



***Sport  
Studies***  
*and Higher Education*

***An Interdisciplinary  
Approach***

**The University of the West Indies**  
in collaboration with the  
**First Citizens Sports Foundation**

**Conference on Science,  
Higher Education and Business:**  
*An Interdisciplinary Approach to Sport Studies,  
Research and Development*

January 15-17, 2014

Venue: Learning Resource Centre  
The University of the West Indies, St. Augustine



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# Message from **The Campus Principal**



As Principal of the St. Augustine Campus of The University of the West Indies, I am extremely pleased to support this conference aimed at improving Sport Studies within the Higher Education

system of Trinidad and Tobago and the Caribbean region. Indeed, this is the first of its kind in the region and therefore, I think it is fair to say that you, our conference presenters and participants, are a part of history in the making.

I wish to commend my colleagues from The UWI St. Augustine Campus who have worked diligently together with our longstanding corporate partners, the First Citizens Sports Foundation, to spearhead what is an extremely timely and relevant conference! Congratulations! I wish also to welcome and thank all presenters who have come to share their views, experience, research and expertise, especially our international visitors. I hope that your visit to Trinidad and Tobago is productive, meaningful and enjoyable!

My dear friends, investing time, resources and effort in enhancing the quality of our sporting programmes and sport in general in the Caribbean is absolutely essential. Sport promotes a healthy lifestyle through athleticism, exercise and recreation, and also serves to build camaraderie and unity between the people of our country and region through fair and healthy competition. But sport is not only important for maintaining a healthy lifestyle and social recreation; it can also be a major enabler of economic empowerment and advancement. Sports-tourism has become one of the niche markets in the tourism industry, and is now described as the fastest growing sector in the global travel and tourism industries. It is in this context that I would like to encourage conference participants to also look at ways in which our

sporting programmes can train our sporting professionals to tap into the sports-tourism market globally, using all the possibilities of science, technology, marketing and promotion. Our own students and graduates are well-poised to make a valuable contribution in this regard, as both our UWI/FIFA/CIES Postgraduate Diploma and Masters in Sports Management programmes can equip them with the requisite skills, knowledge and insight into the sporting industry.

I am also truly pleased that this conference has taken an interdisciplinary approach, and has brought together a wide cross-section of participants from academics and students, to higher education professionals and sport administrators, among many others. Without a doubt, we will all benefit greatly from the cross-fertilisation of ideas that result from fora such as this. I look forward with great anticipation to the impact which this conference will have on improving the knowledge, teaching, learning, scholarship and research on sport in Trinidad and Tobago and the wider Caribbean region.

On behalf of The UWI St. Augustine Campus community, I extend best wishes to all for a productive and successful conference!

**Professor Clement K. Sankat**

Pro Vice Chancellor and Campus Principal  
The University of the West Indies, St. Augustine Campus

# Message from The Conference Chair



As Chair of the Conference Planning Committee, I am honoured and delighted to welcome you to this conference and to The University of the West Indies (UWI), St.

Augustine Campus. I extend a very special welcome to all of our local, regional and international presenters and participants. We are very happy to be hosting the first conference of this kind in the English-speaking Caribbean.

Within the last two decades, The UWI has introduced academic programmes in various aspects of sport education, e.g. the postgraduate diploma and M.Sc. in Sports Management, and the Certificate in the Art and Science of Coaching at The UWI, St. Augustine; the Certificate in Management & Administration of Sport and the B.Sc. and M.Sc. in Sport Sciences at Cave Hill; and the M.Sc. Sports and Exercise Medicine and MSc. Sports Business Management at the Mona campus. I am also aware that sport programmes have been developed at the University of Trinidad and Tobago (UTT). The UWI has also been seeking to strengthen athletic development in a range of sporting disciplines. As a teaching and research university, we value scholarship and the engagement that this research conference could offer to the various stakeholders involved in sport, as well as the impact it could have on our current and future programmes in sport. The Caribbean region has experienced increasing recognition in the global sporting arena with a number of world champions in various sporting disciplines, including this campus's own Jehue Gordon. As a result there is an increased interest among young persons in physical fitness, sporting events and academic programmes. This conference is therefore very timely. We hope that it will lay the groundwork for the establishment of integrated academic programmes on sport in academic institutions of the region and ultimately, to improved athletic development. We also hope that there would be knowledge exchange and networking among presenters and participants, resulting in increased collaboration with

regional and international institutions, which could act as a platform for more research and development of the area of Sport Studies within Trinidad and Tobago, The UWI and the Caribbean region.

Over the past few decades, sports education has emerged as a multi-disciplinary, cross-disciplinary and interdisciplinary field. As the theme of the conference suggests, it was our intention to have a rich programme with presentations from an array of disciplines and fields. However, most of the abstracts which we received were in the area of Sports Science, which is interesting as for the first time we are bringing together national and regional research in this area of which most of us were unaware. Fewer abstracts were submitted in the areas of, for example, sociology, psychology, economics, media or even business, so we have already identified some of the areas for future focus. In some of the areas that were not adequately addressed but are extremely important for future research and teaching, we have arranged round-table discussions as a mechanism to begin to think about the issues and to devise a teaching and research agenda.

As the Conference Planning Committee Chair, I am aware that the success of this conference will not be a single-handed effort but depends on the many people and organisations which collaborated with The UWI, St. Augustine Campus. In particular, I would like to thank our platinum sponsors, the First Citizens Sports Foundation, which has partnered with us throughout the process; the Ministry of Sport; the Sport Company of Trinidad and Tobago, and the UWI Sport and Physical Education Centre (SPEC), UWI, St. Augustine. Recognition should also go to all members of the conference planning committee and the various UWI St. Augustine departments who worked tirelessly on the details of the conference.

For those of you who are visiting Trinidad and Tobago for the first time, I wish you a pleasant stay here. We hope that you will find this conference dynamic and enlightening.

## **Professor Rhoda Reddock**

Deputy Principal and  
Conference Planning Committee Chair  
Sport Studies and Higher Education Conference 2014

# Message from **First Citizens Sports Foundation**



In August 2004, the First Citizens Group took over the sponsorship of the Sports Foundation from the West Indian Tobacco Company. The Foundation was started in 1962. Since its assumption

of the sponsorship, the First Citizens Group has continued to be an excellent and generous benefactor.

As the only organisation in Trinidad and Tobago to have one for sports, we are particularly proud of our "Hall of Fame". Thus far, we have had nine inductions, and, after the most recent, a total of one hundred and ninety-six (196) individuals, coaches and administrators and one team (Netball 1979) have been admitted. The work of this Foundation committee is never-ending and we aim to raise it to the highest standards in the shortest possible time.

As we continue to create new partnerships, we are strengthening existing ones and focusing on the development of all goals and objectives. We are committed to education, training and certification. We are also aware that for meaningful progress to be made, focused research is mandatory. For this reason, we are extremely excited to be partnering with The University of the West Indies at this conference.

We look forward to the professional delivery of sport in all its facets. We want to ensure the sustainability of sport development so that we in Trinidad and Tobago and the wider region are at a competitive level, not only on the field but in other key areas of education, knowledge and research.

The Foundation has been very fortunate to have been a part of this historic initiative. There was a need to be fulfilled and we have worked together to make it a reality. We would like to thank the Board of the First Citizens Bank for its continued funding support and its support of this conference. The Board's decision to support this conference has helped to ensure that sport in Trinidad and Tobago is brought to the front burner. We believe that this has helped to engender the interest of our young people in all areas and aspects of sport.

We will continue to give our full support to The UWI in its efforts in Sport Education to be ready, relevant and involved in the preparation of its students.

## **Dr. Keith Clifford**

Chair  
First Citizens Sports Foundation

# Conference **Aims and Objectives**

During the past two (2) decades, Trinidad and Tobago has experienced the introduction of academic programmes in sports education at the tertiary and higher education levels. This is in keeping with developments in other parts of the region and the world. Sport has become not only an important arena for employment, business and investment but also for academic research, scholarly endeavours and undergraduate and graduate teaching. What is also noteworthy is that sports education has emerged as a multi-disciplinary and interdisciplinary field, with courses and programmes spanning virtually all disciplinary and cross-disciplinary specializations.

The major rationale for holding this sport conference concerns this void in Caribbean sport research/ scholarship and the need to integrate or rationalize existing local initiatives in higher education. Apart from this absence of programme integration, the programmes also suffer from problems of staffing, funding and a strong dependence on foreign data or sources of research relating either to sport development or sport for development which do not facilitate a historical understanding of the realities of sport development and management in the Caribbean. The Conference Themes/ Areas are based on a multi-disciplinary approach with thematic diversity consistent with the range of issues that confront sport development both locally and regionally.

