts of self-cultivation. Cognitive processing of expert motor skills is not entirely pre-reflective in nature as mainstream views posit. Rather skillful performance is compatible with reflective self-awareness and attentive monitoring of one's own actions. The latter is true in cases of skillful fluency, but not all cases of expertise. Consistent with the idea that performance entails flexibly adaptive dispositions and a holistic responsiveness to practical contexts, it argues that choking is dynamic and practice specific. The phenomenological analysis finds a common, underlying structure composed of: body schematic and imagistic processes (Shaun Gallagher), dynamic layering at the fringe of consciousness (William James), proprioceptive, kinesthetic and kinetic dynamics (Maxine Sheets-Johnstone), memory and time processing, and emotion. Japanese *do* (arts of self-cultivation) are praxes that couple a keen analysis of phenomena of consciousness with indirect ways of achieving skillfully fluid performance *while* proposing a remedy. Usually, explicit focus encumbers execution. However, experts trained in these *ways* bring a kind of focus that, paradoxically, is an active component of the performance that benefits expert performance: *mushin*—no mind—undisturbed yet spontaneously fluid attention. *Kenjutsu*, swordsmanship, manuals combining Buddhist phenomenological insights and practical know-how inform this analysis. A sword duel is a real do-or-die situation likely to induce deadly choking, yet this martial tradition was predicated on successfully handling such scenario.

Tom Loney (UAEU, Institute of Public Health, College of Medicine and Health Sciences)
Beyond smoke and mirrors: The power of the placebo effect and personal beliefs in elite sports performance **[Day 2, 15:40]**
In the medical field, a placebo is an inert or physiologically ineffectual treatment (e.g. medication, sham surgery) designed to deceive patients in the control group of a clinical trial in order to minimise expectancy bias. Moreover, the placebo effect is a favourable outcome arising from the personal belief that one has received a beneficial treatment, which will improve a specific health outcome. Indeed, many patients receiving placebo medications report improvements in various subjective health conditions (e.g. pain, depression). In elite sport, the clinical term "placebo" is usually replaced by the expressions "personal beliefs", "superstitions", "rituals" or "luck". Sporting achievement is often dependent on an athlete's belief in their ability to attain peak performance during competition and one of the key ingredients for attaining peak performance in elite sport is an athlete's self-efficacy, viz. belief in their ability to succeed in specific situations (Bandura, 1977). As such, many athletes partake in unique pre-competition rituals that they believe are necessary for a successful performance. Placebo effects in the sporting context may also be implicated in the use of substances or technologies by athletes, which have no clear biological or mechanical basis (e.g. colourful strapping). Similarly, numerous athletes will wear specific items of clothing (e.g. "lucky" undergarments) that may serve as a psychological crutch by helping the athlete to cope with the cognitive demands of the situation and facilitate preparation for peak performance. When an athlete truly believes in a ritual (e.g. putting their left shoe on before their right), then there is a greater chance that when the athlete experiences success, the individual will attribute a proportion (or perhaps all) of the success to the specific ritual (e.g. order of dressing). Critical appraisal of the scientific evidence-base does not always support the purported and marketed claims of many widely used sports medicine equipment, supplements or indeed pre-competition rituals. Moreover, conducting a tightly controlled experiment to establish the true cause-effect relationship between wearing a "lucky" pair of socks believed to magically enhance athletic performance is fraught with serious methodological limitations. As long as the product or ritual is safe, does not cause any detrimental health effects and is not banned by the relevant sporting regulatory authority, then the placebo effect may provide the athlete with a psychological advantage that could possibly lead to improved athletic performance.

Martin Kramar (Health Clinic and Middlesex University Dubai)
The Effects of Mental Interventions on Competitive Anxiety, Stress Resistance, Cardiovascular Activity and Sport Performance of College Athletes **[Day 3, 14:30]**
This study investigated the implementation of mental training applications with college athletes. The purpose of the experimental study was to examine the effects of an eight-week mental training program on athletes' anxiety adjustment, stress resistance, cardiovascular regulation, and visualization learning ability in soccer related contests. A total of 56 college soccer players, were randomly assigned to either the experimental or the control group. The athletes completed measurements of cardiovascular activity prior to juggling and shooting contests as well as in the recovery phase after the contests. Posttest measurements included cold pressor tests and questionnaires such as the Sport Competition Anxiety Test (SCAT), the Competitive State Anxiety Inventory-2 (CSAI-2), the State-Trait Anger Expression Inventory (STAXI-2) and the Recovery-Stress Questionnaire for Athletes (RESTQ-Sport). The findings suggest that the mental training program generated positive effects on athletes in terms of optimizing cardiovascular activity prior to and after contests (lowering heart rate and activating baroreceptor reflex mechanism) and improving juggling skills (59% improvement in touches and 45% enhancement in time) in comparison to the pretest measurements. One of the recommendations stresses the importance of deep breathing in sport performance.

