



ReCon IV: 50th Anniversary
Celebrating the Past, Envisioning our Future

TABLE OF CONTENTS

INTRODUCTION	2
Message from the ReCon IV Co-Committee Chair	2
Message from the ReCon IV Co-Committee Chair	3
PRACTICAL INFORMATION	4
Bus Information.....	4
Conference Hotel and Venue	4
Registration	4
Luggage Storage	5
What to Bring on the Maline Canyon Hike	5
Questions	5
Map of Jasper	6
PROGRAM INFORMATION.....	7
ReCon IV Organizing Committee	7
ReCon IV Subcommittees	7
Photographers.....	8
Official Tweeters	8
Acknowledgements.....	8
Presentation Guidelines	8
Best Oral and Poster Presentations	9
Previous Winners	9
PROGRAM IN DETAIL	10
Thursday, September 4, 2014	10
Friday, September 5, 2014	12
Saturday, September 6, 2014.....	15
KEYNOTE SPEAKERS	18
Rod Murray Address.....	18
Alumni Speaker	19
RESEARCH PRESENTATION ABSTRACTS.....	20
THANK-YOU TO OUR SPONSORS!!	33
PROGRAM AT A GLANCE	34

INTRODUCTION

Message from the ReCon IV Co-Committee Chair

It is with great pleasure that I welcome you to ReCon IV. You are part of a milestone for the Faculty of Physical Education and Recreation - our program is 50 years old. ReCon IV is the first of many 50th anniversary activities planned for the coming year. In light of the anniversary, the conference theme is, *Celebrating the Past, Envisioning the Future*. To celebrate the past, we invited an alumnus, Dr. Joannie Halas, to speak about her graduate experiences in our faculty. To envision your future, we encourage you to take full advantage of the graduate student research, leadership and professional development opportunities, and social events found on the program.



This is also the first year that ReCon has been held in Jasper. I invite you to network with fellow students, staff, and members of faculty while exploring the wonders the town site and surrounding area have to offer.

ReCon, which was first held in 2011, brings together a unique combination of retreat and conference formats. It is a time to be curious, to think, to challenge the ways we think about the world, and learn from each other. The idea for an annual graduate student event was proposed by Dean Kerry Mummery and brought to fruition under the guidance of the Physical Education and Recreation Graduate Student Society (PERGSS) and then Associate Dean Graduate, Dr. Stewart Petersen. I am pleased to continue to support this annual event.

I extend a sincere thank you to the hard working, creative, and committed organizing committee. Their astounding leadership has made the coming days possible.

Welcome all.

Donna Goodwin
Associate Dean (Graduate)

Message from the ReCon IV Co-Committee Chair

Welcome to ReCon IV, the Physical Education and Recreation Faculty's annual graduate student conference and retreat! This one of a kind event takes place in the breathtaking Rocky Mountains and is designed to showcase graduate student research, provide professional development opportunities, facilitate social interactions and networking, and build enthusiasm for the upcoming year. ReCon is an integral part of the graduate student experience, and whether students are new to the faculty or nearing the end of their programs, attendance at ReCon is extremely valuable and a lot of fun!



The 2014 academic year marks the 50th anniversary of our faculty, as such the selected theme for ReCon IV is *Celebrating the Past, Envisioning the Future*. To celebrate the past, an alumna of the faculty, Dr. Joannie Halas (graduated 1999), will be delivering a keynote talk about her experiences studying at U of A, and how they have shaped her academic career. We can also celebrate the recent success of our graduate students through the diverse selection of research presentations offered throughout the weekend. To envision the future, we encourage delegates to think about the future of our faculty and graduate studies. We also hope that the professional development sessions will help students envision where they would like to be in the next year and to plan for a successful and productive year ahead.

Each year ReCon continues to grow and improve. I am pleased to see the diversity of research presentations in the program, and the quality of research being conducted by our students. One tremendous improvement to the planning of ReCon this year is in the process of selecting graduate students to sit on the organizing committee. The new process requires students to apply to sit on the committee as a portfolio chair. This process has given more students the opportunity to get involved and have the opportunity to benefit from the committee experiences. It has also created a more equal distribution of planning tasks.

This will be the first year that ReCon is held in Jasper, Alberta. I hope everyone enjoys the new scenery and activities offered throughout the weekend. On Friday, we will be hiking the Maligne Canyon, which will take us through a journey of waterfalls and picturesque views. On Saturday, there are lots of activity options including a yoga session led by graduate student, Kelsie Acton, and a tour of Jasper.

I would like to thank the members of the ReCon IV Organizing Committee for their hard work and commitment throughout the planning process. I hope you have all enjoyed the experience and gained some valuable planning and leadership skills that will benefit you throughout your careers.

I look forward to meeting the new students and interacting with everyone throughout the weekend!

Jodie Stearns
PERGSS Vice President (ReCon)

PRACTICAL INFORMATION

Bus Information

We will be boarding the bus on Thursday, September 4th at 8:30am **behind the Clare Drake Arena** by the large Zamboni doors (west side of the Van Vliet Building). We will be leaving at **8:45am SHARP!** There will be a 30 minute break in Edson, however we suggest that you bring water and snacks for yourself as it will be at least a four hour bus trip to Jasper. The Jasper drop-off location is at the Sawridge Inn and Conference Center.

The bus will return back to Edmonton on Saturday, September 6th from the Sawridge Inn and Conference Center. It will load at 4:30pm, and will leave at **4:45pm SHARP.** Again, there will be a 30 minute break in Edson and the drop-off location will be behind the Clare Drake Ice Hockey Arena.

Conference Hotel and Venue

Both the conference and hotel accommodation are situated within the Sawridge Inn and Conference Center. The hotel is located along the main street in Jasper and is a short walk from an array of restaurants and shops.

Sawridge Inn contact information: 76 Connaught Drive
Jasper, Alberta
TOE 1E0
(780) 852 5111
<http://sawridgejasper.com>

Registration

Delegates can register between 1:30pm and 3:30pm on Thursday, September 4th.

The registration fee includes:

- Conference registration for all 3 days
- Coffee/snacks at breaks
- 2 continental hot breakfasts (Friday and Saturday)
- 2 boxed lunches (Friday and Saturday)
- Conference dinner at Champs Sports Lounge
- Transportation to group activities in the Jasper area.

Please ensure that you fill out two lunch forms so that you receive a lunch on Friday and Saturday. You can also sign up for a restaurant for dinner on Thursday night, and for yoga (limited to 20 people) or a walking tour (limited to 24 people) on Saturday.

Those who arrive late can pick up their conference bags from Nicholas Kuzik. Please ensure that you fill out two lunch forms so that you receive a lunch on Friday and Saturday.

Luggage Storage

Please be aware that your room may not be ready when you arrive at the hotel as their check in time is 4:00pm. There will be a storage room where you can leave your luggage until your room becomes available.

Similarly on Saturday, the check-out time is 11:00am. You will need to store your luggage on this day as well.

What to Bring on the Maligne Canyon Hike

Weather in the mountains can be very unpredictable. Please plan to bring a water bottle, good hiking shoes or boots, a warm layer, and a wind/rain shell if you plan to participate in the Maligne Canyon hike.