The aims of this conference are to:

- **Contribute to knowledge and scholarship on sport in the Caribbean**
- **Lay the groundwork for the establishment of integrated academic programmes on sport in higher education**
- **Facilitate knowledge exchange (sharing of experiences)**
- **Review best practices of sport programmes in a higher education context (inclusive of Benchmarking)**
- **To develop a plan of action for future development of academic sports programmes and recommendations towards the implementation**

Sport and Physical Education are two (2) essential components of society's quest for the holistic development of its members, as the fields embody the concept of harnessing and developing human performance within a multidisciplinary approach. Moreover, the world continues to navigate towards a trend of healthier lifestyles and lifestyle choices that cater to maintaining or improving ones quality of life through involvement in Sport and Physical Education Programmes.

# Hosted by

The University of the West Indies

St. Augustine, Sports & Physical Education Centre

## Conference Committees

### **Planning Committee**

Rhoda Reddock - Chair

Justin Latapy-George

Catherine Forde

Alexander Smith

Anthony Creed

Marquitta Webb

Renata Sankar-Jaimungal

Charisse Broome

Sa'eed Bawa

Gabre-Jesu Mc Tair

Camille Charles

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### **Programme Committee**

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### **Finance Committee**

Justin Latapy-George - Chair

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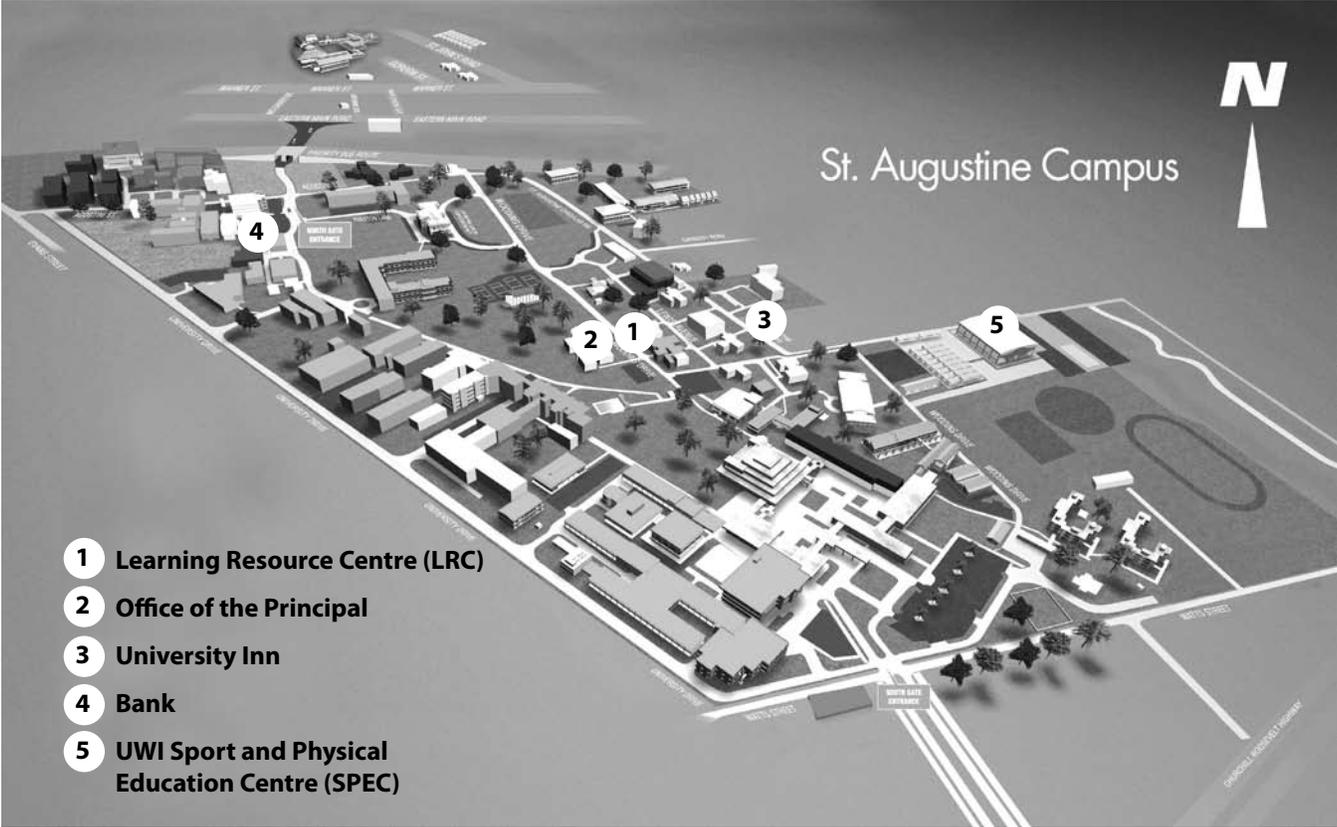
Camille Charles

Annette Waldron-Joseph

### **Conference Coordinator**

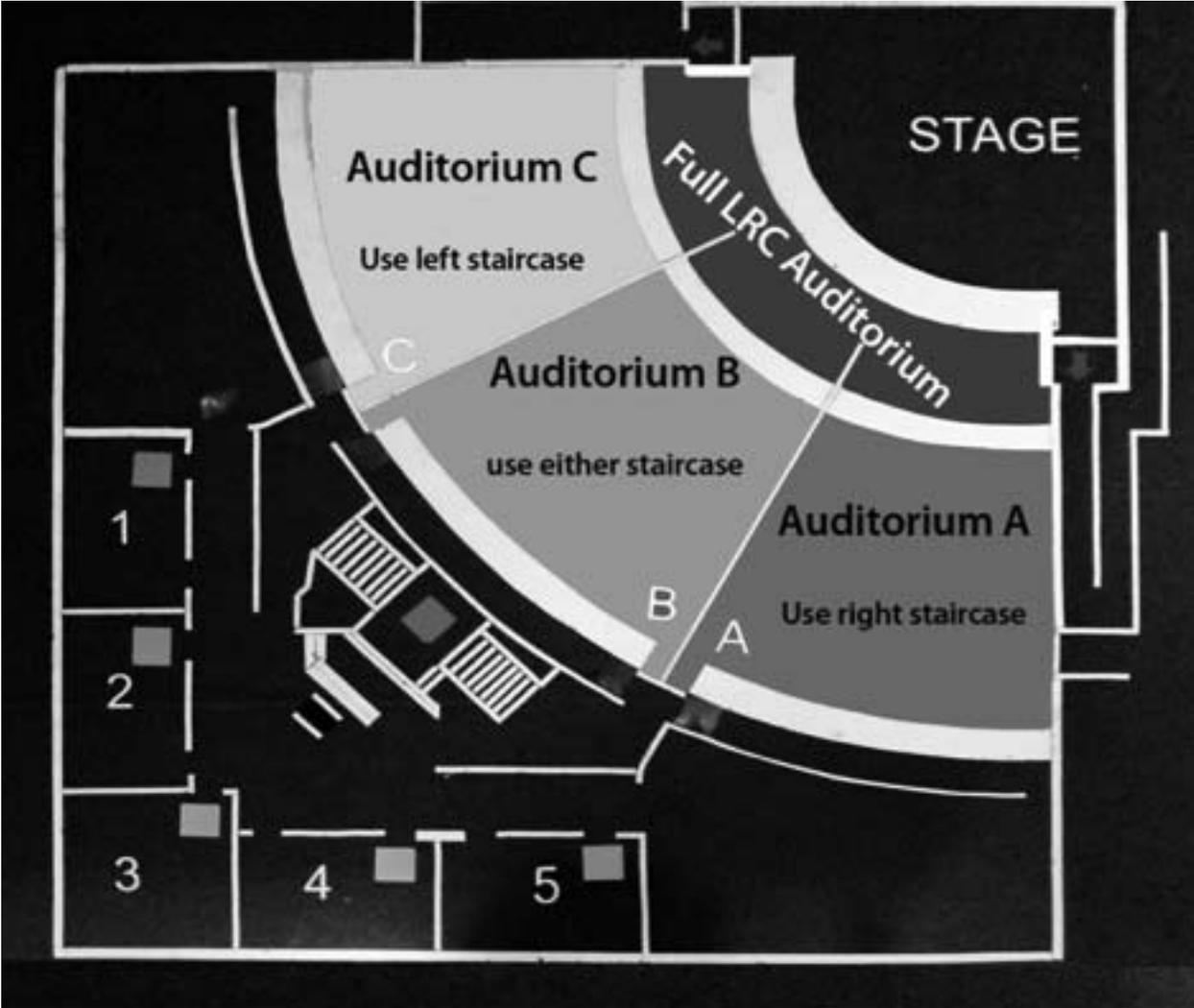
Kyome Pascall Mortley

# Map



# Learning Resource Centre (LRC) Auditoriums

THE UNIVERSITY OF THE WEST INDIES, ST AUGUSTINE CAMPUS, TRINIDAD AND TOBAGO



# Programme Agenda

## WEDNESDAY, JANUARY 15, 2014 – OPENING CEREMONY

04:30 p.m. – 6:00 p.m.	<b>REGISTRATION</b>
06:30 p.m. – 9:00 p.m.	<b>OPENING CEREMONY</b> Regency Room V & VI Hyatt Regency Hotel #1 Wrightson Road Port-of-Spain