Tadhg MacIntyre

1) Visualization, Simulation and Action: Lessons for Sport from Neuroscience **[Day 1, 14:00]**

Visualization, the ability to simulate sensations, actions, and emotions is a remarkable human capacity that has been studied by sport psychologists for over seventy years. In the past two decades this mental simulation process has attracted attention from cognitive neuroscientists. From a neuroscientific perspective, visualization consists of brain states like those that arise during perception but occurs in the absence of the appropriate immediate sensory input. This evidence is fundamental to our understanding of the role of visualization in simulating action. Researchers in the 1990's theorized that the difference between visualization and movement is one of degree and not of kind. In other words, visualization is one of several cognitive simulation strategies that enable us to acquire new skills, refine learned skills, to rehearse strategy and to control our emotions. The latest neuroscience research indicates that visualization is more effective when combined with observation of (e.g., watching a golf putt) and executing movement (e.g., putting in golf), than it's use in isolation. Moreover, visualization is an integral process in movement preparation and this is illustrated by the role it has in pre-performance routines (e.g, for putting in golf). The latest recommendations on the use of visualization highlight that it can have negative consequences if not applied appropriately. However, visualization as a cognitive simulation process has been demonstrated to have a significant positive effect on the performance of skilled actions. It has been shown to be useful across a range of domains, sport skills, recovery from stroke, in pilot training and in training surgeons. Visualization has the capacity to enhance performance, restore function (e.g., use rehabilitation and recovery) and by implication speed up return to play (for injured players) and finally, enhance adherence to exercise programs, and consequently, help fight the obesity epidemic.

2) Saving Lives on the Road: A Strength-Based Approach to Understanding Driver Fatigue.
[Day 4, 9:10]

Road deaths account for almost 70% of head injuries in the UAE and they are linked to mortality rates of 37 per 100,000, one of the highest in the World. Human factors research demonstrates that driver inattention may be a major cause of both crashs and fatalities. A driver's attention is a limited, critical resource that can be compromised by distractions both internal and external. Fagituge is a major constraint as are meta-cognitive processes and both active and passive attentional constraints. Recently, research has focused on the dysfunctional human-technology interaction (e.g., phone use) but it is possible that effective human-technology interaction could amelriorate attentional deficits linked to driver errors. In order to assess the potential for such technology, an exploratory study of the role of fatigue and slips of action will be conducted at UAE Desert Challenge, one of the world's most prestigious international cross country rallys. Using a strength-based approach, the use of expert sporting samples to understand cognitive processes to enable inferences to be drawn for the general driving population, the five day rally is an appropriate challenge. Statistics for this discipline of motorsport indicate that up to 12 medevacs are required for the rally annually. In this study, a sample of competitors will be tested daily to monitor response time to a series of attentionally demanding tasks. Measures of both central and peripheral fatigue, sleep quality, stress and effort will be conducted across the event. A multi-disciplinary team will evaluate the changes in attentional profiles due to fatigue and cognitive load of the competitors and the commensurate impact on driving performance. The results will be compared to other samples in follow-up research with a view to developing driver assistance technology that accounts for attentional switching, passive attention processes and fatigue monitoring.

Mauro Maldonato (University of Basilicata)

The Predictive Brain and Anticipation in Sport **[Day 2, 14:00]**

During the lengthy and complex process of human evolution our ancestors had to adapt to extremely testing situations in which survival depended on making rapid choices that subjected muscles and the body as a whole to extreme tension. In order to seize a prey travelling at speeds that could reach 36 km per hour homo sapiens had just thousandths of a second in which to anticipate the right moment and position himself before the prey arrived. He also had to prepare the appropriate gesture, tensing his muscles and overcoming the resistance determined by body weight. While we are no longer faced with an environment that is anything like so threatening, our brain continues to use these mechanisms day in day out to save time and energy, enabling us to avoid situations of danger, sense in advance the intentions of an interlocutor, and more besides. In this paper we set out to show that our brain is not only a reactive mechanism, capable of reacting quickly to the stimuli that arrive from the external environment, but is above all a pro-active mechanism which allows us to make hypotheses, anticipate the consequences of actions, and formulate expectations: in short, to wrong foot an adversary.

David L. Mann (Vrije University, Amsterdam)

1) Do as I do, not as I say: elite athletes and their awareness of the visually-guided actions they perform **[Day 2, 12:00]**

Skilled athletes possess a remarkable ability to perform visually-guided actions that are very fast, yet precise, and are often executed at levels that test the boundaries of human performance. Surprisingly though, skilled athletes often have a relatively poor, or at times, completely misconstrued awareness of how they perform these visual-motor actions. This lack of awareness may at least in part be explained by neurophysiological evidence that suggests the visual pathway used to control fast visually-guided actions acts in a subconscious manner and relies on visual information that is relatively impoverished when compared to our normal sense of vision. Developing an understanding of the apparent lack of conscious awareness of how skilled motor actions are performed is important as it helps to enrich our understanding of how cognition can regulate the actions we perform when interacting with our environment, and it has important applied implications when seeking to improve the motor skills of developing athletes. In this presentation I will address a range of empirical studies I and others have performed to explore how skilled athletes regulate their visually guided actions. First, I will show that the ability to anticipate and respond to the actions of others is embodied and is expressed through movement to a level that cannot be verbalised in a conscious manner. Second, consistent with the notion that visually-guided actions are engendered based on the subconscious use of impoverished visual information, I show that the vision of skilled athletes (in this case, cricket batters) can be blurred to the point of legal blindness before there is a measureable decrease in batting performance. Further, I show that skilled performers sub-consciously prefer to use relatively blurred information when generating a motor action. Third, I will present evidence from studies recording the direction of the visual gaze of footballers and cricketers to show they use eye movement strategies that anticipate the future state of their movement. Importantly though, the athletes themselves are often not aware of the strategies they employ, even though the pattern of gaze appears to play an important role in their success in the sport. Collectively, these empirical studies help to explain why skilled athletes possess a diminished sense of conscious awareness about their visual-motor actions, and further, these studies are actively used in the field to improve the visual-motor skill of developing athletes in fast ball-sports.