Questions

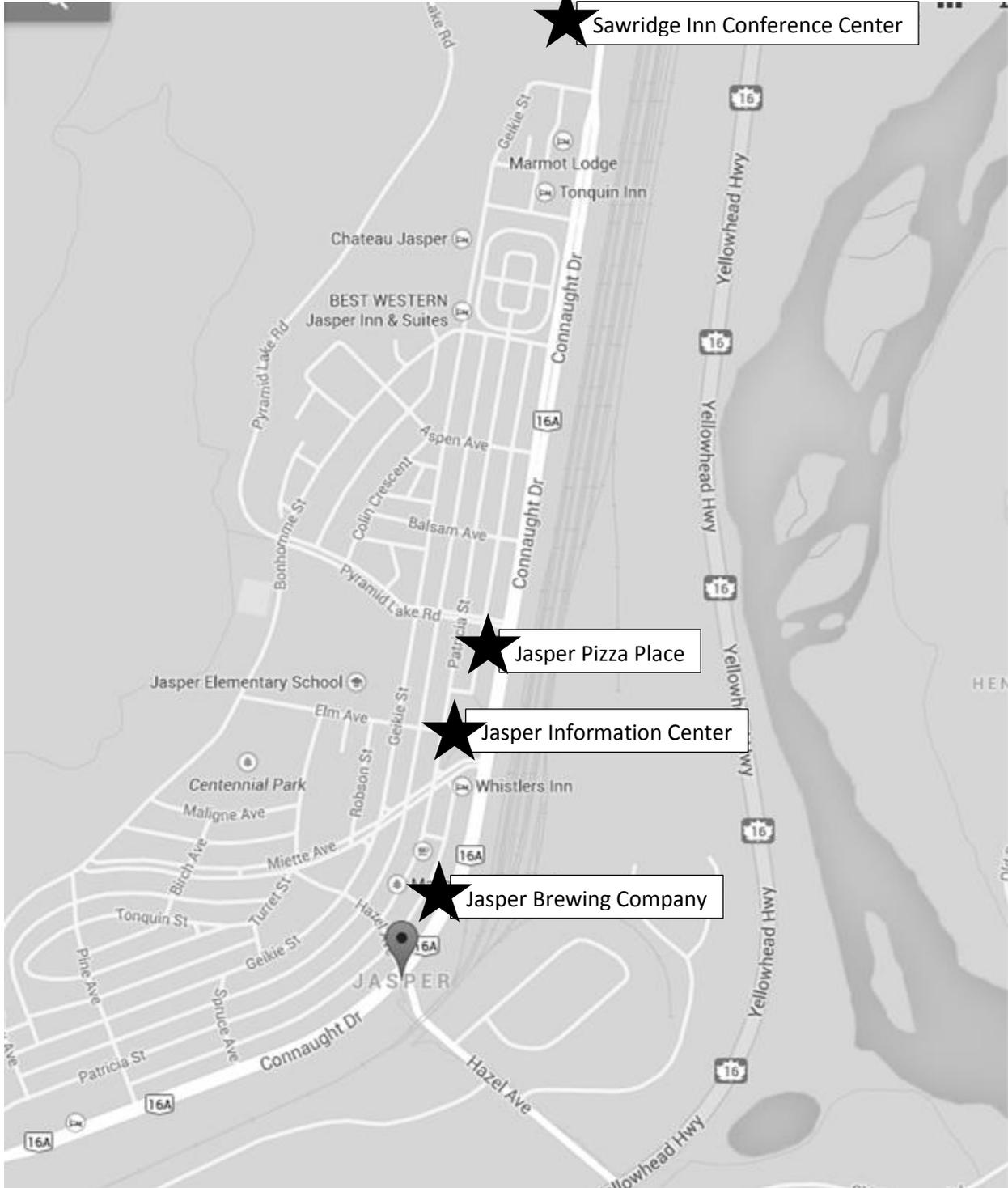
If you have a question before or during the conference please email Kateline Hladky at pergssrecon@ualberta.ca. Further, if you have an emergency you can call Jodie's cell at 780-619-6123.

Map of Jasper

To Edmonton



★ Sawridge Inn Conference Center



PROGRAM INFORMATION

ReCon IV Organizing Committee

Donna Goodwin (Co- Chair)
Jodie Stearns (Co-Chair)
John Spence
Nicholas Holt
Dana Dragon-Smith
Kateline Hladky
Nicholas (Corey) Kuzik
Eric Mathieu
Annie Selzler
Rachel Skow
Laura Watson



(From left to right: Dana, Jodie, Annie, Eric, Nicholas)

ReCon IV Subcommittees

Professional development subcommittee

Laura Watson (chair)
Mick Lizmore

Onsite logistics subcommittee

Nicholas (Corey) Kuzik (chair)
Étienne Myette-Côté
Dana Dragon-Smith

Scientific review subcommittee

Annie Selzler (chair)
Rachel Skow

Communications subcommittee

Rachel Skow (chair)
Saeed Reza Toghi

International experience panel subcommittee

Jodie Stearns
Tom Hinch
Pirkko Markula

Rod Murray Address adjudication subcommittee

Donna Goodwin (chair)
Meaghan Carey
Jennifer Crawford
Howie Harshaw
Normand Boule
Margie Davenport Steinback

Photographers

Saeed Reza Toghi
Dana Dragon-Smith
Rachel Skow
Jodie Stearns

Official Tweeters

Kateline Hladky
Rachel Skow

Acknowledgements

Thank-you to Saeed Reza Toghi for designing a fantastic program cover for ReCon IV! Also, thank-you to all of our activity leaders, session facilitators, panelists, and moderators! Your contributions are greatly appreciated.

Presentation Guidelines

Poster Presentations

Posters are required to be in PORTRAIT orientation and NO LARGER THAN 36 inches (width) x 48 inches (height). For poster template options, visit the AICT website: <https://lfp.srv.ualberta.ca/printing/>. Poster set up time will be Friday September 5 at 9:30am in the foyer outside of the conference room (Chief Paul Ballroom).

Short & Long Oral Presentations

Short oral presenters will have 6 minutes to give their research talks and 2.5 additional minutes for questions. Long oral presenters will have 15 minutes to give their research talks and 3 additional minutes for questions.

We ask that all short and long oral presenters adhere to these guidelines as closely as possible so that everyone has equal opportunity to present their research. When creating your presentations, please keep in mind that the audience will be diverse in discipline and experience. The ReCon Committee recommends that you explain complex terms and concepts, and avoid technical jargon. Nicholas (Corey) Kuzik will assist presenters in uploading their presentations at the conference registration desk on Thursday September 4th from 1:30-3:30pm. If you are unable to make this time, please arrange an alternative with him at nkuzik@ualberta.ca.

Best Oral and Poster Presentations

A prize will be awarded for the best oral and poster presentations. ReCon delegates will vote at each research presentation session and award winners will be decided based on the majority vote. The awards are based on the following criteria: engagement with the audience, effective communication of ideas, and inclusion of thought provoking discussion. Keep these criteria in mind when developing your presentations.

Previous Winners

2013

Oral presentation winner- Vince Tedjasaputra

Poster presentation winner- Annie Selzler

2012

Oral presentation winner- Michael Chizewski

Poster presentation winner- Liam Boyd

Special Mention- Danielle Peers & Lindsay Eales

2011

Oral presentation winner- Lindsay Eales

Poster presentation winner- Angela Coppola

PROGRAM IN DETAIL

Thursday, September 4, 2014

8:30am – 1:30pm **Boarding & Bus travel from Edmonton to Jasper**

The bus will load at **8:30am** *behind* the Clare Drake Arena.
The bus leaves at **8:45am SHARP**.
The bus will stop in Edson for 30 minutes for a lunch break.

1:30pm – 3:30pm **Registration**

Pick up conference bag in the foyer of the Sawridge Inn

Ensure that you fill out your lunch forms, sign-up for a restaurant for dinner on Thursday night (Jasper Pizza Place or Jasper Brewing Company), and sign up for an organized activity for Saturday afternoon (yoga or Jasper walking tour).

3:30pm - 3:15pm **Welcoming Comments – Chief Paul Ballroom**

Donna Goodwin, Associate Dean, Graduate Programs
Jodie Stearns, PERGSS Vice President, ReCon
Dean Kerry Mummery

3:45pm – 4:15pm **Icebreaker Activity – Chief Paul Ballroom**

Facilitator: Laura Watson

4:15pm- 5:15pm **Professional Development Session 1 – Chief Paul Ballroom**

The Value of International Experiences

Facilitator: Dr. Tom Hinch

Panelists: Marianne Clark, Jim Denison, Saeed Reza Toghi, Hakon Solberg

Description: In the increasingly globalized academia, many graduate students and faculty seek to enrich their scholarship through a broad range of international experiences. Panelists in this session will describe the essence and nature of their international experience, highlight the benefits and challenges, and offer advice to ReCon delegates.

5:15pm- 5:30pm **Break**

5:30pm – 6:30pm

Rod Murray Memorial Address – Chief Paul Ballroom

Messy Utopias: Building more Collaborative, Creative, Critical and Caring (Academic) Communities

Introduction: Marianne Clark

Speaker: Danielle Peers

Description: In this presentation, I explore some of the common barriers and struggles that graduate students (and faculty) face, often in isolation. I then introduce the notion of Messy Utopias, and demonstrate how Rod -- and others from our faculty -- have developed strategies for creating small pockets of such utopias, as a way to collectively navigate some of these struggles. These strategies include: conscious community building; far-reaching collaboration; unsecured creativity; generous critique; care-sharing; and, importantly, pleasure.

7:00pm

Dinner in Jasper

Reservations have been made at two restaurants for 20-30 people each. A *sign-up sheet will be available at registration*. Please sign-up at this time to avoid overwhelming the restaurants. *Delegates are responsible for paying for their own dinner.*

Option 1: Jasper Pizza Place
402 Connaught Dr.
Jasper, AB
780-852-3225
<http://www.jasperpizza.ca>
Leaders: *Vince Tejasaputra, Eric Mathieu*

Option 2: Jasper Brewing Company
624 Connaught Dr.
Jasper, AB
780-852-4111
<http://www.jasperbrewingco.ca>
Leaders: *Cournea lab (Jennifer Crawford, Mary Norris, Andria Morielli, James Vallerand)*

Both restaurants are approximately a 20 minute walk from the Sawridge Hotel and are fully accessible.

Friday, September 5, 2014

7:00am – 8:30am Breakfast

A full buffet will be served at the hotel restaurant (*included with registration*). Please remember to bring your breakfast voucher with you.

8:30am – 9:30am Alumni Presentation - Chief Paul Ballroom

The Grace of an Open Mind

Introduction: Dr. Nicholas Holt, Acting Associate Dean, Research

Speaker: Dr. Joannie Halas, University of Manitoba

Description: Joannie will speak about the critical moments that have shaped her development as a scholar, and especially those that occurred when she was a graduate student at the University of Alberta. Her presentation will focus on how important it is to ‘think about our thinking’, particularly in an age of “great untruth” (Smith, 2006).