## THURSDAY, JANUARY 16, 2014 – CONFERENCE DAY 1

<b>REGISTRATION</b>	08:00 a.m. - onwards
<b>SESSION 1</b>	09:00 a.m. – 10:30 a.m.
<b>Full Auditorium</b>	<b>Opening Roundtable</b> - Sport Studies, Research and Higher Education in the Caribbean Chair: Brian Lewis
	Panelists: <b>Grace Jackson</b> , The University of the West Indies – Mona <b>Christine Cummings</b> , The University of the West Indies – Mona <b>Rudolph Alleyne</b> , The University of the West Indies – Cave Hill <b>Paul Blair</b> , University of Trinidad and Tobago <b>Sherlan Cabralis</b> , The University of the West Indies - St. Augustine
BREAK	10:30 a.m. – 10:45 a.m.
<b>SESSION 2</b>	10:45 a.m. – 12:15 p.m.
<b>Full Auditorium</b>	Psychology, Sociology and Sport: Implications for the Caribbean Chair: <b>Alexander Smith</b>
	<b>Margaret Ottley</b> Perceptions of Sport Psychology in Trinidad and Tobago  <b>Troy Morgan</b> Sport Sociology and the Origins of NASSS: A Historical Overview and Discussion of Issues, Problems and Future Directions  <b>Katija Khan</b> Assessing Mental Toughness in Trinidad & Tobago Male Athletes
LUNCH	12:15 p.m. – 01:15 p.m.

# Programme Agenda

<b>CONCURRENT SESSION 3</b>	01:15 p.m. – 2:45 p.m.
<b>Auditorium A</b>	Sports Medicine, Health and Athletics 1 Chair: <b>Sa'eed Bawa</b>
	<p><b>Aldeam Facey</b> Lactate Metabolism and Adiposity in Elite Athletes</p> <p><b>Sinead Salandy</b> What colour is your urine? The effect of exercise on hydration status in student athletes</p> <p><b>Safiya Beckford</b> Nutritional knowledge and attitudes of adolescent swimmers in Trinidad and Tobago</p> <p><b>Candice Thomas</b> Monitoring training fatigue with the orthostatic heart rate test during 9 weeks of intensified training in biathletes</p>
<b>CONCURRENT SESSION 3</b>	01:15 p.m. – 2:45 p.m.
<b>Auditorium C</b>	Sport Business and Economics Chair: <b>Charisse Broome</b>
	<p><b>Keith Joseph</b> Sport Tourism – A viable Economic Development Option?</p> <p><b>Tyrone Marcus</b> Sports Law and its application to the Caribbean</p> <p><b>Acolla Cameron</b> Alternative Tourism Development in Trinidad: Assessing the Potential of Sport Tourism as a Niche Product</p> <p><b>Sherlan Cabralis</b> An overview of Trinidad &amp; Tobago Sports &amp; Recreational Facility Management Structure</p>
BREAK	02:45 p.m.-03:00 p.m.

# Programme Agenda

<b>SESSION 4</b>	03:00 p.m.-04:30 p.m.
<b>Full Auditorium</b>	Roundtable Discussion: Anti-doping in Sports Chair: <b>Terry Ali</b>
	Panelists: <b>Michelle Stoute-Lopez</b> - Doping Control Officer, Ministry of Sport, Trinidad & Tobago <b>Judith Joseph</b> - Legal Officer, Ministry of Sport, and RADO Board Member for Trinidad & Tobago <b>Rachel Irving</b> - University of the West Indies – Mona
<b>CULTURAL EVENING</b>	05:30 p.m.-08:00 p.m.
<b>Grounds of the Office of the Principal</b>	Various Artistes

## FRIDAY, JANUARY 17, 2014 – CONFERENCE DAY 2

Registration	08:30 a.m. -12:00 noon
<b>SESSION 5</b>	09:00 a.m. – 10:30 a.m.
<b>Full Auditorium</b>	Sport Science and High Performance: Fitness, Training and Rehabilitation Chair: <b>Tobias Ottley</b>
	<b>Farid Youssef</b> Harnessing the brain: the next frontier for elite athletic performance
	<b>Gregory Seale</b> Functionally Training the Hamstrings: Considerations for Strength and Power Production and Bio-Mechanical Efficiency
	<b>Sybele Williams</b> Biomechanics: Contribution to the Rehabilitation and Future Performance of the Professional Athlete
	<b>Miguel Jagessar</b> Investigating the effects of body position for horizontal bench press on activation levels of three muscles
BREAK	10:30 a.m.-10:45 a.m.

# Programme Agenda

<b>CONCURRENT SESSION 6</b>	10:45 a.m.-12:15 p.m.
<b>Auditorium A</b>	<p>Women, Gender and Sport Chair: <b>Patricia Mohammed</b></p> <p><b>Akilah Carter – Francique</b> Hear my call? Benefits of Black female sport participation on health and wellness</p> <p><b>Dylan Kerrigan</b> Language, Power and an Emic Perspective: Small Goal Football in the Caribbean</p> <p><b>Stephanie Leitch</b> Do You Have the Balls to Play Ball?</p> <p><b>Danielle Gabay</b> Listening to the Voices: The Experiences of Black Female Student Athletes in Canadian Higher Education</p>
<b>CONCURRENT SESSION 6</b>	10:45 a.m.-12:15 p.m.
<b>Auditorium C</b>	<p>Sport Studies: Approaches to Education Chair: <b>Anthony Creed</b></p> <p><b>Jafus Cavil</b> An explanatory analysis of HBCUs and Caribbean Universities Athletics Programs</p> <p><b>David Benjamin</b> Techniques that facilitate full engagement of athletes with varying disabilities</p> <p><b>John Andrew Felix</b> Approaches implemented by the T &amp; T Professional Football League (T &amp; T Pro League) to prevent the infection of players by HIV</p>
LUNCH	12:15 p.m.-01:15 p.m.

# Programme Agenda

<b>CONCURRENT SESSION 7</b>	01:15 p.m.-02:45 p.m.
<b>Auditorium A</b>	Sports Medicine, Health and Athletics 2 Chair: <b>Kerry Dollaway</b>
	<p><b>Carla Rauseo</b> Current shoulder pain and risk factors in young swimmers from Trinidad: A Pilot Study</p> <p><b>Anyl Gopeesingh</b> Understanding Injuries in Elite Track and Field Athletes: A TT experience</p> <p><b>Terence Babwah</b> An audit of injuries sustained in the Trinidad and Tobago Women's Football League in 2009</p> <p><b>Peer Nasseir</b> The epidemiology and etiology of Volleyball injuries and implications for coaching</p>
<b>CONCURRENT SESSION 7</b>	01:15 p.m.-02:45 p.m.
<b>Auditorium C</b>	Sport Development and Peace Chair: <b>David Benjamin</b>
	<p><b>Marion Keim Lees</b> The Role of Universities in Sport, Development and Peace</p> <p><b>Ben Sanders and Mark Mungal</b> M&amp;E is not your enemy: Understanding Impact in Sport for Development</p> <p><b>Nadim Nassif</b> Politics and Sport Policy in Lebanon</p> <p><b>Lisa Seepaul</b> White Ascendancy: Bio-capital Material Performativity Within Transnational Consortium Alliances. A Case Study: Right to Play and MasterCard</p>
BREAK	02:45 p.m.-03:00 p.m.

# Programme Agenda

<b>SESSION 8</b>	03:00 p.m.-04:30 p.m.
<b>Full Auditorium</b>	<b>Round Table Discussion:</b> Sports and the Media Chair: <b>Sunity Maharaj</b>
	Panelists: <b>Kwame Laurence</b> – Online Editor, Express <b>Valentino Singh</b> – Sports Editor, Trinidad Guardian <b>Lasana Liburd</b> - Managing Director and Editor, Wired868.com <b>Rey Davis</b> – Sportscaster, Power 102 and Boom Champions
<b>CLOSING CEREMONY</b>	04:30 p.m.-05:00 p.m.