2) Strategies for the Implicit Training of Visual-motor Skills **[Day 3, 14:30]**

The way that motor skills are learned can have a profound effect on how 'concrete' those skills become, and particularly, on how well those skills can be performed under pressure. *Implicit learning* provides a particularly interesting means of learning motor skills as it promotes learning in environments where athletes acquire motor skills without necessarily having conscious awareness of how they perform them. Because the conscious regulation of movement is thought to be associated with 'choking' or the 'yips', one of the key reported benefits of implicit motor learning is that skills learned in this manner should be less likely to break down under pressure. In this presentation I will first discuss some of the methods used to teach skills implicitly, many of which originate from the fascinating work of Rich Masters and his colleagues at the University of Hong Kong. Second, I will talk about some of the strategies used to try and encourage elite athletes to learn in an implicit manner. Finally, I will discuss some of the strategies we and others have used in an attempt to implicitly improve the visual-motor skills of emerging athletes in sports like football and cricket. Collectively I hope to provide coaches and practitioners with strategies to implement implicit learning with developing athletes in an effort to improve the permanency of learning and to improve performance under pressure.

Albert Newen (Ruhr University – Bochum, Germany)

1) Knowledge and sport abilities. Types of knowledge and their interdependencies **[Day 3, 11:20]**

Which knowledge do we need to realize a perform a sport actitivity on a high level? The fist aim of the paper is to argue for a new framework according to which we have to distinguish three paradigmatic kinds of knowledge-states. While Ryle introduced the distinction between knowing-that and knowing-how, I argue that we need a threefold distinction. Using some core-examples of the recent debate from everyday life, I will show that we can analyze knowledge situations that are not captured by the Rylean dichotomy and argue that, therefore, the latter has to be displaced by a more fine-grained theory of knowledge-formats. We will distinguish three different formats of knowledge we can have of our actions, namely (1) propositional, (2) sensori-motor, and (3) image-like formats of knowledge. In the second part of the talk, I will discuss the role of these different types of formats of knowledge for a complex ability in sports. The philosophical part develops the interaction of propositional knowledge with sensori-motor knowledge in high-level sport activities and in addition some speculations about strategies to improve this interaction will be discussed.

2) Self-deception in professional sports: How to stay away from doping **[Day 3, 16:10]**

The first part of the talk will shortly develop the main structure of self-deception and show how strongly self-deception is part of our everyday life. This is coming with a danger in our professional life: we have a tendency of developing a false self-image if we are aiming to high, on the one hand, and we will not reach high-level goals, if we are aiming too low. But unbalanced self-deception can be one main reason for an inadequate evaluation of doping in professional sports. Sports men and women as well as professional background persons need to install mechanisms to prevent unbalanced self-deception. If we do not think that the professional sportsmen and -women are criminals, we can only understand them in the context of a variety of psychological condition, one of which is the underestimated dimension of self-deception.

Thomas Patrick (ASPETAR, Qatar)

1) Using Lived Experience In Optimizing Athletic Development **[Day 2, 9:10]**

Understanding how an athlete learns from experience and how this has impacted their development in becoming capable elite international athletes is of considerable importance to ensuring optimal talent development in sport. Based on the qualitative theory of phenomenology, a purposeful sampling technique was used to identify participants who were considered experts in their chosen sports. In-depth interviews were conducted and a thematic analysis was completed for each participant. As a result, four general themes emerged: learning from new coaching approaches, learning from performances, learning during the performance, and seeking out knowledge. The central themes will be presented along with a practical discussion regarding the implications to coaches and athletes towards fostering an environment and related processes towards optimizing athlete development and performance.

2) Optimizing Youth Development in the GCC: Lessons from Qatar **[Day 3, 11:50]**

Working with developing athletes remains a unique challenge in ensuring a reasonable return on investment of coaching and sport science expertise. Many have found that early success does not contribute to predicting or explaining success at a senior level. Of considerable importance is the notion that many young players in Qatar are given a salary for their participation with National Teams or Club participation. Moreover, while parental support is an important characteristic of effective talent development, the family can often remain distant from many young player's performance environment and activities. Several challenges will be presented regarding optimizing youth development in Qatar along with some practical recommendations that are being implement as part of Aspetar's National Sports Medicine Program.