9:30am- 9:45am Break

9:45am-11:00am Long Oral Presentation Session 1 – Chief Paul Ballroom

Moderator: Shintaro Kono

Doing more with less: optimizing the use of electrical stimulation for rehabilitation

Matheus J. Wiest, Kelvin E. Jones, Abdul Aldayel, Helen Schimidt, David F. Collins

Sport Commitment in High School Swimmers

Heather Larson

The Time-space Context of Daily Leisure in Urban China

Jingjing Gui

Through a different lens: Examining the influence of culture and acculturation on perceptions of the female exerciser stereotype

Kimberley D. Curtin, Krista J. Munroe-Chandler, Todd M. Loughead

11:00am-11:15am Break

Coffee and tea will be served.

11:15am – 12:15pm

Professional Development Session 2 – Chief Paul Ballroom

Tapping into your Graduate potential

Facilitator: Laura Watson

Description: This session will be focused on increasing students' self-awareness of their current and desired selves. Delegates will identify important psychological, technical, physical and tactical characteristics needed for improving their personal graduate experience and areas of development will be highlighted. The session will involve interactive group discussions and individual tasks.

12:15pm – 4:30pm

Grab-and-Go Lunch & Outdoor Activities

Lunch: Box lunch (*included with registration*)

Outdoor Activity: Maligne Canyon - hike

This is a 7.4km hike which will take you on a journey of waterfalls, ravines, and lush plant life.

Leaders: John Spence, Mariska Booyens, Dana Dragon-Smith

Transportation:

The bus will drive delegates to and from the activities. We will leave the Sawridge at **12:30pm SHARP**, and will head back at **4:00pm SHARP**. *Priority will be given to those who paid for the bus.*

4:30pm–5:00pm

Break

5:00pm–6:30pm

Poster Session – foyer outside of the Chief Paul Ballroom

Exploring Social Influences on the Development of Athletic Identity in Varsity Athletes

Kassi A. Boyd, Kacey C. Neely, Nicholas L. Holt

School culture and knowledge discourses among PE teachers in Norwegian high school – A Study of Professional Development

Vegard Brattset

Does pulmonary rehabilitation decrease chemosensitivity in COPD, and is this affected by disease severity?

Brad Byers, Desi Fuhr, Linn Moore, Heather Edgell, Mohit Bhutani, Eric Wong, Michael Stickland

Associations Between Physical Activity and Posttraumatic Growth in Gynecologic Cancer Survivors

Jennifer J. Crawford, Jeff Vallance, Nick Holt, Kerry Courneya

Pole Fitness and Positive Body Image: An Interpretative Phenomenological Study

Ariel J. Dimler

Objectively measured physical activity and self-reported cardiovascular disease

Agnes Marie Eek

Learning Environment in Physical Education

Tor-Inge Gloppen

Intentions to prescribe exercise to people with ALS

Aaliya Merali

Feasibility and preliminary efficacy of aerobic exercise in rectal cancer patients receiving neoadjuvant chemoradiotherapy

Andria R. Morielli, Nawaid Usmani, Normand G. Boulé, Kerry S. Courneya

Perceptual motor learning in a prediction motion task

Nicole Roshko, Kateline Hladky, Brian Maraj

Understanding exercise behavior in cancer survivors

James R. Vallerand, Kerry S. Courneya

Juice, pop, and alcoholic beverages will be available at the bar.

6:30pm–7:00pm

Break

7:00pm

Conference Dinner

CHAMPS Sports Lounge

Inside the Sawridge Inn

<http://sawridgejasper.com/dine-lounge/champs-sports-lounge.aspx>

Pasta Buffet with Penne al Pesto, Spaghetti Carbonara Classico, Fusilli with fresh tomatoes, basil, and mozzarella, Chicken Trottle with zucchini and grilled eggplant. There will also be three different salads to choose from and dessert.

The dinner is included with registration. However, delegates will be responsible for alcoholic beverages and these will be pay-as-you-go.

Saturday, September 6, 2014

7:00am – 8:30am

Breakfast

A full buffet will be served at the hotel restaurant (*included with registration*). Please remember to bring your breakfast voucher with you.

8:30am – 9:15am

Short Oral Presentation Session – Chief Paul Ballroom

Moderator: Annie Selzler

Capillary blood volume response to exercise in endurance-trained athletes vs. sedentary non-athlete males

Vince Tedjasaputra, Melissa Bouwsema, Michael Stickland.

A Case Study of CCTV5 Television Coverage of the 2014 Winter Olympics– From a Feminist Perspective

Chen Chen

Metformin timing and exercise in type 2 diabetes.

Etienne Myette-Cote, Tasuku Terada, Normand Boulé

On the steps of the Sala Rossa: The reception of accessibility activism

Kelsie Acton, Lindsay Eales

Will changing the putter you use really change your golf game? Perceptual motor integration in a discrete motor task

Kateline Hladky, Nicole Roshko, Brian Maraj

9:15am – 9:30am

Break

9:30am – 11:00am

Professional Development Session 3 - Chief Paul Ballroom

Envision your future - Focus attention on your desired Self

Facilitators: Laura Watson and Mick Lizmore

Description: The overarching goal of this workshop is to discuss and brainstorm strategies to help delegates move towards their desired self while recognizing the importance of a work-life balance. Achievement behaviors and characteristics that can both help and hinder one's academic and personal development will be discussed. Individual and group activities will be used to facilitate learning.

Lunch: Box lunch (included with registration)

Delegates are free to participate in many activities available to them during the activity break. We have organized two activities (see details below). Other options include jumping in the hotel pool for a swim or socializing with friends at a nearby café.

Organized Activity 1: Walking Tour of Jasper

Leader: Eric Mathieu

Time: 11:30am-1:00pm

Start and end location: Jasper Information Centre

Transportation: Bus will leave at 11:15 SHARP.

A sign-up sheet will be available at registration. Sign up early as there are only 24 spots!

Take a step back in time and discover the characters that helped shape Jasper National Park and the mountain town of Jasper. This 1.5 hour historical walking tour of town takes participants on a personal journey into the past through a variety of stories about the people, places and events that have made Jasper what it is today.

While the tour is guided voluntarily, donations are appreciated. Your donation will support programs and projects in Jasper National Park. A \$50 donation will be made by Recon, however further contributions from delegates attending the walk will be greatly appreciated.

Organized Activity 2: Yoga

Instructor: Kelsey Action

Time: 11:30am-1:00pm

Location: Boardroom 2

A sign-up sheet will be available at registration. Sign up early as there are only 20 spots!

Never done yoga? Not sure you can become a pretzel? Don't have your own mat? No problem!! This session will be applicable to all skill levels and accessibility needs. Also, Recreation Services has kindly allowed us to borrow equipment so that everyone will be able to participate!

1:30pm – 2:45pm

Long Oral Presentation Session 2 - Chief Paul Ballroom

Moderator: Nicholas (Corey) Kuzik

Our Sport, Our Space, Our Dream: Understanding the Go Green Cricket Field Project

Clara-Jane Blye

Age-Group Comparability of Raw Accelerometer Output from Wrist and Hip Worn Monitors

Marie Hildebrand, Vincent T. Van Hees, Bjørge Herman Hansen, Ulf Ekelund

Background Research on Mountain Tourism and Sustainability in Kyrgyzstan and Tajikistan.

Aisulu Abdykadyrova, Qobiljon Shokirov, Chad Dear

Vascular Responses Following Acute Hypoxia

Rachel Skow, Christina MacKay, Margie Davenport, Craig Steinback

Coffee and tea will be served.

2:45pm- 3:00pm

Break

3:00pm – 4:00pm

Closing Remarks & Awards - Chief Paul Ballroom

ReCon Fund Development Campaign presentation by Mick Lizmore

Oral and poster presentation awards will be presented by Annie Selzler

Closing comments from Dean Kerry Mummery; Donna Goodwin, Associate Dean (Graduate Programs); and Jodie Stearns, PERGSS Vice President (ReCon).

4:30pm – 9:30pm

Boarding and Bus Travel from Jasper to Edmonton

The bus will load at **4:30pm**.

The bus leaves at **4:45pm SHARP**.

The bus will make a short stop in Edson on the way home.

KEYNOTE SPEAKERS

Rod Murray Address: Thursday September 4, 2014

Messy Utopias: Building more Collaborative, Creative, Critical and Caring (Academic) Communities

Danielle Peers

Abstract: In this presentation, I explore some of the common barriers and struggles that graduate students (and faculty) face, often in isolation. I then introduce the notion of Messy Utopias, and demonstrate how Rod -- and others from our faculty -- have developed strategies for creating small pockets of such utopias, as a way to collectively navigate some of these struggles. These strategies include: conscious community building; far-reaching collaboration; unsecured creativity; generous critique; care-sharing; and, importantly, pleasure.



Nomination Rational: Danielle's academic endeavors have compelled us to consider disability through a critical lens. Beyond academia, she is a dedicated community builder, translating her research into tangible resources, as well as local and national opportunities for people to engage in disability sport and art practices. She continually provides us with invaluable tools to foster more inclusive academic, sporting, artistic and activist communities.