## **SATURDAY, JANUARY 18, 2014 – CONFERENCE DAY 3**

<b>SESSION 9</b>	09:00 a.m. – 1:00 p.m.
<b>Institute of Critical Thinking, 2nd Floor,</b>	Technical Meeting – <b>Selected Participants ONLY</b> Chair: <b>Jay Coakley</b>

# Abstracts – Session 2

## PSYCHOLOGY, SOCIOLOGY AND SPORT: IMPLICATIONS FOR THE CARIBBEAN

### **Perceptions of Sport Psychology in Trinidad and Tobago**

Margaret Ottley, Ph.D.  
West Chester University, PA, USA  
Email: [ottleym1@hotmail.com](mailto:ottleym1@hotmail.com)

This investigation was a psychological analysis of the degree of receptivity towards sport psychology in Trinidad and Tobago within a socio-cultural context. The purpose of the study was to initiate sport psychology studies in English speaking Caribbean islands and to investigate the knowledge and perceptions of selected Trinidad and Tobago coaches and athletes regarding sport psychology consultation. No studies in sport psychology have ever been done in Trinidad and Tobago or any of the Caribbean islands. The increased demands for superior athletic performance have led Trinidad and Tobago's coaches and athletes to seek alternative strategies to enhance their performance.

Participants were asked to complete two questionnaires: the Ottley Demographic Questionnaire (ODQ) and the Sullivan and Hodge (1991) Coaches and Athletes Survey (SHCAS). In an initial study done in 2000, the questionnaires were distributed to 57 coaches and athletes 18 years of age or older. The sample was drawn from the following six major sports identified by the Trinidad and Tobago Olympic Committee (TTOC): cycling, field hockey, football (soccer), netball, rifle, and rugby. The study was replicated in 2009 with a total of 76 participants from 31 different sport disciplines.

For both studies, it was hypothesized that there were no statistically significant differences on scores of knowledge and perceptions regarding sport psychology consultation in Trinidad and Tobago. Additionally, demographic differences were investigated between the study sample and the population statistics to Trinidad and Tobago.

The results of both studies indicated that there was an overall need for knowledge base and culturally sensitive developmental programs in sport psychology. In 2009, 86% of the participants reported to have inadequate knowledge of PST and 100% were interested in working with a sport psychology consultant. Only 14% of participants found that they adequately met the psychological needs of their sportspersons. It was noted that while participants were comfortable dealing with the physical and technical aspect of sports, 47% were not comfortable dealing with the psychological needs of their athletes. There was a perception among sport groups that sport psychology services would contribute to the improvement of their sport performance.

# Abstracts – Session 2

## PSYCHOLOGY, SOCIOLOGY AND SPORT: IMPLICATIONS FOR THE CARIBBEAN

### **Sport Sociology and the Origins of NASSS: A historical overview and discussion of issues, problems and future directions**

Andrew Yiannakis, Ph.D.<sup>1</sup> Merrill Melnick, Ph.D.<sup>2</sup> & Troy Morgan, M.S.<sup>3</sup>  
University of Connecticut,<sup>1</sup> University of New Mexico,<sup>1</sup> State University of New York,  
College at Brockport,<sup>2</sup> University of New Mexico<sup>3</sup>  
Emails: [ayiann@unm.edu](mailto:ayiann@unm.edu) <sup>1</sup> [mmelnick@brockport.edu](mailto:mmelnick@brockport.edu) <sup>2</sup> [troymorg@unm.edu](mailto:troymorg@unm.edu) <sup>3</sup>

The emergence and development of the North American Society for the Sociology of Sport (NASSS) is inexorably intertwined with the growth of sport sociology in North America and Europe. This paper focuses on this relationship, provides a historical context, addresses current problems, and creates a basis for discussing future directions for both the field and the organization. Furthermore, the authors extend the issues raised in the sociological study of sport in North America and discuss the implications as it relates to the study of sport in Caribbean society.

# Abstracts – Session 2

## PSYCHOLOGY, SOCIOLOGY AND SPORT: IMPLICATIONS FOR THE CARIBBEAN

### **Assessing Mental Toughness in Trinidad & Tobago Male Athletes**

Khan, Katija<sup>1</sup>, Clough, Peter J.<sup>2</sup>, Youssef, Farid<sup>3</sup>

1. Department of Psychiatry, University of the West Indies, Trinidad

2. Department of Psychology, University of Hull, United Kingdom

3. Department of Physiology, University of the West Indies, Trinidad

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Mental toughness (MT) is an increasingly popular concept in sport which describes an athlete's ability to withstand stress and adverse circumstances and perform consistently to the best of their abilities. MT has been shown to correlate significantly with capacity for exertion, coping with pain, compliance with rehabilitation programmes and competition level. While it has been variably defined and measured in the literature, the concept has not been investigated among Caribbean populations and, as such, its validity and utility are unknown.

This study's aims are threefold: to validate a mental toughness measure for use in Caribbean populations, to assess mental toughness in athletes at varying levels of competition and to compare mental toughness across cultures.

The Mental Toughness Questionnaire (MTQ-48) is one of the most popular MT instruments worldwide and is based on a model which assesses four components: control, commitment, challenge and confidence. The MTQ-48 was administered to samples of male non-athletes, recreational, university level and Division 1 athletes in Trinidad. Scores were compared across competition levels and correlations with coach expectancy ratings, resilience and performance strategies were obtained. Cross-cultural comparison of MTQ-48 scores was also evaluated in university students and semi-professional athletes in Trinidad and the UK.

The study is ongoing, but preliminary results indicate that the MTQ-48 is easily administered and appropriate for use in the Caribbean. Early trends indicate mental toughness is correlated with competition level and coach ratings. The applicability of the MTQ-48 and the potential for MT training to improve performance is discussed along with its contribution to Caribbean sports psychology.

# Abstracts – Concurrent Session 3

## SPORTS MEDICINE, HEALTH AND ATHLETICS 1

### **Lactate Metabolism and Adiposity in Elite Athletes**

Aldeam Facey and Rachael Irving

Department of Basic Medical Sciences, Faculty of Medical Sciences

University of the West Indies – Mona, Jamaica

Email: [rachel.irving@uwimona.edu.jm](mailto:rachel.irving@uwimona.edu.jm)

Background: Lactate metabolism is an integral pathway in physical exercise and adipose cells produce approximately 30% of lactate metabolized. Numerous contrasting views exist regarding the physiological effects of lactate and its role post-production and in body composition. Purpose: This paper attempted to clarify and highlight the significance of lactate in exercise and show how sustained lactate threshold is related to adiposity. Methods: Lactate levels were compared pre- and post-exercise in 15 elite athletes with BMI between 23 -26 kg/m<sup>2</sup> and 15 untrained individuals of similar age and BMI. Results: Recovery indicator as measured by the change in lactate levels pre- and post-exercise revealed that the athletes showed the greater decrease/recovery (2.5mmol/L  $\pm$  6.6; 11.6%) vs. (1.8 mmol/L  $\pm$  4.3;-22.9%) for untrained individuals. From the athletic group those with normal BMI showed marked decrease/ recovery (3.0mmol/l $\pm$ 2.9; 27.0%). Conclusion: Lactate production is associated with muscular fatigue; a major limitation in athletic performance. This fatigue is not exclusively due to the decrease in pH but the production of H<sup>+</sup> ions which depresses muscle functions. It is also very important that the lactate produced to satisfy high energy demands is cleared from the muscles and metabolized by the liver or be utilized as an energy substrate. Lactate is transported in the skeletal muscles through the plasma monocarboxylate transport (MCT) system and is utilized by muscles such as the heart and red skeletal muscles. There is a marked positive correlation existing between adiposity and lactate production. Numerous physiological properties inclusive of adiposity, VO<sub>2</sub> max, lactate threshold and insulin sensitivity affect and regulate lactate production.

# Abstracts – Concurrent Session 3

## SPORTS MEDICINE, HEALTH AND ATHLETICS 1

### **What colour is your urine? The effect of exercise on hydration status in student athletes**

Sinead Salandy and Marquitta Webb, Ph.D., RD, LN

Department of Agricultural Economics and Extension, Faculty of Food and Agriculture,  
The University of the West Indies – St. Augustine, Trinidad and Tobago, West Indies

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**Background:** Despite the danger of dehydration during physical performance, many athletes do not hydrate before, during, and after exercise or a sporting event. Physical performance is diminished by impaired physiological responses due to dehydration as an effect of exercise. Additionally, weight losses of  $\geq 2\%$  of body mass after exercise is a risk factor for dehydration. **Purpose:** To investigate the effect of exercise on hydration status of student athletes at a university campus using urine color change and percentage weight loss. **Methodology:** Athletes from eight sporting disciplines participated in the study. Data were collected at the beginning and after the athletes' practice sessions for both outdoor and indoor sporting events. Data collection began with a structured questionnaire. Urine specimens were collected and compared to a standard urine color scale. The following anthropometric procedures were utilized for this study: height, weight, and BMI. Data were analyzed using SPSS version 12. Paired sample t-test was utilized to compare urine color before and after practice, as well as the difference in weight loss before and after practice. The level of significance was set at 0.05. **Results:** Out of the 52 athletes who participated in the study, 36 (69.2%) were males and 16 (30.8%) females with a mean age of  $22.865 \pm 3.206$ . Hydration status and weight after physical activity were significantly altered ( $p = <0.001$ ) and ( $p = <0.001$ ), respectively. 17.3% of the study population had weight losses that exceeded 2%. **Conclusion:** The results suggest a possible link among urine color, weight loss, fluid intake and hydration status among the athletes. Exercise increases dehydration and causes weight loss due to fluid losses in the athletes. Attention should be given to fluid supplementation and individualization of fluid intake for each athlete.