Gareth Picknell (UAE National Defense)

1) See is believing: A justification for the inclusion of PETTLEP imagery with a Modern Pentathlete **[Day 2, 11:20]**

The value of including imagery as part of psychological skills training interventions with athletes has long been advocated due to the numerous beneficial effects reported in the sport psychology literature. Indeed, evidence exists that imagery is positively associated with enhanced performance and learning, as well as thoughts and emotions including increased self-confidence (e.g., Evans et al., 2004), motivation (Beauchamp et al., 1998) and attentional control (Calmals et al., 2004). One particular aspect of imagery that has received considerable interest over the last decade is that of motor imagery, which refers to the rehearsal of actions without engaging in the actual movements involved. Reasons posited for this interest is attributed to advancements in neuroimaging and the development of the 'functional equivalence' hypothesis. These developments have allowed researchers to assert, as a result of observing active brain structures, that motor imagery and motor preparation and execution are related to the same motor representation system (Decety & Grèzes, 1999). With this in mind, it is the role of applied sport psychology practitioners when working with athletes, to develop imagery training programmes that aim to optimize functional equivalence. In an attempt to provide practitioners with evidence-based guidelines for developing and implementing imagery, Holmes and Collins (2001) developed the PETTLEP model of motor imagery. The presentation will outline a case study with a Modern Pentathlete where the principles of PETTLEP-based imagery were tailored to meet the individual's needs following their return to sport from an extended layoff due to chronic injury. Firstly, the presentation will attempt to justify the inclusion of motor imagery as part of the athlete's psychological support programme with a critical review of the PETTLEP imagery literature. Subsequently, a summary of the implemented imagery training programme will be provided, along

with an overview of reported benefits relating to the athlete's imagery usage, preparation and performance following their involvement in the intervention.

2) Where are we now and where are we going? A review of coaching practices and approaches to knowledge attainment in sport **[Day 4, 10:30]**

The presentation aims to facilitate discussion about current coaching practices and approaches for developing knowledge of sports performers as used by coaches operating in the United Arab Emirates. A review of the coaching sciences and sport psychology literature will be used to frame contemporary internationally accepted methods for enhancing the learning process of athletes. However, in order to understand where we are as a discipline, the discussion will be counterbalanced with an evaluation of more traditional approaches that have previously guided the majority of coaching practices.

Mark Scott (UAEU, Linguistics)

Forward Models in Speech and Sport **[Day 2, 14:40]**

There are already well-established links between language and choking. Some studies have shown that repeating a goal-related word during an action can help reduce choking, particularly when this word describes a goal for the action as a whole, while other studies have shown that the proper use of inner-speech can produce a beneficial effect, presumably by occupying the mind and preventing an athlete from over-thinking (Beilock 2011). In this paper I would like to develop another link between language and choking: Stuttering. Choking and stuttering are on the face of it, very similar events – both are failures to perform an action at normal proficiency, particularly when under stress. This similarity may indicate a similar underlying cause. In this paper I propose a variation of the common "paralysis by analysis" explanation of choking and argue that some instances of choking may in fact be tantamount to a stutter of the body.

The *paralysis by analysis* explanation of choking is that an athlete over-thinks the task and so uses conscious control strategies when unconscious control would be less prone to error. I suggest that some instances of choking (specifically those that involve a component of *freezing*, such as sometimes occurs as part of the "yips" in golf) can be explained, slightly differently, by an excessive internal monitoring of one's movements before the movements have even happened. The motor control system is believed to include a system that predicts the sensory consequences of one's actions *before* the actions are performed. This system is called a forward model (Wolpert, Ghahramani, and Flanagan 2001). The prediction created by the forward model can then be inspected for mistakes and, if one is found, a correction can be issued. This prediction system allows for very fast and sensitive control, but it can lead to problems. If the threshold for what constitutes an error is set too low (so that the slightest deviations are tagged as errors), then the motor system will be issuing a lot of corrective commands, and in many cases *too* many corrective commands, leading to freezing or a sputtered execution. Such excessive issuing of corrective actions has been proposed as the cause of stuttering (Brocklehurst 2008,Max et al. 2004). I am suggesting that this same mechanism can occur in sporting events, such as golf, when the athlete is attending so carefully to his/her actions that the slightest deviation in motor command is caught by the action-monitoring system and tagged as an error forcing the motor system to issue a series of correctives and leading in some cases to a complete freezing of action. This theory is, of course, a variation on the paralysis by analysis theory.

This connection between stuttering and choking, if correct, opens up the possibility of treatments developed for preventing choking to be applied in the prevention of stuttering and vice versa.

Beilock, Sian. 2011. *Choke: What the Secrets of the Brain Reveal about Getting It Right When You Have to*. Simon and Schuster.

Brocklehurst, P. 2008. “A Review of Evidence for the Covert Repair Hypothesis of Stuttering.” *Contemp Issues Commun Sci Disord* 35: 25–43.
Max, Ludo, Frank H. Guenther, Vincent L. Gracco, Satrajit S. Ghosh, and Marie E. Wallace. 2004. “Unstable or Insufficiently Activated Internal Models and Feedback-Biased Motor Control as Sources of Dysfluency: A Theoretical Model of Stuttering.” *Contemporary Issues in Communication Science and Disorders* 31: 105–122.
Wolpert, Daniel M., Zoubin Ghahramani, and J. Randall Flanagan. 2001. “Perspectives and Problems in Motor Learning.” *Trends in Cognitive Sciences* 5 (11) (November): 487–494.