- Kelsie Acton & Lindsay Eales, Nominators

Biography: Danielle Peers is a Ph.D candidate, and Trudeau and Vanier Scholar, working with Dr. Markula within the Body, Movement, Culture Research Group. She engages post-structuralist and arts based methods to explore the relationships between disability sport and social justice, and to imagine how we could engage with sport and disability otherwise. Danielle's work is anchored in her own experiences as a Paralympic athlete (wheelchair basketball), and it is inextricably woven with her coaching, teaching, policy making, activist and artistic practices. Of note, she has, in collaboration with many others: made and toured seven films; worked on national arts equity and transgender sport policy; coached with the National women's wheelchair basketball team; co-founded three disability sport, recreation and arts non-profits; and is currently the national ambassador for Muscular Dystrophy Canada.

Alumni Speaker: Friday September 5, 2014

The Grace of an Open Mind

Dr. Joannie Halas

Abstract: Joannie will speak about the critical moments that have shaped her development as a scholar, and especially those that occurred when she was a graduate student at the University of Alberta. Her presentation will focus on how important it is to ‘think about our thinking’, particularly in an age of “great untruth” (Smith, 2006).

Biography: Dr. Joannie Halas (PhD, University of Alberta, 1999) is a Professor in the Faculty of Kinesiology and Recreation Management at the University of Manitoba. Joannie’s integrated teaching, research and community service focuses on issues of access to quality and culturally relevant physical education programs, particularly for Aboriginal and inner city youth from diverse backgrounds. A cornerstone of Joannie’s nationally funded community-based research has been the development of the Rec and Read (Aboriginal Youth) Mentorship Programs, which won the [2014 MacJannet Prize for Global Citizenship](#). In 2013, Joannie presented the R. Tait McKenzie Scholar Address at the national Physical and Health Education Conference in Winnipeg, Manitoba.



RESEARCH PRESENTATION ABSTRACTS

Long Oral Presentation Session 1: Friday September 5, 2014

Doing more with less: optimizing the use of electrical stimulation for rehabilitation

Matheus J. Wiest, Kelvin E. Jones, Abdul Aldayel, Helen Schmidt, David F. Collins

INTRODUCTION: Electrical stimulation is one of the methods used to produce muscle contractions and movements in people with spinal cord injury or stroke. When electrical stimulation is applied over a muscle belly or nerve trunk contractions fatigue rapidly, due in part to high discharge rates of recruited muscle fibres. To reduce discharge rates during electrical stimulation we developed "interleaved" electrical stimulation in which pulses are alternated between muscle and nerve sites. We propose that this reduces discharge rates (by half) potentially reducing fatigue. **OBJECTIVES:** Describe the effects of different frequencies of stimulation on torque production for muscle, nerve and interleaved stimulation. **METHODS:** Torque versus frequency curves were generated from data collected using muscle (tibialis anterior), nerve (common peroneal nerve) and interleaved electrical stimulation. Two 2 s trains of each type of electrical stimulation were delivered at 10, 20, 30, 40, 60, 80 and 100 Hz in 10 participants. The stimulation amplitude was set to generate 20% of a maximal voluntary isometric contraction (MVIC) at 20 Hz. **RESULTS AND CONCLUSIONS:** At the highest stimulation frequency (100 Hz), nerve and muscle stimulation produced ~30% MVIC torque while interleaved produced 51% MVIC. Muscle and nerve stimulation stopped increasing torque at 30 Hz while interleaved at 60Hz. These results suggest that there is a mechanism limiting the capacity of the muscle fibres to generate torque when the same nerves fire at frequencies higher than 30 to 40 Hz, regardless of stimulation protocol. These results are important for rehabilitation since fatigue due to high motor unit firing frequencies is one of the greatest limitations of electrical stimulation and interleaved stimulation generates more torque while reducing firing rates by half.

Sport Commitment in High School Swimmers

Heather Larson

INTRODUCTION: High school swimming in Alberta is characterized by an emphasis on participation and inclusion regardless of ability level or competitive aspirations. For many students, this is their first meaningful exposure to the sport. The purpose of this study was to explore the potential of high school swimming programs as an avenue for increasing future physical activity and sport participation in less active adolescents. Research was guided by these questions: 1) Does high school swimming have a positive impact on the physical activity levels of less active adolescents during and/or after the swim season? 2) Can participation on a high school swim team foster commitment to swimming, for those who are new to the sport? 3) What determines students' commitment to their high school swim team? **METHODS:** Participants' physical activity levels were measured pre-season, mid-season, and post-season, using a validated questionnaire. Mid-season, participants also completed a questionnaire measuring seven constructs from Scanlan et al.'s (1993) Sport Commitment Model. Eight participants were interviewed using the Scanlan Collaborative Interview Method (Scanlan et al., 2009). **RESULTS:**

Participants who were less active pre-season had significantly higher physical activity post-season. Twenty participants without prior competitive swimming experience displayed equal commitment to their high school swim team as those with prior experience. Sport enjoyment and valuable opportunities contributed significantly to sport commitment. Qualitative analysis found that social support, desire to excel, and team tradition (despite swimming being an individual sport) were also important sources of commitment. **CONCLUSIONS:** High school swimming in Alberta provides a viable avenue for increasing physical activity and encouraging future participation in swimming. Schools can encourage commitment to their teams by providing enjoyable experiences through good coaching and plentiful opportunities for competition and team bonding, and should ensure that students are aware of their options for continued participation in swimming after high school.

The Time-space Context of Daily Leisure in Urban China

Jingjing Gui

The rapid industrialization and urbanization experienced by China has led to changes in individuals' leisure participation and experiences, and requires study in order to understand the implications of these changes. Changes in individuals' discretionary time and income, the commercialization, and socialization of leisure services have contributed to formation of mass leisure, which has made the study of leisure in China a serious phenomenon. The development of information and communications technology, and increasing individual mobility have made time and place decision more complicated; static socio-demographic attributes and leisure preference are not sufficient to clarify leisure variability, necessitating further investigation of time-space context of leisure. This study examines the one-week activity diaries and simultaneous GPS trajectories of residents of the Shangdi-Qinghe area of Beijing from a 2012 survey. The study found that: (1) daily leisure has temporal and spatial variability, that may be explained by family life cycle, education, and leisure types; (2) although the use of out-of-home leisure space has become more prevalent in Shangdi-Qinghe, daily leisure is a balance of in-home and out-of-home leisure, as people seek to find equilibrium between these two experiences to maximize their leisure utility; (3) day-to-day leisure variability is evident in the contrast of weekdays and weekends, which suggests that daily leisure is profoundly influenced by work institution; (4) individual socio-demographic attributes influence leisure probabilities, and dynamic variables have more direct influences on leisure decisions than static attributes; (5) increasing leisure time does not necessarily increase the probability of out-of-home leisure (e.g., spatial or temporal inflexible maintenance activity makes individual less likely to participate outdoor recreation at weekends, and delay of start time will also reduce the probability of out-of-home leisure).

Through a different lens: Examining the influence of culture and acculturation on perceptions of the female exerciser stereotype

Kimberley D. Curtin, Krista J. Munroe-Chandler, Todd M. Loughead

An exerciser stereotype in which exercisers receive more positive ratings on physical and personality attributes than those described as non-exercisers and control targets has been identified in previous research (e.g., Munroe-Chandler et al., 2012). Despite these positive ratings, the rate of participation in exercise for non-White Canadians is below that of White Canadians (Bryan et al., 2006). One factor that may influence exercise participation rates for ethnic minorities is acculturation to mainstream culture (Daniel et al., 2013). The purpose of the present study was to examine the female exerciser stereotype in light of both culture and individual acculturation. Participants (N = 510) read a vignette describing a female exerciser, and rated the target on personality and physical attributes before completing the

Vancouver Index of Acculturation (Ryder et al., 2000). Results revealed no significant differences between White (n = 340) and non-White (n = 170) participants on ratings of personality and physical attributes ($p > .05$). However, it was found that those who were more acculturated with mainstream Canadian culture rated the target higher on physical and personality attributes compared to those who were less acculturated to mainstream culture ($p < .05$). Findings indicate that mainstream acculturation may be a more important factor when forming impressions of exercisers than an individual's culture.

Poster Session: Friday September 5th, 2014

Exploring Social Influences on the Development of Athletic Identity in Varsity Athletes

Kassi A. Boyd, Kacey C. Neely, Nicholas L. Holt

The purpose of this study was to explore how social agents influence the development of athletic identity among varsity athletes. More specifically, the role of parents, peers, and coaches on the development of athletic identity was examined. Nineteen varsity athletes (7 male, 12 female; M age=20.6 years, SD=1.6) with a strong athletic identity (M AIMS=50.9, SD=6.4) who competed in team sports at a western Canadian university participated in semi-structured interviews. Data were subjected to inductive content analysis. Results showed an overarching theme of recognition as an athlete and reinforcement of an athletic identity from all social agents contributed to the development of the participants' athletic identity. Participants reported that their parents, coaches, and peers (both teammates and non-sport friends) all had a significant impact on the development of their athletic identity. However, these social agents influenced athletic identity in different ways. Parents influenced athletic identity by providing support and demonstrating commitment to their sport involvement. Coaches promoted athletic values and encouraged participants to 'be an athlete' in all aspects of their lives. Relatedness and being labelled an athlete were the main ways peers influenced the development of athletic identity. These findings describe how athletic identity may be developed and provide some suggestions as to how parents, coaches, and peers can foster a positive athletic identity.