# Abstracts – Concurrent Session 3

## SPORTS MEDICINE, HEALTH AND ATHLETICS 1

### **Nutritional knowledge and attitudes of adolescent swimmers in Trinidad & Tobago**

Safiya Beckford and Marquitta Webb, Ph.D., RD, LN

Department of Agricultural Economics and Extension, Faculty of Food and Agriculture,  
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**Purpose:** To investigate the level of nutrition knowledge and attitude of adolescent swimmers training competitively in Trinidad and Tobago. **Methodology:** A self-administered questionnaire, which consisted of 21 nutrition knowledge and 11 attitude statements, was utilized to assess the level of nutrition knowledge and attitude of adolescent swimmers. For the assessment of nutrition knowledge, correct answers were given a score of “1” and incorrect answers were given a score of “0”. For the evaluation of attitude towards nutrition, a score ranging from “1-5” was assigned to each response, “5” was given to the most positive response and “1” was given to the most negative. Data were analyzed using SPSS version 21.0. ANOVA was used to compare nutrition knowledge and attitude between sex, age, level of education, and number of nutrition classes attended. Pearson correlation was used to evaluate the relationship between nutrition knowledge and attitude. **Results:** The sample comprised of 220 swimmers with a mean age of  $14.56 \pm 2.544$ . The mean nutrition knowledge score was  $10.97 \pm 2.897$  and mean attitude score was  $41.69 \pm 6.215$ . Nutrition knowledge was positively and significantly related to the number of reported nutrition sources ( $p = 0.005$ ). Nutrition knowledge was positively and significantly related to the attitude ( $p = 0.027$ ). **Conclusion:** Athletes lack nutrition knowledge but have a positive attitude towards nutrition, which may indicate receptiveness to future nutrition education.

# Abstracts – Concurrent Session 3

## SPORTS MEDICINE, HEALTH AND ATHLETICS 1

### **Monitoring training fatigue with the orthostatic heart rate test during 9 weeks of intensified training in biathletes**

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In monitoring the effects of training and non-training stress on an athlete, parameters that are inexpensive and practical to measure are preferred. Moreover, it is essential that such measures be accurate enough to give athletes and sport coaches scientific feedback on an athletes' preparedness to train.

The aim of this investigation is to determine the effectiveness of the orthostatic heart rate (OHR) test when tracking alterations in training stress during 9 weeks of intensified training in biathletes. To determine this, previously identified functional, haematological and hormonal markers of overreaching/overtraining OT/OR were examined during the 9-week period and the results correlated with that of the OHR indices. Eleven trained biathletes (age [mean  $\pm$  SEM]: Male 22.2  $\pm$  0.9 yr, Female 28.2  $\pm$  2.0 yr; height: Male 182.3  $\pm$  3.1 cm, Female 163.2  $\pm$  3.2 cm;  $\text{VO}_2\text{max}$ : Male 63.9  $\pm$  2.7  $\text{ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ , Female 54.5  $\pm$  1.6  $\text{ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ ) underwent intensified training over a 9 week period. Intravenous blood samples, OHR, heart rate variability (HRV) and 30 minute standardized sub-maximal treadmill tests (STT) were undertaken at baseline, during the three training blocks (pre-, mid-, post-; training blocks duration 17  $\pm$  2.2 days) and at the end of the 9 week period.

When correlated with the resting heart rate RHR index of the OHR test, strong correlations were found for submaximal HR (-0.71), submaximal BL (-0.72), testosterone (-0.86), FTCT (-0.71), as well as haemoglobin (Hb) (-0.88), and haematocrit (Hct) (-0.85) levels over the 9-week training period. Moreover, the P30 index revealed moderate correlations for submaximal HR (0.56), submaximal BL (0.34), LF (0.46), HF (.33), testosterone (0.41), Hb (0.49) and Hct (0.53) over the same training period. However, the peak upon standing (PH) index only produced a moderate correlation with cortisol (0.49) whereas correlations with all other indices were weak.

Collectively, these findings suggest that the morning RHR index remains one of the most effective and practical non-invasive tools to use by coaches and athletes when monitoring training status and preparedness to train.

# Abstracts – Concurrent Session 3

## SPORT BUSINESS AND ECONOMICS

### **Sport Tourism – A Viable Economic Development Option?**

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Sport tourism is defined as travel for the purpose of engaging in a sport event whether as an active participant or spectator. The sport event can be training as an athlete, engagement in competition, attendance at conferences or workshops and attendance at competitions as a spectator or enthusiastic team supporter. Sport tourism has risen to prominence in the world over the past two decades to such an extent that it has been identified as one of the fastest growing industries of the contemporary era. Growth forecasts are extremely positive even in the midst of the global economic circumstance of the past five years. Generally, hosts of sports tourism activities aim to boost both the image of their cities and countries and generate considerable income during the time of the event as well as for an extended period thereafter from the planned legacy of the event. It has often been argued that the Summer Olympics and the FIFA World Cup are easily the most popular global sport events and a veritable gold mine in respect of sport tourism's economic impact on host nations. This paper examines the issue of sport tourism as a viable economic development option with specific reference to the Summer Olympic Games. The Summer Olympic Games of Barcelona (1992), Atlanta (1996), Sydney (2000), Athens (2004) and Beijing (2008) are analysed in respect of the economic impact on the respective cities and by extension, countries. The evidence from the aforementioned Summer Olympics suggest that there are numerous challenges arising from the commencement of the bid process through to several years following the conclusion of the event that have left us in a quandary as to the viability of hosting such mega events as an economic investment strategy undertaken by any city and country regardless of size.

# Abstracts – Concurrent Session 3

## SPORT BUSINESS AND ECONOMICS

### **Sports Law and its application to the Caribbean**

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Sports Law has emerged within the last two decades as one of the fastest evolving arms of the law. In many instances, well established juridical concepts have been applied to the sports industry while on other occasions, sport-specific legal principles have been created.

The aim and the scope of the paper were: a) to explore the core subject matter of sports law, with a specific focus on how it applies to the Caribbean b) to examine both the judicial and academic contexts of the topic showing how the region has treated with the intrusion of the law into the sports industry.

The following research methods were incorporated: 1) an evaluation of theoretical approaches to sports law internationally, 2) a comparative study of sports-related case law in the Caribbean region, emphasizing matters resolved through arbitration and litigation, 3) a comparative analysis of sports-based legislation in the region, and 4) the use of questionnaires to assess the landscape of sports dispute resolution.

Sports law in the Caribbean is in its early stages of development and is still largely unknown to many persons. It will grow because of the commercialization of the global sports industry and against the backdrop of the increasing successes by this region's athletes in multiple sports. Sports administrators prefer the extra-judicial settlement of their disputes when compared to the option of litigation.

Sports law is an accepted branch of legal study and practice. Its current reach is global and has gradually been incorporated into Caribbean courts, dispute resolution systems and academic institutions.

# Abstracts – Concurrent Session 3

## SPORT BUSINESS AND ECONOMICS

### **Alternative tourism development in Trinidad: assessing the potential of sport tourism as a niche product**

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The operating environment for tourism continues to evolve in this ever increasing competitive global tourism marketplace. Destinations are under tremendous pressure in some instances to remain competitive and others are striving to become competitive. For the islands of Trinidad and Tobago, particularly Trinidad, the energy sector has assumed the dominant role of income earner and has been the engine of growth over the last four decades. As a result, the country's travel and tourism growth has been slow moving as compared to the other islands in the Caribbean. Government policies have historically sought to limit and control tourism activity and the oil boom of the 1970s diverted attention away from tourism as a source of foreign exchange revenues. However, within recent times, tourism has been identified as one of five sectors that should be developed to contribute to the country's economic development and reduce the country's reliance on the energy sector.

As compared to its Caribbean neighbours, Trinidad does not possess the azure seas and unblemished white-sand beaches that the Caribbean has become known for. Therefore, if Trinidad is to establish a competitive edge in the tourism industry, consideration must be given to a viable alternative to the traditional 3S product of the Caribbean. It is with this in mind that this paper seeks to examine the extent to which Trinidad can be developed as a competitive sport tourism destination. The paper will firstly discuss the contribution that sport tourism can make to tourism development at a destination. An analysis of the sport tourism destination resources will follow with particular emphasis on prospects for growth and the challenges that can hinder growth. Finally, consideration would be given to the potential markets that should be targeted within the sport tourism industry given the specific Trinidad context.