Nektarios A.M. Stavrou (ASPETAR, Qatar)

***Low negative emotions or high positive emotions? Examining the link to athlete’s performance* [TBA]**

As managing negative emotions has been the primary focus of researchers and practitioners in the past, positive emotions have received limited examination in the sporting context. Around the beginning of millennium this trend started to shift as a new theoretical approach has emerged, under the name positive psychology (Seligman & Csikszentmihalyi, 2000). This new scientific field focused on the study of positive experience, trying to find the pathways to improve humans functioning, performance, and well-being (Seligman, 2011). However, this approach is not new as three decades earlier Csikszentmihalyi (1982) started building this approach through the flow theory, trying to examine the human experience, and how people can control and produce this type of positive experience.

Recently, flow theory has been applied in sports providing important information regarding its relationship with other psychological constructs, as well as, athletes’ performance (Kimiecik & Stein, 1995). Flow refers to an intrinsically rewarding and pleasurable experience, during which the goals are clearly set by the athlete. This enables the athlete to be completely concentrated in the activity, and adding the subsequent absence of worry about the upcoming result, there is a great possibility for the athlete to experience high level of performance (Jackson, 1995; Jackson & Csikszentmihalyi, 1999). Research results supported a strong link between subjective and objective measures of performance with flow experience (Jackson & Csikszentmihalyi, 1999; Stavrou & Zervas, 2004; Stavrou et al., 2007).

The main antecedents of athletes’ flow experiences in competition have been proposed to be anxiety and self-confidence (Jackson et al., 1998; Koehn et al., 2013). However, far from flow experience, anxiety and confidence are two key variables that have a profound impact on athletes’ experiences and performance in competition. Anxiety has received wide spread attention in sport psychology research focusing, among other, on anxiety-performance relationship. Initially, the research of the sport anxiety – performance relationship was based on the inverted-U hypothesis, positing a curvilinear relationship between psychological arousal and performance (Gould & Krane, 1992; Yerkes & Dodson, 1908). Moving from the unidimensional approach of the inverted-U hypothesis, Martens, Vealey, and Burton (1990), proposed a more comprehensive theory in the examination of competitive anxiety, called multidimensional anxiety theory (MAT).

Based on the MAT, anxiety was separated into cognitive anxiety and somatic anxiety suggesting that the two factors are independent, since they influence athletes’ performance differently, and have different antecedents and consequences to performance (e.g., Hanton et al., 2004; Jones et al., 1990; Wiggins, 1998). For instance, MAT proposes that cognitive anxiety remains stable prior to competition and exhibit a negative linear relationship with performance, caused by negative expectations about upcoming performance results. Somatic anxiety proposed to have an inverted-U shaped relationship with performance, with lower and higher levels being detrimental to performance. Somatic anxiety appears to be more pronounced in the lead-up to performance

(Martens et al., 1990), but it is thought to have lower influence than cognitive anxiety during performance. Finally, self-confidence remains unchanged as the time of competition approaches, unless expectations of success will change, exhibiting a strong positive linear relationship with performance (Burton, 1988). Given the assumption that both constructs are based on performance expectancies, an increase of either self-confidence or cognitive anxiety is expected only when new information changes expectancy (Martens et al., 1990). Hardy, Jones, and Gould (1996) proposed an interactive effect between both variables, hypothesizing that if the confidence to cognitive anxiety ratio is favourable, high confidence may have a protective function against negative anxiety effects on athletes' performance. Conclusively, research results indicate that positive and negative emotions act independently or in interaction exhibiting a significant effect on athletes' performance.

Submitted and approved abstracts

Benjamin Aguda (University of Memphis, USA)
Grounded cognition and choking: Shared neural resources in simulation **[Day 2, 16:30]**
According to proponents of the "grounded cognition" movement, the correct way to understand cognition (representational and non-representational) is as embodied simulation. Grounded cognition theories are united by a shared commitment to simulation architecture for neural activity. Put simply, perceptual and motoric areas of the brain that are activated in live experience are also activated during visualization and conceptualization. Furthermore, perceptual and motor simulations occur during active perception by producing perceptual and motoric inferences that go beyond what we perceive. These simulations are hypothesized to be responsible for the feedback loops that allow for constant correction during live movements and for the coordination of perception and action required for situated action.
This paper will assume that the simulation architecture proposed in grounded cognition theories is correct and, in light of this assumption, examine the debate between rival explanations for the choking effect. Specifically, I will argue that the best explanation for choking is a variation of the cognitive overload view under the simulation architecture of neural activity. My reasoning is as follows: if it is the case that motor simulations occur during behavior traditionally thought of as cognition as well as during online perceptual experience and it is also the case that offline simulations reuse the same areas of the brain as online activity, then it follows that choking occurs when the neural resources necessary for online activity are being 'tied up' in other processes of cognition or simulation.