School culture and knowledge discourses among PE teachers in Norwegian high school – A Study of Professional Development

Vegard Brattset

From a political and a scientific point of view, teachers are highlighted as the most important factor for students learning. The professional development of teachers is regarded as an important part of school development. Through my studies, I have developed an interest for the school culture and communication among teachers in high school sports studies and how that can influence their teaching and professional identity. The main objective of this study is to illuminate how different knowledge discourses is communicated among sports study teachers in Norwegian high school and how the local school culture has an influence on their teaching and professional development. THEORY: The study is based on a social constructive view on learning and uses Pierre Bourdieu's framework for analysis. METHOD: This qualitative study uses a combination of observation and semi-structured interviews in

two Norwegian high schools with a sports study section. The observations will be committed in planned developmental meetings between teachers and sectional leaders in the sports sections. Notes will be taken during and after the meeting and this will be the data material from the observations. On each of the two schools there will be conducted interviews of a principle, a section leader and two PE teachers. The data will be analyzed with a discourse analysis. EXPECTED RESULTS: By looking into these questions I expect to earn knowledge about the way professional teachers in Norwegian sports studies communicate to expand their competence and how the school culture has an impact on the communication among the teachers. The observations goal is to get an understanding of the school culture at each school and the power structures between the teachers and school leaders. The interviews will give me data about how the teachers and leaders experience the communication and how that contributes to their teaching, professional identity and professional development.

Does pulmonary rehabilitation decrease chemosensitivity in COPD, and is this affected by disease severity?

Brad Byers, Desi Fuhr, Linn Moore, Heather Edgell, Mohit Bhutani, Eric Wong, Michael Stickland

INTRODUCTION: Chronic obstructive pulmonary disease (COPD) is a progressive, partially-reversible airway obstruction characterized by dyspnea and exercise intolerance. COPD is associated with enhanced carotid chemoreceptor (CC) activity/sensitivity which can contribute to increased dyspnea as well as risk of cardiovascular morbidity and mortality. Exercise training has been shown to reduce CC activity/sensitivity in conditions of heightened CC activity/sensitivity, which could potentially reduce dyspnea as well as cardiovascular risk in COPD patients. PURPOSE: To examine if exercise training through pulmonary rehabilitation (PR) could reduce CC activity/sensitivity in COPD; furthermore, we aimed to see if COPD severity affected an individual's response to PR. We hypothesized that CC activity/sensitivity would decrease with PR, with the greatest response in more severe COPD patients. METHODS: COPD patients (n=45; age=67±7 years; FEV1% predicted=56.6±20.7%) were tested before (PRE) and after (POST) an 8-week PR program. Additionally, COPD time-control subjects not enrolled in PR were also tested. CC sensitivity was evaluated by the ventilatory (VE) response to hypoxia at rest (target O₂ saturation = 90% and 85%; 3 minutes). Baseline CC activity was determined by the decrease in resting VE in response to 100% O₂ for 2 minutes. Individuals were stratified by lung function into mild/moderate (n=24) or severe/very severe (n=21) groups. Dyspnea was measured PRE/POST PR using the Medical Research Council (MRC) Dyspnea Scale. RESULTS: PR significantly reduced dyspnea (PRE: 2.3±0.8, POST: 2.1±0.8, p=0.04). The VE response to hypoxia (PRE: 0.10±0.09, POST: 0.13±0.12 ΔL/m/ΔSpO₂, p=0.18), and the transient drop in VE with hyperoxia (PRE: -2.13±1.45, POST: -2.64±1.71 L/m, p=0.09) were unaltered with PR. No effect of disease severity was observed. COPD time-controls exhibited no change in hypoxic or hyperoxic response. CONCLUSION: While PR decreased dyspnea in COPD, CC activity/sensitivity was unaffected by PR. Furthermore, COPD severity did not affect an individual's response to PR.

Associations between Physical Activity and Posttraumatic Growth in Gynecologic Cancer Survivors

Jennifer J. Crawford, Jeff Vallance, Nick Holt, Kerry Courneya

PURPOSE: Numerous physical and psychological benefits of physical activity (PA) for cancer survivors have been documented; however, few studies to date have examined posttraumatic growth (PTG). The primary objective of this study was to examine the association between PA and various indicators of PTG

in gynecologic cancer survivors (GCS). METHODS: The Alberta Cancer Registry generated a random sample of 2,064 GCS stratified by cancer type (688 from each survivor group) who were mailed a survey that assessed standard demographic and medical variables, the Godin Leisure Time Exercise Questionnaire, and several PTG scales. RESULTS/FINDINGS: Completed surveys were received from 621 (38%) of the 1,626 eligible GCS, of whom 32.9% were meeting aerobic exercise guidelines, 19.0% were meeting strength exercise guidelines, and 11.1% were meeting both exercise guidelines. After adjustments for key demographic and medical covariates, analyses of covariance indicated significant differences in PTG based on meeting the aerobic exercise guidelines for the Negative Impact of Cancer Scale ($p < 0.001$) and several of its subscales. Analyses of covariance also indicated significant differences based on meeting the strength exercise guidelines for the Post Traumatic Growth Inventory subscales of new possibilities ($p = 0.015$) and appreciation for life ($p = 0.023$). Finally, results showed that those meeting both exercise guidelines reported higher Post Traumatic Growth Inventory total scores than those meeting only one or no guideline ($p = 0.014$). CONCLUSION: PA is a modifiable lifestyle factor that may facilitate PTG. A combination of both aerobic and strength exercises may result in higher levels of PTG in GCS.

Pole Fitness and Positive Body Image: An Interpretative Phenomenological Study

Ariel J. Dimler

BACKGROUND: Body image is complex and multidimensional (Cash & Smolak, 2011) and although the overwhelming majority of body image research focuses on negative body image, positive body image has recently been studied as a unique entity (e.g., Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). One area in which positive body image experiences may be particularly relevant is in the area of physical activity and exercise (e.g., Martin-Ginis & Bassett, 2011). One specific form of fitness, pole fitness, is of particular interest due to the heavy emphasis on positively changing women's relationships with their bodies (Donaghue, Kurz, & Whitehead, 2011). There is minimal research on women's positive body image experiences, despite the myriad claims that participation in such activities (i.e., pole fitness) will lead to positive body image. PURPOSE: The purpose of this research is to explore young women's positive body image experiences during pole fitness classes. METHOD: The method for the proposed research will be interpretative phenomenological analysis (IPA), which focuses on capturing and interpreting the meanings that participants place on experiences (Smith & Osborn, 2003). Ten young women between 18-25 years will be recruited from local pole fitness studios in Edmonton, Alberta. Each participant will be asked to participate in one-on-one interviews, a music selection task, and focus group. The semi-structured one-on-one interviews will focus on exploring positive body image experiences in pole fitness classes. The music selection task will provide an alternative way to better understand the women's experiences (Daykin, 2004). Finally, the focus group will provide the participants the opportunity to elaborate on interview questions, as well as discuss ideas and experiences that may not have been covered in the one-on-one interviews. Data will be analyzed using Smith and Osborn's (2003) IPA approach, to identify the overarching themes that represent young women's positive body experiences during a pole fitness class.

Objectively measured physical activity and self-reported cardiovascular disease

Agnes Marie Eek

BACKGROUND: Cardiovascular disease (CVD) poses a significant health problem. Worldwide approx. 18 million people die annually by CVD. CVD is strongly associated with physical inactivity. However, this association is often based on self-reported physical activity data. Commissioned by the Directorate of Health, the Norwegian School of Sport Sciences conducted a nationwide survey in 2008/2009 where physical activity was measured objectively. In 2014/2015 the Norwegian School of Sport Sciences is conducting a similar study. Since there are few studies reported on objectively measured physical activity and CVD, the aim of my master's thesis is to examine the association between objectively measured physical activity and CVD. **METHODS:** In 2008/2009 a random sample of women and men aged 20 to 85 years were invited to participate in a nationwide cross-sectional study. A total of 3464 persons (32 %) participated in the study. In 2014/2015 a similar sample of a variety of men and women will be invited. The same design and methodology will be used. Physical activity is measured objectively by an accelerometer and CVD is measured through a questionnaire. **RESULTS:** Physical activity can be scheduled with different intensity, frequency and duration and hence gives us a nuanced picture of the physical activity habits of the population. Objective measurement methods supplemented with self-reported data allow associations between physical activity and self-reported CVD. **CONCLUSIONS:** A national monitoring system with objective data on the population's level of activity will have the potential to contribute to a nuanced knowledge about physical activity and CVD.