# Abstracts – Concurrent Session 3

## SPORT BUSINESS AND ECONOMICS

### **An overview of Trinidad & Tobago Sports & Recreational Facility Management Structure**

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Background: Sport and recreational facilities of all shapes and sizes are an ingrained part of global sport management culture and necessary for the development of all sporting discipline. Trinidad & Tobago has over 540 sport and recreational facilities, which are considered to be underutilized and poorly maintained. Aim: To review possible management structures that can be used to improve usage and maintenance Method: Visited 125 facilities and met with stakeholders from the communities. Met with the fourteen (14) Regional Corporations' management teams and discussed the management and maintenance program of their facilities. Information was also collected, via a questionnaire, from 50 random facilities. Results: There are no consistent maintenance program and formal management structure. Conclusion: There is a need to review the different types of management structure available, which may assist in the increasing the number of users and ensure better maintenance of the sports and recreational facilities.

# Abstracts – Session 5

## SPORT SCIENCE AND HIGH PERFORMANCE: FITNESS, TRAINING AND REHABILITATION

### **Harnessing the brain: the next frontier for elite athletic performance**

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Traditional efforts to improve athletic and other forms of elite performance have focused upon individual physical attributes. As a result, athletes are encouraged to become bigger, stronger and faster and ultimately put on almost superhuman performances. However, we may be close to maximising the physical potential of the human body to perform, and hence need to seek elsewhere for a competitive edge. Increasingly, research suggests that the 'x'-factor common to any elite athletes has less to do with brawn and more to do with highly tuned neural and cognitive processes. This paper will explore the neuroscientific basis of elite performance and suggest that this is an area ripe for application in the Caribbean context as we seek to maintain and improve our standing within the world athletic community.

# Abstracts – Session 5

## SPORT SCIENCE AND HIGH PERFORMANCE: FITNESS, TRAINING AND REHABILITATION

### **Functionally Training the Hamstrings: Considerations for strength and power production and bio-mechanical efficiency**

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A meta-analysis was done to examine the effectiveness of combining strength training and running technique to reduce the incidence of hamstring injuries in sport and improve performance efficiency. The studies analysed, showed a correlation between the use of eccentric loading of the hamstrings and combining coordination drills as an effective means to reduce the injury and/or re-injury rate. One study showed that eccentric training of the hamstrings reduced injury rates by 60% - 70%. This is significant since re-injury rates are as high as 31%.

The research shows that there is a need for eccentric strength and endurance for the braking mechanism of the hamstring muscle but most importantly the coordination and timing of the contraction for optimal efficient movement. A significant time is lost from competition and training after a hamstring injury with a high possibility of hamstring re-injury. Since the anatomy of the hamstrings places it in a vulnerable position during running, training the hamstrings for the demands of the sport is necessary.

# Abstracts – Session 5

## SPORT SCIENCE AND HIGH PERFORMANCE: FITNESS, TRAINING AND REHABILITATION

### **Biomechanics: Contribution to the rehabilitation and future performance of the professional athlete**

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Background: The performance of an athlete is highly dependent on joint functionality and the corresponding range of motion (ROM). The subjectivity inherent in visual assessment makes comprehensive evaluation and monitoring of joint behaviour and/or coordination during the complicated three-dimensional movements characteristic of sporting performance difficult. An objective and quantitative procedure is required with which to assess changes in such movement patterns. Method: Investigations were performed with 8 male patients with shoulder injury, 11 healthy male subjects and 7 professional handball players. Screening involved the use of three-dimensional video-based motion analysis and movement tests, which were based on daily activities, in order to assess individual movement patterns. Findings: A reproducible characteristic movement pattern can be specified for healthy subjects. Furthermore, these movement patterns can be defined by quantitative parameters. As expected the compensatory movement strategies of patients differ considerably from those of healthy subjects. However, the movement characteristics of the professional handball players also differed considerably from those of healthy subjects. Interpretation: In the case of complex, multi-joint movements involving many degrees of freedom an experimental procedure has been developed which can be used to objectively analyse and compare the individual movement patterns of athletes. The introduction of objective movement parameters facilitates intervention approaches and rehabilitative therapies to more accurately target successful outcomes, reduce successive injuries and inform future training protocols.

# Abstracts – Session 5

## SPORT SCIENCE AND HIGH PERFORMANCE: FITNESS, TRAINING AND REHABILITATION

### **Investigating the effects of body position for the horizontal bench press on activation levels of three muscles**

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The horizontal bench press (HBP) is a popular exercise used for strength testing, power-lifting, bodybuilding and for developing upper body strength. The HBP is a common cause of shoulder injuries during weight training. A flat bench surface severely restricts movement of the scapula, thereby artificially exaggerating the movement of the glenohumeral joint. Larsen (2008), recommended a pool noodle to elevate the spine and allow more natural retraction and protraction of the scapula or scapulohumeral rhythm. Secondly, the HBP requires three common lower back orientations of flat, naturally arched and arched. **PURPOSE:** To determine the effects of scapula mobility and lower back orientation on activation levels of the upper clavicular (UCPM) and lower sternocostal (LSPM) heads of the pectoralis major and anterior deltoid (AD) muscles using surface electromyography (SEMG). **METHODS:** Fourteen males with two years of weight training experience volunteered for the study. Two ML865 Power Lab 4/25T data acquisition systems coupled by a common trigger recorded electromyographic (EMG) activity. The filtered EMG was full-wave rectified, integrated, and time normalised and expressed as a percentage of maximum mean integrated EMG (%MmIEMG). Repeated-measures ANOVA recorded differences in %MmIEMG between five exercise positions for each muscle at  $p < 0.05$ . **RESULTS:** No significant differences in EMG activity were determined for change in scapula mobility and lower-back orientation. **CONCLUSION:** A contoured surface elevating the spine was used for the HBP without affecting activation levels of the UCPM, LSPM and AD. This position possibly prevents shoulder injuries. Any of the lower back orientations is recommended for performing the HBP without affecting activation levels of the three muscles. Lifters should utilize a lower back orientation that is comfortable.

# Abstracts – Session 6

## WOMEN, GENDER AND SPORT

### **Hear my call? Benefits of Black female sport participation on health and wellness**

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The purpose of this paper is to explicate the significance of sport participation on Black girls' health and wellness. According to the Centres for Disease Control and Prevention (CDC) Black (e.g., African American) girls and women in living in the United States of America (USA) have the highest rates of cardiovascular disease, obesity, and certain types of cancers (e.g., breast). For example, when comparing rates of obesity, 29.2 percent of Black girls are obese as compared to Black boys at 19.8 percent and White girls at 14.5 percent. Subsequently, the CDC (2013) suggests the primary behaviours and factors that contribute to the obesity epidemic and the aforementioned diseases are (a) decreased physical activity, (b) poor nutritional habits, and (c) knowledge. Additionally, the CDC and World Health Organization concur that social determinants such as race, gender, and social class also contribute to said conditions. Acknowledging the role of behaviours, factors, and social determinants, why should Black girls be encouraged to participate in and utilise sport as a method to address health and wellness? Sport is one form of physical activity that, when performed, can provide health benefits through "rigorous physical exertion"; however, when examining rates of sport participation, Black girls have low participation rates as youth at 15 percent. Consequently, as Black girls become women, their rates of sport participation and the types of sports they participate in continue to decrease (e.g., intercollegiate sports), especially when compared to their aforementioned counterparts. There are a number of challenges and barriers Black girls face with gaining access to sport participation (e.g., gender stereotypes, economics). Hence, the goal of this paper is to (a) acknowledge the health statistics and sport participation challenges and barriers and (b) provide strategies to increase sport participation and the health and wellness of Black girls and women in the USA and beyond.

# Abstracts – Session 6

## WOMEN, GENDER AND SPORT

### **Language, power and an emic perspective: small goal football in the Caribbean**

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This paper fleshes out anthropological ideas on small-goal football in the Caribbean for a book chapter already in production. The content was collected via long term, ethnographic research in Jamaica and Trinidad, including participant observation, and provides both phenomenological and ethnological information of the socio-cultural institution itself.

Three short vignettes are offered in this presentation: One on language-use on the small-goal football field (racial/ethnic nicknames and others words). One on power-relations on the small-goal football field (who has power amongst these footballing men and why?) And one on a Caribbean love of skills on the small-goal football field (what anthropologists call an “emic” perspective).

These three vignettes help us to conceive what the phenomenon and social institution of small-goal football in the Caribbean can mean in the lives of Caribbean people in three distinct ways. 1) We learn about the uniqueness of the Caribbean social-reality, and how the scars of our Western history such as racial hierarchy and white supremacy can be remade through sport under a banner of continuity and change. 2) We learn about sport and masculinities, and how the everyday qualities of masculinities in the Caribbean can be both reorganised and reinforced on the field of play. And 3) we see sport through the eyes of local Caribbean men who engage in small-goal football, providing a bottom up view of the social institution itself, and the cultural mirror this shines on what small-goal means to some Caribbean men.