Sahla Azzi (UAEU, Linguistics)
Epistemology and research methodology in sport studies: the impact of a multidisciplinary approach **[Day 2, 17:00]**
The scientific literature systematically examines how to make an elite player or a better coach; however, the complex psychological dynamics that underpin the performance of players on the playground during the game can hardly be accounted for by scientific analyses with a narrow explanatory focus. One reason is that the mental life of the athletes is not a measurable parameter that could be entirely examined by laboratory experiments and quantitative tools; on the other hand, although questionnaires and interviews can be used to identify the defining qualities of an elite player or a successful coach, they cannot reveal the cognitive and biological

mechanisms that underlie actual playing and winning in a game. My paper discusses how multidisciplinary approaches could provide an integrated solution to the limitations of reductionist epistemologies, helping to find closer answers to the real nature of sport skills and excellent performances. Building on different domains in linguistics and psychology, my research aims to explain why the multidisciplinary approach can provide a more coherent narrative, and to clarify the epistemological premises of a successful sport science.

Zuzanna Rucinska (University of Hertfordshire, UK)

Radically Enacted Creativity in Sports **[Day 2, 17:30]**

"Tactical creativity" (Memmert et al. 2010) is a useful skill in sports, though hard to achieve. For example, in the in situation of attacking or advancing (as opposed to defending), on-the-spot 'creative' maneuver that can surprise the defendant is beneficial to the game. As Memmert & Roth (2007) claim, "creativity entails varying, rare and flexible decision-making in complex game situations… (but) it is not clear how this type of thinking is developed."

This paper will challenge the common assumptions in cognitive sciences and sports psychology that creativity (or creative improvisation) requires conceptual thinking, has normative requirements, or that it is "explicitly representational in character". Instead, I will propose a notion of *radically enacted creativity*, a result of using one's sensorimotor skills (coupling of perception and action) on exploring contextual affordances and participating in shared activity. It is the idea that creativity can be conceptualized as putting *experiences* (not ideas) together in a new way, which is an embodied and enacted skill. I will argue that tactical creativity in sports should be understood as such enactive capacity, giving reasons why it is unattractive to believe in mental plans playing the guiding role of action. I will first discuss the criteria of creativity in sports: originality, flexibility, fluency of thinking (in Memmert et al., 2010), and discuss them in light of two very different proposals: traditional Representational Models (RM) of creativity, and the new proposal of Radically Enactive (RE) creativity. I will challenge the RM approach pointing out its inherent problems (frame problem and mental scripts), and suggest why RE approach is more promising. I will also discuss and rebut potential challenges to the RE account, the key role of routines and affordances. The paper will conclude that radically enactive creativity serves as a good predictive model of improvement and innovation in creating new sports tactics. I will propose suggestions to coaches of how RE creativity could be developed, basing on the success of this approach in other domains like stage acting and family therapy.

Note: live interpretation into Arabic will be provided

Professional and biographical notes of the speakers

Nasser Al-Ameri is professor of Sport and Exercise Psychology at the College of Education of UAE University. He is also chair of the Department of Physical education. For years, he offered his services as a sport psychology consultant to professional football teams and sport associations in the UAE. He was Director of the World Youth Chess Championship held in Al Ain in December 2013.

Fdwa Al-Mughairbi is Assistant Dean for Research and Graduate Studies and former Head of the Psychology and Counseling program of the College of Humanities and Social Sciences of UAE University, where she teaches Cognitive neuroscience and Neuropsychology while conducting her experimental studies on the behavioral effects of brain cells degeneration. She runs a research project on Parkinson Disease with UAEU Medical School, and collaborates with the researchers of Panjwani Center of Molecular Medicine, Karachi University, Pakistan.

Benjamin Aguda was born and raised in New Orleans, LA. During Hurricane Katrina he moved to Orlando, FL where he began his studies in philosophy in 2008. He graduated with honors from the University of Central Florida where he did his senior honors thesis on simulation theories of cognition under Shaun Gallagher. Upon graduation he was accepted to the University of Memphis in the philosophy Ph.D. program. His research interests are enactive cognition, philosophy of biology, and philosophy of science.

Sahla Azzi is a PhD student in the department of linguistics at the UAE University. She received her B.A. in Applied Linguistics from the UAE University. Her research interest focuses on the nature of language processing in Arabic-English bilinguals. Sahla had been working as the Writing Center Assistant in which she carried both administrative and teaching responsibilities particularly empowering students to develop their academic writing. She also served as Secretary of the Students' Council, initiated a free IELTS Training Course for Students, and worked as a Tutor in Students' Development Unit, the Linguistics' Program and the Writing Center.

Tom Buchanan is Golf Operations Supervisor at Al Ain Equestrian, Shooting & Golf Club. He has over 10 years of practical hands-on experience as a Golf Professional in Dumfries and Galloway Golf Club and Head Assistant at Duddingston Golf Club. In 2013 he was awarded with the titles of UAE PGA Strokeplay Champion and UAE PGA Matchplay Chmaption.

Massimiliano (Max) Cappuccio is Assistant Professor in Philosophy of Mind and Cognitive Science at the Department of Philosophy of UAE University, where he coordinates the Interdisciplinary Program in Cognitive Science. He is also a member of UAEU Laboratory of Psycholinguistics, run in collaboration with New York University Abu Dhabi, and a founding member of the UAE Society for Robotics and Artificial Intelligence. He is a correspondent member of the Neurophilosophy Lab of the State University of Milan, Italy. He is currently working on a UAE-NRF-funded interdisciplinary project at the intersection of embodied cognition and sport psychology and is editing a special issue of *Phenomenology and the Cognitive Sciences* dedicated to "Choking Effect and Unreflective Action".