Learning Environment in Physical Education

Tor-Inge Gloppen

With a background as a lecturer in physical education (PE) and as an MSc student at the Norwegian School of Sports Sciences (NSSS), I want to conduct a research study with a pedagogical framework in PE in the first year of high school in Norway. This study will investigate the formation of learning environment in two different PE classes at the start of the first year (2014/2015). The research question is: What is a good learning environment in PE? What could be the problems and challenges for teachers and students in the creation of a learning environment in PE? The research method in my study will be qualitative and based on symbolic interaction theory by G. H. Mead. This theory can provide insights into different aspects of self and society (Vaage, 2001). I will use interviews to explore teacher and student's experiences and expectations about (establishing) a good learning environment. This will be supplemented by participatory observation in the field to provide insight into teacher and student's behaviour, social relationships and patterns (Thagaard, 2010). Research emphasizes the importance of a good learning environment in the classroom, especially for students who are at risk of dropping out of school community (Opheim et. al., 2013). On the basis of literature and discussion with my supervisor, I believe that it is reasonable to argue that there is a lack of knowledge when it comes to how the learning environment is established and experienced in PE. My purpose is to develop knowledge about how a PE classroom is set up and maybe get on track of the processes on how the learning environment is developed. For teachers who are planning introduction for physical education, this study can contribute with new knowledge that can be helpful in the process of creating a good learning environment.

Intentions to prescribe exercise to people with ALS

Aaliya Merali

Amyotrophic lateral sclerosis (ALS) is a rapidly progressing neurological disease characterized by muscle weakness, resulting in difficulty moving, swallowing, and breathing. Although few treatment options are available for people with ALS (PALS), one option to potentially reduce symptoms associated with the disease and preserve muscular strength and bulk is exercise. Despite research supporting the benefits of exercise as a viable therapy, anecdotal experiences and scholarly opinion pieces suggest that healthcare professionals (HCP) may be hesitant to prescribe it to their patients. Currently in the pilot phase, this research aims to understand factors that facilitate and hinder HCPs to prescribe exercise as therapeutic option to PALS. Ten HCPs were invited to participate in a web survey with a think aloud component. Specifically, HCPs invited to participate in this pilot session consisted of: neurologists, nurses, physiotherapists, occupational therapists, and speech and language pathologists not associated with one of the ALS Clinics across Canada. The session lasted approximately one hour in which the HCPs voiced their opinions regarding the survey tool as they completed it. Items in the survey were guided by the theory of planned behavior in order to target specific elements (i.e. social pressure, perceived confidence) influencing exercise prescription behavior. Preliminary findings may suggest: (1) there is a difference in exercise prescription behavior amongst different clinical specialties; (2) there is hesitation to prescribe certain exercise types; and (3) barriers surrounding the HCPs are preventing HCPs to prescribe exercise to PALS. The findings from the pilot research will help revise the survey tool. The revised survey will then be sent to the main study consisting of HCPs working in ALS clinics across Canada. The results of this study will provide fruitful insights into whether or not HCPs prescribe exercise to their patients as well as provide researchers reasons as to why they may not prescribe exercise.

Feasibility and preliminary efficacy of aerobic exercise in rectal cancer patients receiving neoadjuvant chemoradiotherapy

Andria R. Morielli, Nawaid Usmani, Normand G. Boulé, Kerry S. Courneya

BACKGROUND: Standard treatment for patients with locally advanced rectal cancer involves 5-6 weeks of neoadjuvant chemoradiotherapy (NACRT) followed by definitive surgery 6-8 weeks later. Unfortunately, NACRT is associated with declines in physical fitness that may predict postoperative morbidity. To date, no study has examined the feasibility of an aerobic exercise intervention in preventing these declines. **OBJECTIVE:** Assess the safety, feasibility and preliminary efficacy of an aerobic exercise intervention during NACRT and prior to definitive surgery in rectal cancer patients. **METHODS:** Patients are screened for eligibility by radiation oncologists and the study coordinator at the time of their first radiation consultation at the Cross Cancer Institute. All patients are provided with a structured aerobic exercise program until their surgery. The exercise training consists of 3 supervised moderate intensity sessions per week during NACRT with the option of continuing with the supervised exercise program or completing an unsupervised exercise program prior to surgery. Patients undergo physical fitness testing and complete a questionnaire prior to starting NACRT, one week after NACRT and one week prior to their scheduled surgery. **PROGRESS:** To date, 17 of 24 (71%) patients have been eligible for the trial and 10 of 16 patients (63%) have been recruited (1 pending). Six patients have completed the intervention during NACRT and the post NACRT assessments. Of these, 3 have opted for an unsupervised exercise program prior to surgery and 3 have opted for a combined supervised/unsupervised program. Two patients are currently receiving the supervised exercise

intervention during NACRT. One patient withdrew from the study because they felt it was too stressful to keep up with medical and exercise appointments. Adherence to the supervised exercise sessions during NACRT is 79% (116/146). Reasons for missed sessions include treatment related side effects; diarrhea, enteritis, and foot pain. We are collecting valuable information that will aid in the design of future exercise intervention studies for rectal cancer patients.

Perceptual motor learning in a prediction motion task

Nicole Roshko, Kateline Hladky, Brian Maraj

Prediction motion tasks (PMT) require the estimation of an object's temporal and spatial position after its trajectory has been visually occluded (Tresilian, 1995). The purpose of this experiment was to investigate motor learning in PMT. Ten participants (mean age: 21.8 years) responded to a visual display (E-Prime, PST, Pittsburg, PA) using a mouse. The display depicted a ball moving towards a target region with the path being occluded at the mid-point. The goal was for the participant to move the cursor so that the occluded ball and the cursor coincided within the target region. Participants completed five blocks of 30 randomized trials, which included three speeds (fast/medium/slow) with visual feedback after each trial. The difference between the ball and cursor's location was recorded to calculate the dependent measures (CE/VE). Ten minutes and 60 minutes after completion participants performed 30 randomized trials of the three speeds without feedback. The acquisition data were analyzed using a 3-Speed by 5-Block repeated measures ANOVA. Results for CE showed main effects for Speed and post-hoc test (Tukey HSD, $p < 0.05$) showed slow different than fast/medium. Analysis for Block demonstrated 1 as having greater error than 2-5. Results for VE showed a main effect for Block (1 more variable than 2-5). The 10-minute (Retention 10) and 60-minute (Retention 60) retention data were analyzed along with Acquisition Blocks 1 and 5 using a 3-Speed by 4-Time repeated measures ANOVA. Results for CE revealed main effects for Speed and Time. Post-hoc analyses showed the slow condition with more error than fast/medium and Acquisition 1 different than Retention 10, which was not different than Retention 60. Overall, there was a distinct improvement as a function of time (decreasing CE). These results will be discussed in relation to skill acquisition processes (eg. contextual interference) and its specific implications for PMT.

Understanding exercise behavior in cancer survivors

James R. Vallerand, Kerry S. Courneya

BACKGROUND: Regular exercise prevents and reverses treatment-related comorbidities in cancer survivors. However, many survivors are not active enough to benefit from exercise's protective effects (Mishra et al., 2012). To address this disparity, we must better understand cancer survivors' exercise motivation. The theoretical exercise motivation model most commonly used for cancer survivors is the theory of planned behaviour (TPB; Ajzen, 1991). Despite its numerous applications across cancer survivor groups, no studies have used the TPB to predict exercise levels in hematologic cancer survivors. Recent theoretical extensions of the TPB explore how exercise intentions translate into regular participation (Rhodes & De Bruijn, 2013). Several behavioural constructs help explain this intention-exercise relationship in healthy populations but no studies have focused on cancer survivors. Furthermore, no studies have modeled cancer symptomologies as determinants of exercise participation, and none have accounted for motivational differences involved in aerobic versus strength exercise participation. **OBJECTIVES:** 1. Predict exercise levels using the TPB-model for hematologic cancer survivor groups 2. Explore the utility of behavioural constructs in explaining the intention-exercise relationships for hematologic cancer survivors 3. Model survivors' cancer symptomologies as

exercise determinants 4. Quantify all relationships separately for aerobic and strength exercise

METHODS: Objectives will be pursued through a cross-sectional survey-based study design. Stratified by cancer type, 2100 surveys will be mailed to hematologic cancer survivors (i.e., leukemia, Hodgkin lymphoma, & non-Hodgkin lymphoma). Questionnaires will capture TPB, intention-exercise behavioural construct, cancer symptomology, and aerobic and strength exercise measures. Structural equation modeling will assess the effectiveness of motivational frameworks in predicting exercise levels.

Short Oral Presentation Session: Saturday September 6, 2014

Capillary blood volume response to exercise in endurance-trained athletes vs. sedentary non-athlete males

Vince Tedjasaputra, Melissa Bouwsema, Michael Stickland.