Many agree that sport reflects culture. Taken together, the anthropological insights from the small-goal football field in this presentation provide evidence to better understand the lives, pressures and realities that some men living in the Caribbean experience.

# Abstracts – Session 6

## WOMEN, GENDER AND SPORT

### **Do you have the balls to play ball?**

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Based on both traditional and modern understandings, a Warrior is someone engaged aggressively or energetically in an activity, cause or conflict, while a Princess refers to the daughter of a monarch, noblewoman or someone who displays the genteel characteristics associated with being a Princess. In Trinidad and Tobago, these are the titles given to our national male and female football teams, the Soca Warriors and Soca Princesses respectively. I would like to argue that these names are far from being merely representational but reflect the highly gendered arena of sport, which is both male and heterosexual. An analysis of the language used by male coaches in relation to female football players both on and off the field, reveals how sexism and homophobia shape these interactions and how the promotion of these can result in decreased female participation and an increased management of sexuality and gender identities in women's sport.

# Abstracts – Session 6

## WOMEN, GENDER AND SPORT

### **Listening to the voices: The experiences of black female student athletes in Canadian higher education**

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Reviews of the literature reveal that little is known about minority female student athletes and their experiences within Canadian higher education. This dearth of information is paradoxical considering the academic and athletic legacy of this subgroup, as well as the noted importance of the student experience and athletic participation within postsecondary education. This study has gathered data on the experiences of Black female student athletes. The goal was to gain an understanding of their experiences as students, as athletes, and as Black women. The main research question was: What are the university experiences (academic, athletic, and social) of Black female student-athletes within Canadian universities? This study employed an intersectional framework to examine how race, gender, athleticism and the student role intersect to shape the student experience. Further, the study compared the experiences of Black female student athletes across the four Canadian Interuniversity Sport (CIS) regions. The investigation utilised a mixed method approach consisting of an online survey and in-depth interviews. This paper will present the findings of this study.

## Abstracts – Concurrent Session 6 SPORT STUDIES – APPROACHES TO EDUCATION

### **An explanatory analysis of HBCUs and Caribbean universities' athletic programmes: a special review of the University of the Virgin Islands (HBCU), the University of Puerto Rico – Mayagues, and the University of the West Indies – Mona Athletic Programs**

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The purpose of this study was to examine the intercollegiate athletic programmes and other programme components such as the athletic programmes operating membership alignment in which each programme is operating, number of sports, and classification level (sovereign states or dependencies and other territories) at Historically Black Colleges and Universities (HBCUs) and more specifically the lone HBCU of the Caribbean, the University of the Virgin Islands in relationship to other universities' athletic programmes throughout the Caribbean, particularly the University of Puerto Rico – Mayagues and the University of the West Indies – Mona athletic programmes. A quantitative content methodology framework (Gomm & Davies, 2000) was used in order to study the HBCUs' athletics programmes and Caribbean universities' athletic programmes. As of 2013, a total of 106 HBCU institutions and 151 universities of the Caribbean were identified and examined using a content analysis methodology. Employing the principles of the grounded theoretical approach for analysis (Xie, 2009) revealed the percentage of athletic programmes offering specific sports, as well as significant differences between programmes based on the athletic programmes classification and operating membership in which the athletics programme is an operating member institution, the status of the university (public or private), university description designation, and the university size as well as sport management courses and programme offerings. These findings and recommendations for future research are presented in the discussion and conclusion sections.

# Abstracts – Concurrent Session 6

## SPORT STUDIES – APPROACHES TO EDUCATION

### **Techniques that facilitate full engagement of athletes with varying disabilities**

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As a coach with over twenty years of experience working with persons with Intellectual Disabilities and Physical Disabilities in the Caribbean, I have been able to develop a cadre of best practices that can be used to assist athletes in understanding and interpreting information channelled to them in the realm of sport. It has been my experience that coaches are challenged and feel somewhat helpless when faced with athletes who have a disability. These techniques have been disseminated to coaches in the Caribbean in an attempt to assist with the coaching methodology when working with athletes of varying disabilities. This study seeks to examine the various types of disabilities, and a description of techniques used to work with these athletes. These techniques consider athlete behaviours and characteristics, as well as strategies to improve learning.

The methodology used to gather information was interviews with one hundred (100) persons who have interacted with Special Olympics Athletes in various capacities over the last ten (10) years in the following Special Olympics Programmes; Belize; St Vincent; Trinidad and Tobago and St Lucia. The sample group comprised parents, care providers, teachers, coaches, etc. The questions posed were focused on athletes' characteristics, as well as the observation of athletes in the Caribbean during coaching sessions. A notation of trends and mapping was also utilised to record and document observations of behaviour, similarities and differences experienced in coaching athletes of varying disabilities.

This is an area in the Caribbean that has been deficient as it relates to development for these athletes. The general trend is to rely heavily on observational techniques. This approach to our differently abled athletes can change through advocacy and education for the abilities of these athletes.

# Abstracts – Concurrent Session 6

## SPORT STUDIES – APPROACHES TO EDUCATION

### **Approaches implemented by the Trinidad and Tobago professional football league (T&T pro league) to prevent the infection of players by HIV**

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This study investigates the extent to which preventative approaches are implemented to mitigate the transmission of HIV in the Trinidad and Tobago Professional Football League (PRO League). It was done as a result of reports on the prevalence of Human Immunodeficiency Virus (HIV) in Trinidad and Tobago. These reports indicated the highest prevalence of HIV in Trinidad and Tobago is in the 15 – 36 age groups; this is the age group into which most of the players of the PRO League fall.

The literature review indicated that behaviour change communication (BCC) in the sporting environment can lead to the reduction of risky sexual behaviour by athletes, in the short and medium term.

The probability of infection levels of sporting individuals who contracted HIV during sporting activities was carefully scoured through reviews of the literature related to HIV prevention strategies employed in sporting organisations. The literature indicated that in no instance has it been proven that an athlete was infected by HIV as a result of injury received while engaged in sporting activity. The instances of infection to athletes have resulted from their life styles except Arthur Ashe who was infected through blood transfusion.

A face to face survey was conducted among the players of the eight clubs in the professional football league in Trinidad and Tobago. The findings from the survey indicate that Information Education and Communication (IEC) on HIV are not provided by the T&T Pro League. To some extent it is indicated that protective gear are not widely used. Multiple sexual partners and sporadic testing by players are evident.

It is concluded that the professional football league does not have a programme to prevent the transmission of HIV. Cognitive learning theory supports the use of BCC in behaviour change interventions which includes imaging. Mentoring and role modelling have proven to be positive motivating instruments in instituting and concretising positive behaviour change in the short to medium term.

It is recommended that an awareness programme using BCC approaches be implemented by the PRO league. Clubs must be intricately involved in the programme.

# Abstracts – Concurrent Session 6

## SPORTS MEDICINE, HEALTH AND ATHLETICS 2

### **Current shoulder pain and associated risk factors in young swimmers from Trinidad: a pilot study**

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Background: Shoulder pain is one of the greatest issues in modern competitive swimming and several risk factors have been identified. Purpose: To establish the occurrence of shoulder pain and functional limitation in young competitive swimmers from Trinidad and Tobago and to investigate the presence of known risk factors in this population. Methods: Seventy-one competitive swimmers (10 - 25 years of age) were recruited to fill in a self-administered questionnaire, involving demographics, training details, the visual analogue scale (VAS), and the Kerlan-Jobe Orthopaedic Clinic Shoulder Score (KJOC). Results: Sixty-two swimmers (37 male, 25 female) actually completed the questionnaire. The mean VAS score was 2.77 ( $\pm 2.55$ ) with almost 70% of the athletes having suffered from shoulder pain during the previous 12 months. The mean score of the KJOC was 80.99 ( $\pm 19.01$ ) with more than 50% of the athletes having a score below the cutoff for normal shoulder function of 90 points. The multiple regression analysis revealed that age, gender, and kilometres swum per week could contribute to the prediction of the VAS (adjusted  $R^2 = 0.351$ ,  $p < 0.05$ ). Only age could significantly account for the 24.8% of the adjusted variance of the KJOC. Conclusion: There appears to be a great presence of shoulder pain and functional limitation in swimmers from Trinidad and Tobago. Age was the greatest predictor for both shoulder pain and limited shoulder function.