Tom Carr is Professor of Cognition and Cognitive Neuroscience at Michigan State University. He has been Visiting Scientist at IBM Watson Research Center and the CNRS Cognitive Neuroscience Laboratory in Marseille, and served as the Mayborn Professor of Cognitive Studies at Vanderbilt University. He has been editor of the *Journal of Experimental Psychology* and *Perception & Psychophysics*, and is an associate editor of *Cognitive Psychology*. His work is concerned with how basic cognitive processes are brought to bear on task performance, task control, and their phenomenology; skill development; and performance under demanding conditions. His methods include mental chronometry, neuroimaging, and phenomenological self-report.

Roland A. Carlstedt is Chairman of the American Board of Sport Psychology and its Director of Training and Certification. He is a licensed clinical psychologist, board-certified sport psychologist and board certified in biofeedback. He holds appointments with Harvard Medical School (Department of Psychiatry) and McLean Hospital (Developmental Biopsychiatry Research Program). Dr. Carlstedt is the author of *Evidence-based applied sport psychology: A practitioner's manual. He* has consulted with numerous elite athletes, teams and organizations worldwide and was a fulltime coach and sport psychology consultant on the ATP/WTA tennis tours for over ten years while based in Europe.

Alberto Cei, psychologist and psychotherapist, teaches *Coaching* at the University of Tor Vergata, Motor Science Dept, Roma, Italy and *Sport Psychology* at the School of Sport of the Italian Olympic Committee. He attended at the last five Olympic Games working with athletes winners of 10 Olympic medals. Consultant of the Malta Olympic Committee and of Indian athletes in shooting sports. He wrote 14 books in sport psychology and performance development. Alberto is the editorial manager of the *International Journal of Sport Psychology*, treasurer of the European Federation of Sport Psychology (FEPSAC) and former president of the Italian Society of Sport Psychology. Website: www.ceiconsulting.it and blog www.albertocei.com

Matthew Cullen completed his undergraduate B.Sc (Hons) degree in Sports Science, M.Sc in Sport Psychology and QTS in Physical Education at Liverpool John Moore's University, UK. He worked at Liverpool F.C in their Youth Academy in a variety of roles initially coaching, the role evolving into a teaching and psychological support role over the next 6 years. During this time the club won the UEFA Champions League, FA Cup and the FA Youth Cup. After teaching Physical Education for 3 years in a secondary school he spent 3 years in Abu Dhabi to supporting ADEC's education reform across the emirate. His remit was to help to improve behaviour in schools through sport. Matthew now works in an applied Sport Psychology role at Aspire Sports Academy in Doha.

Caren Diehl Caren Diehl completed her BSc (Hons) in sport and exercise psychology at Glamorgan University, her M.Ed. at Temple University and received her PhD from the University of Wolverhampton. Dr. Caren has worked in Ghana, Germany, UK, USA, India, UAE. She currently works as sport psychologist for Up And Running Integrated Medical Center, Dubai.

Daniel D. Hutto holds a joint appointment as Professor of Philosophical Psychology at the Universities of Wollongong and Hertfordshire. His most recent books include: *Wittgenstein and the End of Philosophy* (Palgrave, 2006), *Folk Psychological Narratives* (MIT, 2008) and co-author of *Radicalizing Enactivism* (MIT, 2013). He was a chief co-investigator for the Australian Research Council 'Embodied Virtues and Expertise[1] project (2010-2013). He is a node leader in the Marie Curie Action 'Towards an Embodied Science of Intersubjectivity[1] initial training network (2011-2015) and a collaborator the 'Agency, Normativity and Identity' project (2012-2015) funded by the Spanish Ministry of Innovation and Research.

Jesús Ilundáin-Agurruza is associate professor of Philosophy at Linfield College (Oregon, USA), where he received the 2011-2012 Samuel H. Graf Faculty Achievement Award and was 2008-2009 Allen & Pat Kelley Faculty Scholar. He currently serves a President for the International Association for the Philosophy of Sport (IAPS). He has edited *Cycling & Philosophy* (with M. Austin), published articles in journals such as *Sports, Ethics, and Philosophy* and *The Journalfo the Philosophy of Sport,* and written numerous chapters for many anthologies and edited collections on risk, various sports and their confluence with martial arts, comparative philosophy, consciousness, literature, and more (some in Spanish). He is an avid cyclist and swimmer.

Tom Loney is currently an Assistant Professor in the Institute of Public Health in the College of Medicine and Health Sciences at the United Arab Emirates (UAE) University. Prior to joining UAE University in 2011, Dr Loney completed his doctorate at the University of Bath (UK) before moving to the UAE in 2008 to work as an applied physiologist for the UAE Armed Forces. Dr Loney's research interests include human performance optimisation in athletes and tactical operators (e.g. military personnel, firefighters) and his published research output includes over 40 peer-reviewed papers, government technical reports, and book chapters.