Athletes exhibit enhanced cardiovascular function compared to non-athletes, and it is generally accepted that exercise training does not affect the pulmonary circulation. Recent work has shown that an increased resting pulmonary capillary blood volume (VC) is associated with a higher VO₂max, and subjects with highest VC have greater pulmonary vascular distensibility, possibly optimizing cardiac function and exercise performance. However, there have been no studies to date examining the effect of fitness on VC response during exercise. We hypothesized that endurance-trained athletes will have greater VC compared to non-athletes during cycling exercise. Four athletes (HI-VO₂max: 62.5±3.2 ml·kg⁻¹·min⁻¹) and 9 non-athletes (LO-VO₂max: 44.5±3.8ml·kg⁻¹·min⁻¹) performed cycling exercise at 3 intensities (rest, ventilatory threshold [VT], 90% of VO₂max). At each intensity, VC was calculated using multiple FIO₂-DLCO breath-hold method, and cardiac output (Q) was determined using impedance cardiography. Consistent with previous studies, athletes had higher VC at rest (HI: 103.6±10.6 mL, LO: 84.0±16.5 mL) but no difference in Q (HI: 7.1±0.2 L/min, LO: 7.7±0.9 L/min). During exercise at VT, athletes had higher VC (HI: 148.2±10.7, LO: 128.9±16.6 mL) and Q (HI: 21.7±3.1 L/min, LO: 17.6 L/min). At 90% of VO₂max, athletes had a higher VC compared to non-athletes (HI: 162.3±10.3 mL, LO: 152.50±18.5mL), and greater Q (HI: 26.0±3.6 L/min, LO: 20.5±1.8 L/min). These results indicate that athletes have increased VC at rest and during high intensity exercise compared to non-athletes, suggesting that higher VC is associated with higher Q and greater VO₂max. This may provide preliminary evidence that exercise training may produce favorable changes in the pulmonary vasculature

A Case Study of CCTV5 Television Coverage of the 2014 Winter Olympics—From a Feminist Perspective

Chen Chen

Previous studies have suggested that female athletes have been marginalized by media coverage. To investigate this premise, this study examined Olympic television coverage given to female events by China Central Television (CCTV) who had the exclusive television rights for the 2014 Sochi Winter Olympic Games. This study undertook a content analysis of the 2014 Sochi Winter Olympic Games coverage by CCTV5 with a particular focus on the amount of coverage devoted to female events. The study was descriptive in nature and its scope was to examine the amount of time allotted to female athletes by television. The analysis included Olympic events, interviews, “Fengyunhui” profiles, and medal ceremonies. The decision of CCTV5 to broadcast one sport over another was not only influenced

by sport viewership trends, but was also depending on the 2014 Winter Olympic events schedule. This schedule was comprised of 44% female, 51% male, and 5% mixed female/male competitions. With the exception of mixed gender figure skating, CCTV5 provided equitable coverage as evidenced by the findings which revealed that CCTV Olympic television coverage consisted of: 38% female, 50% male, and 12% mixed gender competitions. Coverage of female competition was a little less than the Olympic events schedule.

Metformin timing and exercise in type 2 diabetes.

Etienne Myette-Cote, Tasuku Terada, Normand Boulé

PURPOSE: The glucose lowering effects of exercise can be impaired when people with type 2 diabetes (T2D) are treated with metformin. The objective of this study was to examine the effect of removing a single dose of metformin before and/or after a bout of exercise. **METHODS:** People with T2D who were taking metformin twice daily were recruited. After a baseline assessment that included a graded exercise test, participants were assigned to randomly complete four experimental conditions: 1- morning and evening metformin doses without exercise (M-M), 2- morning and evening metformin doses with exercise (M-Ex-M), 3- morning metformin dose only with exercise (M-Ex), and 4- exercise with evening metformin dose only (M-Ex). Exercise consisted of walking continuously for 50 minutes at a moderate intensity starting at 12PM on the first day of the 72 hours experimental conditions. Standardized breakfasts, lunch and dinners were provided on the first day. Glucose profiles were assessed by continuous glucose monitoring. **RESULTS:** To date, 8 of 10 participants have completed all four conditions. They had a mean(SD) age of 64(5)yr and a body mass index of 28.7(5.4)kg/m². The glucose concentrations were lowered during the three exercise bouts (all $p < 0.06$). Compared to M-M, the postprandial glucose concentrations on exercise days increased by 8% ($p = 0.02$), 13% ($p = 0.03$) and 6% ($p = 0.18$) in the M-Ex-M, M-Ex and M-Ex, respectively. There were no differences among the three exercise conditions. **CONCLUSION:** Exercise increased postprandial glucose in T2D treated with metformin; removing a metformin dose before or after exercise did not attenuate this negative effect.

On the steps of the Sala Rossa: The reception of accessibility activism

Kelsie Acton, Lindsay Eales

Activism demands change and to demand change activists use performance to create 'spectatorial affect' (Filewod, 2011), giving urgency to their demands. Performance as political intervention has a long history in Canada (Filewod, 2011), but for the most part, it is 'local, unremarked, and artistically invisible' (Filewod, 2011, p. 3) with both its content and its impact lost to study. On Monday June 23rd, four members of the 'Performing Disability/Enabling Performance' working group at Encuentro 2014, a performance studies conference, climbed the stairs of the Sala Rossa to draw attention to the inaccessibility of the venue and the larger issues of inaccessibility in Montreal. The event was documented on social media and by photographer Lara Blüer, allowing for an examination of the performance and the framing of the performance (Bennet, 1990). Audience members, some who had come with the intention of supporting the protest, some who had come to see the official performance scheduled that night at the Sala Rossa were invited to record their thoughts on comment cards. These comment cards were also documented, providing insight into how the performance was understood by its audience. This paper examines the complex interplay of performance, framing and audience response to understand how performance became activism.

Will changing the putter you use really change your golf game? Perceptual motor integration in a discrete motor task

Kateline Hladky, Nicole Roshko, Brian Maraj

Discrete motor tasks, such as golf putting, have been tested with various techniques to demonstrate differences between expertise level and implement design. Perception is inherently linked with the motor system in order to allow for the control of these simple movements. The purpose of this experiment was to examine this relationship in a golf putt by comparing kinematic and gaze tracking changes between two expertise levels and two putter types. Four novices (mean age: 26.3y, limited golfing experience) and 4 experts (average age: 25.3y, mean self-reported handicap: 8) were asked to complete 15 putts each with a mallet (Odyssey White Hot Pro 2-ball) putter and blade (Odyssey White Ice 2.0) putter with counterbalanced presentation at a distance of 1-metre. Data was collected with the HS-H6 Eye-Tracker (ASL, Bedford, MA) integrated with Visualeyex Motion Capture System (PTI, Burnaby, BC). The following dependent variables were analyzed with a 2-expertise level (novice/expert) by 2-putter type (blade/mallet) ANOVA: preparation time (s), total stroke time (s), and change in aim line (degrees) between ball address and contact. A significant 2-way interaction was found for preparation time with experts preparing longer than novices. Aim line changes were greater for the mallet putter. In regards to success, experts were 96.6% and 86.2% successful with the blade and mallet putter, respectively. Novices were 77.0% and 81.7% successful with both putters. Relationships between head, eye, and shoulder movement and ocular fixation on key areas will also be addressed. These results will be discussed in relation to previously completed work by Karlsen et al. and Hung.

Long Oral Presentation Session 2: Saturday September 6, 2014

Our Sport, Our Space, Our Dream: Understanding the Go Green Cricket Field Project

Clara-Jane Blye

The purpose of this study was to understand the cultural significance of cricket as it relates to the South Asian Diaspora, and the building of the Go Green Cricket Field (GGCF) a community-organized cricket field building project taking place in Thorncliffe Park, a 'priority neighborhood' in Toronto. Frisby (2011) suggests that participating in community sport can ease the stress associated with settling into a new community or country. Cricket not only serves as a unifying community sport but has been attributed to the creation and maintenance of identity in many South Asian Diasporas, as the connection to cricket ties individuals back to their home or nation states (Fletcher, 2011). This study asked: (1) how do community members articulate the significance of cricket to themselves and within the wider community, and (2) how do community members articulate the significance of a neighbourhood based and community driven capital sport project? Following grounded theory methodology, 10 intensive interviews were conducted with individuals involved in the project (board members, youth, and volunteers). Findings suggest the building of a cricket field has been empowering to community members, creating a space for and by the community. Lacking recreational space and a proper cricket field for years, this project mobilized community members to act and highlighted the importance of cricket to all ages. The cricket field, in this community, plays an integral role in bringing families together, providing safe and healthy opportunities to youth, and empowers cricket players to demand

accessible space. Furthermore, the game of cricket was found to play an integral role in creating and maintaining the Diaspora identity of South Asian community members. This study adds to our limited knowledge on the significance of cricket in Canada and the role of leisure spaces in communities.