# Abstracts – Concurrent Session 7

## SPORTS MEDICINE, HEALTH AND ATHLETICS 2

### **Understanding injuries in elite Track and Field athletes: A TT experience**

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Background: Injuries occur in Track and Field athletes with 1 in 8 registered athletes at World Games 2009, incurring an injury (Alonzo et al 2010). An injury is defined as any musculoskeletal complaint. Injuries range from muscle strain injuries to stress fractures. An injury is often as a consequence of intrinsic or extrinsic risk factors or a combination of both. Aim and scope: This paper serves to present formal data on Track and Field athletes representing Trinidad and Tobago at the most elite level of competition. This will serve to direct injury prevention programs. By illustration of cases, insight into the underlying cause and complex nature of injury management will be identified. Methodology: A retrospective review of patient data collected by the Chief Medical Officer for the Trinidad and Tobago National Senior Track and Field Team to the IAAF 2013 World Games Pre-Camp was analysed for the purpose of identifying injury profiles. The Chief Medical Officer, in conjunction with the team's physiotherapist and Massage therapist, made all diagnoses. Results: There were 27 athletes representing Trinidad and Tobago. There were 42 "injuries" affecting 20 of the 27 registered athletes. 74% of injuries were chronic injuries. Tendinopathy was the most prevalent pathology as well as muscle trigger zones. 83% of injuries were lower limb injuries. Conclusion: There is a high prevalence of overuse injuries in track and field athletes representing Trinidad and Tobago at the Elite level. Injury prevention strategies need to be developed and integrated into the athletes' training program. Attention to adequate rehabilitation is fundamental.

# Abstracts – Concurrent Session 7

## SPORTS MEDICINE, HEALTH AND ATHLETICS 2

### **An audit of injuries sustained in the Trinidad and Tobago Women's Football League in 2009**

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Background: There is abundant data of injuries sustained by female footballers at the professional and elite levels of play but little is known about the epidemiology of injuries in amateur women's football leagues. Aim: To determine the incidence of injury, location, nature, mechanism of injury for amateur women footballers in a Trinidad/Tobago National league Methods: The physiotherapist or trainers for all seven (7) teams participating in the TT Women's Football league were invited to provide injury data after matches. These injuries together with the mechanism of injury, time of injury, location of injury and age of players were recorded on a match by match basis. Results: Only six (6) of the seven (7) teams provided data for this study. The incidence of injury sustained by players during the competition was 25.6 injuries/1000hs of match play. There were five "zero"day injuries. Most injuries sustained were new injuries in 19/27(71%) and 58% occurred in players < 20 years old. Knee and leg injuries were the most common injuries 12/32(37.5%) and most injuries resulted from contact between players (17/27, 63%). Most injuries were mild in nature (12/27, 44.4%) and resulted in absence from full training for between one to seven days. Conclusion: Injuries sustained in an amateur women's league were less than that of elite and professional footballers and occurred mainly among the youth players. The need for law enforcement regarding player contact and the implementation of injury prevention programs could possibly further reduce the incidence of injuries in this league.

# Abstracts – Concurrent Session 7

## SPORTS MEDICINE, HEALTH AND ATHLETICS 2

### **The epidemiology and etiology of volleyball injuries and implications for coaching**

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The primary mechanism of an injury is the exposure of the body system to forces that are greater than the system can withstand (Verhagen, Van der Beek, Bouter, Bahr, & Van Mechelen, 2004). The two basic types are acute traumatic injuries (ATI) with a single large force or chronic overuse injuries (COI) with repeated small forces. ATIs are usually caused by player contact or other contact and COIs by no contact (Bahr & Krosshaug, 2007). A literature search was conducted on the epidemiology and etiology of volleyball injuries. The strategies for the prevention of these injuries were also explored in the literature. Injury prevention research was described as a four step process. Firstly, the epidemiology of the problem was identified and described in terms of the incidence and severity of sports injuries (Bahr, & Krosshaug, 2005). The total injury rate was 4.58 for games and 4.10 for practices per 1000 AEs (Agel, Palmieri-Smith, Dick, Wojtys & Marshall, 2007). Of these injuries, ankle inversion sprains were the most prevalent injuries in volleyball practice and competition (Agel et. al. 2007). Secondly, the etiology or the risk factors and injury mechanisms that play a part in the occurrence of sports injuries were identified (Bahr, & Krosshaug, 2005). The injury risk was higher during match play than during training, probably because of a higher intensity of play, and more risks being taken during matches. Sixty-one percent of all ankle sprains occur at the net zone, and the majority happened during contact with either a teammate or an opponent while landing after attacking or blocking. The risk of injury was higher after a previous ankle sprain and the shorter the time since the previous sprain (Verhagen et. al., 2004). Thirdly, the implications for coaching that are likely to reduce the future risk and/or severity of sports injuries were introduced. Such measures were based on information on the etiological factors and the injury mechanisms as identified in the second step (Bahr, & Krosshaug, 2005). In an effort to decrease the incidence of these injuries in volleyball players, a number of training programs, taping techniques and orthotic devices were instituted (Pedowitz, et. al., 2008). Finally, the effect of the measures was evaluated by repeating the first step of the process (Bahr, & Krosshaug, 2005).

# Abstracts – Concurrent Session 7

## SPORT DEVELOPMENT AND PEACE

### **The Role of universities in sport, development, and peace**

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With the increased globalisation of sport and the growth of multi-stakeholder involvement in sport for development (including North – South partnerships) there is a great need for evidence-based sports interventions including programming, management, and monitoring and evaluation of sport for development and peace programmes. There is also a need for strengthening of scientific approaches to sports programming, curriculum development, training, professional development and delivery of the above.

Universities in the South involved in sport and sport development programmes need to take as point of departure the broader national context and socio-economic realities of their countries.

The paper looks at the questions:

1. What is the role of Universities in Sport, Development and Peace?
2. Are universities expected, and if so by whom, to play a crucial role in the field of sport development and peace for the benefit of the lives of their students, sporting talents and communities, countries?
3. Are universities making active and intentional use of their resources and human capital to support sport for development and peace research, teaching and community development?
4. Can universities play a leading role in initiating or even coordinating partnerships with government, NGO's, private sector and sporting organisations to harness expertise, leverage resources and perform capacity building in the field of sport for development and peace?

This paper will use the Interdisciplinary Centre of Excellence for Sport and Development at the University of the Western Cape in South Africa as a case study for a transformative approach and engagement in local, continent wide and global sport and development issues with the aim to make a sustainable difference for a better society to the students and communities we serve.

We will also share our experiences of the collaboration between ICESSD and the First Sport Foundation since 2011 in the field.

# Abstracts – Concurrent Session 7

## SPORT DEVELOPMENT AND PEACE

### **White ascendancy: bio-capital material performativity within transnational consortium alliances. A case study: Right to Play and MasterCard**

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This essay is part of a repertoire of disquisitions that scrutinise the challenges facing sport for peace and development initiatives. It interrogates one “humanitarian” transnational non-governmental organisation, Right To Play, and their collaboration with global financial services and credit card conglomerate MasterCard. This case study highlights the textual pre-figurement of bio-capital corporeality and the resultant effected performativity through multiple axes. Drawing from Foucault and Butler to utilise a critical queer feminist post-structuralist framework of the textual narratives, the findings indicate that the Right to Play and MasterCard collaboration advances a white ascendancy project.

# Abstracts – Concurrent Session 7

## SPORT DEVELOPMENT AND PEACE

### **Politics and sport policy in Lebanon**

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A policy is a plan of action adopted by an individual, government, political party, business or any kind of institution intended to influence and determine decisions. Politics have different definitions, one as a science concerned with influencing governmental policy and another as a competition between different groups for political power. In the optical of governmental policy, a sport policy, defined by the setting up of a structure mechanism and a financing mode, is the resultant of politics. If we take its second meaning, the struggle between different groups for power, we will then be talking about interference of politics in sport policy.

A sport policy is always influenced and shaped by the historical, political, social, cultural and economical characteristics of a given country. Lebanon is a strong example on how the climate of internal political tensions affects the establishment of a sport policy. The political system, known as confessional, or multiconfessional, allocates power proportionally to the eighteen state recognized religious sects, with the presidency office reserved for a Maronite Christian, the premiership for a Moslem Sunni and the speaker of parliament for a Moslem Shia. This system, established in the 1943 National Pact agreed on in the country's independence, renewed in the Taef agreement in 1989, towards the end of the Lebanese Civil War and reviewed in the 2008 Doha Agreement, is unique in the world. In sport, although this distribution of powers according to the religious communities do not exist inside the leading sport bodies (federations, Lebanese Olympic Committee, Ministry of Youth and Sports), informal arrangements, resulting from struggles and compromises, are made, like in Lebanese politics, to allow every community to have a stake in the country's sport movement.

The objective of this paper is, on one hand, to show how the religious groups, stakeholders in the Lebanese government and parliament, are grabbing the different sport disciplines to build communitarian identity and how the confessionalism, the system that governs Lebanese political life, are constantly interfering in the system functioning and financing mode and therefore, systematically hobbling the development of a national sport policy.

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