Tadhg MacIntyre is a lecturer in sport, exercise and performance psychology at the University of Limerick where he conducts research in the field of motor cognition and on professional practice issues in applied sport psychology. He studied in University College, Dublin where he graduated with a BA (Psych), a first class honours MA (1996) and a PhD in 2007. He has over a decades experience as a registered consultant and has conducted research with WRC drivers and aspiring F1 competitors. He has published almost 30 refereed publications and five book chapters, and presented keynotes in Ireland, Portugal and UAE.

Mauro Maldonato is a psychiatrist and professor of general psychology at University of Basilicata. His academic formation includes studies at the La Sapienza University (Rome), Federico II (Naples), London School of Economics, and the École des hautes études (Paris). He has been a recurrent visiting professor at the Universidade de São Paulo (USP), Pontifícia Universidade Católica (PUC) di São Paulo and at Duke University. He is an author and curator of volumes and scientific articles published in numerous languages. He gave presentations at many universities and international research centers. He is the scientific director of the International Research Week.

Fraser McLaughlan is a fully qualified PGA golf professional with 11 years experience. He holds a MBA in Business & Technology obtained from Texas A&M University Commerce in 2000. He is currently working as Head Teaching Professional at Al Ain Equestrian Shooting & Golf Club.

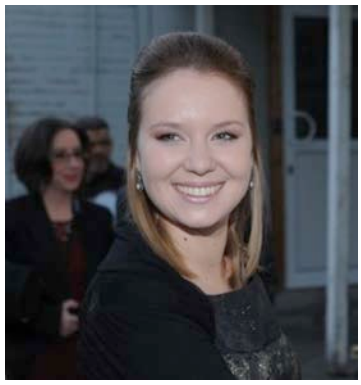
Albert Newen is full professor for philosophy of mind at the Ruhr-University of Bochum (RUB). Furthermore, he is the Director of the Center or Mind, Brain, and Cognitive Evolution at RUB. The central approach of his work is to investigate cognitive phenomena from an interdisciplinary perspective such that the philosophical theory formation is essentially based on the relevant empirical discoveries in psychology, psychiatry and neuroscience. Ongoing research projects include a collaborative project "Social information processing and culture" (VolkswagenStiftung) and a joint "Anneliese-Meier-Award" for

Prof. Shaun Gallagher (and Prof. Newen in Bochum). Recent publications involve articles on self-consciousness, theory of mind, emotions, animal cognition, understanding others, knowing-how and knowing-that etc. Articles are published in top-journals including Synthese, Cognition, Philosophy and Phenomenological Research, Erkenntnis, Frontiers in Neuroscience, Consciousness & Cognition etc.

Thomas Patrick is currently National Sports Medicine Program (NSMP) Performance Manager and Lead Sport Psychologist with Aspetar in Doha, Qatar. Tom has served in various high performance leadership roles including High Performance Sport New Zealand, the Canadian Sport Institute in Toronto as was the High Performance Director with Triathlon Canada and has worked as an applied sport psychologist for 18 years having supported a number of Olympic and World Champion Medalists and several National Team and Professional Sports in Canada, the United States, Australia and New Zealand.

Gareth Picknell is currently working as the Head of Health Education, Promotion and Research for a Health and Sports Medicine Wing supporting the UAE Armed Forces. He is a chartered scientist of the Science Council, UK, and accredited as a sport and exercise scientist by the British Association of Sport and Exercise Sciences, specializing in the domain of sport psychology. Having obtained his MSc in Sport Psychology, and worked extensively with athletes and military personnel in performance environments, he has embarked on studying for a part-time PhD investigating the potential of reflective practice for facilitating behavior change, which he hopes to complete within the next year.

Zuzanna Rucinska is an Early Stage Marie Curie Research Fellow of the TESIS Network (https://tesisnetwork.wordpress.com/). She is currently working at the University of Hertfordshire under direct supervision of Prof Daniel D. Hutto on the aspect of pretence and non-representationalism in early, pre-linguistic forms of social cognition, focusing on how socio-cultural practices and shared intentionality might influence imaginative play and acquisition of higher-order mind-reading capabilities. With an MA in Philosophy of Psychology and an MSc in Occupational Health Psychology from Leiden University (the Netherlands), her interest is in Embodied and Enacted Cognition, Developmental Psychology, Autism and Narrative Practice Hypothesis.



Mark Scott is assistant professor at the Department of Linguistics of UAE University. He is interested in links between production and perception, specifically in the motor system's use of *forward models* to predict the sensory consequences of its own actions. He does experimental work on the influence these forward models have on speech perception and how they are used to provide the sensory content of speech

imagery. He has plans to do work on the contribution these models make to the sense of agency in speech, and the disruption of this sense of agency in schizophrenia.

Nektarios A.M. Stavrou is clinical – Sport psychologist at ASPETAR – Qatar Orthopaedic and Sport Medicine Hospital, Doha, Qatar. He has bachelors in psychology and physical education – sport sciences, PhD and post-doc in sport psychology. He has over 35 publications on peer-review journals and book-chapters, over 100 research works presented in scientific conferences, reviewer in 15 academic journals in the area of psychology and sport psychology, examiner in 30 Master and PhD thesis. He has experience working as a sport psychologist since 2000 in various individual and team sports, and he has participated as sport psychologist in “Athens 2004” Olympic Games and “London 2012” Olympic Games, World Championships, World Cups and European C