Age-Group Comparability of Raw Accelerometer Output from Wrist and Hip Worn Monitors

Marie Hildebrand, Vincent T. Van Hees, Bjørge Herman Hansen, Ulf Ekelund

PURPOSE: The study aims were to compare raw tri-axial accelerometer output from ActiGraph GT3X+ (AG) and GENEActiv (GA) placed on the hip and the wrist and to develop regression equations for estimating energy expenditure. **METHODS:** Thirty children (7-11 yr.) and 30 adults (18-65 yr.) completed eight activities (ranging from lying to running) whilst wearing one AG and one GA on the hip and the wrist. Oxygen consumption (VO₂) was measured with indirect calorimetry. Analysis involved the use of ANOVA to examine the effect of activity, brand and placement on the acceleration values, ICC to evaluate the agreement between the two brands and placements and linear regression to establish intensity thresholds. **RESULTS:** A significant difference in acceleration values between the hip and the wrist placement was found ($p < 0.001$). The output from the wrist placement was in general higher compared to the hip. There was no main effect of monitor brand in adults ($p < 0.12$) and children ($p < 0.73$) and the ICC showed a strong agreement (0.96-0.99). However, a three-way interaction and systematic error between the brands was found in children. Acceleration from both brands and placements showed a strong correlation with VO₂. The intensity classification accuracy of the developed thresholds for both brands and placements were in general higher for adults compared to children and were greater for sedentary/light (93-97%), and vigorous activities (68-92%), than moderate activities (33-59%). **CONCLUSIONS:** Accelerometer output from AG and GA appears comparable when attached to the same body location in adults, whereas non-consistent differences are apparent between the two brands and placements in children, hence limiting the comparability between brands in this age group. Accepted in *Medicine & Science in Sports & Exercise* and published ahead of print, 2014 May 29

Background Research on Mountain Tourism and Sustainability in Kyrgyzstan and Tajikistan.

Aisulu Abdykadyrova, Qobiljon Shokirov, Chad Dear

Kyrgyzstan and Tajikistan are predominantly mountainous countries with relatively intact natural and cultural resources, despite recent periods of socio-economic and political transition and political instability. In comparison with other recreational spaces of earth this territory is comparatively still untapped as tourism destinations. Tourism is increasingly becoming a higher priority for government, civil society and private sector actors in these countries. Critical to the improved planning and management of tourism in Kyrgyzstan and Tajikistan is the capacity to more deeply understand key tourism and sustainability issues and for research to be conducted in a way that it is accessible, useful, and used by policymakers and practitioners. Tourism-related research on Kyrgyzstan and Tajikistan, like the tourism industry itself, has experienced many changes during the transitions from Soviet rule to the immediate post-independence period to current times. Scientific papers were selected and analysed based on following criteria's 1) knowledge that is gained through systematic methods, 2) exposed to some form of quality control and 3) published in one of the following journals: International academic literature (10); local academic literature (46); grey literature (29) for both countries Kyrgyzstan and

Tajikistan. The paper aims to assess the state of knowledge on mountain tourism and sustainability in Kyrgyzstan and Tajikistan. Presentation of this research study will include primary findings regarding knowledge gaps and prioritized areas for future research.

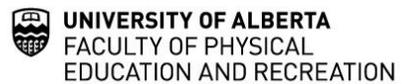
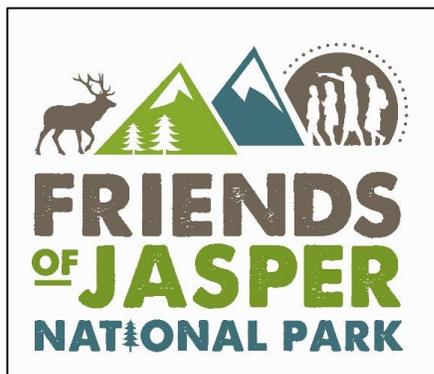
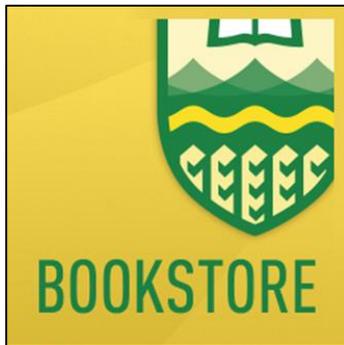
Vascular responses following acute hypoxia

Rachel Skow, Christina MacKay, Margie Davenport, Craig Steinback

Previous work from our lab and others has shown that sympathetic nerve activity increases during, and remains elevated following exposure to hypoxia (reduced oxygen) for a period at least as long as the initial exposure. However, it remains unclear if and how augmented sympathetic nerve activity affects vascular function following hypoxia. We tested the hypothesis that persistent sympathetic nerve activity following hypoxia is associated with changes vascular function (e.g. mean arterial pressure, total peripheral resistance, and femoral vascular resistance). Participants (n=16; males=9; 24±3yrs; mean±SD) were instrumented to measure heart rate, blood pressure, cardiac output (Finometer), and femoral artery blood flow (Doppler ultrasonography). Total peripheral resistance and femoral vascular resistance were calculated from mean arterial pressure and either cardiac output or femoral blood flow, respectively. Data were collected continuously during 10-minutes of baseline, 10-minutes of hypoxia (~80% oxygen saturation), and up to 30-minutes of recovery. Averages (1-min) for each variable were taken during baseline, the end of hypoxia and every 5-minutes during recovery were compared using one-way ANOVA. Mean arterial pressure was not significantly different at any time point (p=0.450). Furthermore, femoral blood flow, femoral vascular resistance and total peripheral resistance were not different at any time point (p=0.554, p=0.646, and p=0.243, respectively). These data indicate the anomalous ability of the human body to adapt to stress and maintain homeostasis. Further investigation is required to understand the mechanisms by which the sympathetic nervous system activity is augmented following acute hypoxia and how this may affect sympathetic reflex responses following acute hypoxia.

THANK-YOU TO OUR SPONSORS!!

Physical Education and Recreation Graduate Student Society (PERGSS)



Sabine Leffers, RMT

Amanda Bryden, RMT



YourYogaMat.com
Your Mat. Your Words. Your Inspiration.



ReCon IV: Program at a Glance

TIME	Thursday September 4, 2014	TIME	Friday September 5, 2014	TIME	Saturday September 6, 2014		
7:00 AM		7:00 AM	Breakfast <i>Full buffet at the hotel</i>	7:00 AM	Breakfast <i>Full buffet at the hotel</i>		
7:30 AM		7:30 AM		7:30 AM			
8:00 AM		8:00 AM		8:00 AM			
8:30 AM	Bus Leaves Edmonton <i>(8:30AM)</i>	8:30 AM	Alumni Presentation <i>(8:30- 9:30AM)</i>	8:30 AM	Research Presentations 2 <i>(8:30-9:15AM)</i>		
9:00 AM		9:00 AM		9:00 AM			
9:30 AM		9:30 AM	Break	9:30 AM	Professional Development 3 <i>(9:30-11:00AM)</i>		
10:00 AM		10:00 AM	Research Presentations 1 <i>(9:45-11:00AM)</i>	10:00 AM			
10:30 AM		10:30 AM		10:30 AM			
11:00 AM		Bus Arrives in Jasper <i>(1:30PM)</i>	11:00 AM	Break	11:00 AM	Grab and Go Lunch & Activity Break <i>(11:00AM-1:30PM)</i>	
11:30 AM			11:30 AM	Professional Development Session 2 <i>(11:15AM- 12:15PM)</i>	11:30 AM		
12:00 PM			12:00 PM		12:00 PM		
12:30 PM			12:30 PM	Grab and Go Lunch & Activity Break <i>(12:15-4:30PM)</i>	12:30 PM		
1:00 PM			1:00 PM		1:00 PM		
1:30 PM	1:30 PM		1:30 PM				
2:00 PM	Check-In at Hotel and Pick Up Registration Packages <i>(1:30-3:30PM)</i>		2:00 PM		2:00 PM		Research Presentations 3 <i>(1:30-2:45PM)</i>
2:30 PM			2:30 PM		2:30 PM		
3:00 PM			3:00 PM		3:00 PM		
3:30 PM	Welcoming Comments		3:30 PM		Break		Closing Comments & Awards <i>(3:00-4:00PM)</i>
4:00 PM	Icebreaker Activity/ Professional Development Session 1 <i>(3:45-5:15PM)</i>	4:00 PM	4:00 PM				
4:30 PM		4:30 PM	Break	4:30 PM			
5:00 PM		Break	5:00 PM	Poster Presentations <i>(5:00-6:30PM)</i> <i>Cash bar</i>	Bus Leaves Jasper <i>(4:30PM)</i>		
5:30 PM	Rod Murrary Memorial Address <i>(5:30-6:30PM)</i>	5:30 PM	5:30 PM				
6:00 PM		6:00 PM	6:00 PM				
6:30 PM	Break	6:30 PM	Break	6:30 PM	Bus Arrives in Edmonton <i>(9:30PM)</i>		
7:00 PM	Dinner - in Jasper <i>(7:00PM)</i> <i>Sign-up required</i>	7:00 PM	Conference Dinner at CHAMPS in Hotel <i>(7:00PM)</i>	7:00 PM			
7:30 PM		7:30 PM		7:30 PM			
8:00 PM		8:00 PM		8:00 PM			
8:30 PM		8:30 PM		8:30 PM			
9:00 PM		9:00 PM		9:00 PM			
9:30 PM		9:30 PM		9:30 PM			

