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Message from the President

Dear ISMPB members and colleagues,

I write this message from my home desk, which I'm sure is an action now very familiar to you all. The pandemic continues to throw challenges our way as we journey through the Greek alphabet. While my particular desk location (Brisbane, Australia) has had less restriction than many of you, we have not escaped and seem to be in the throes of a huge wave of infections.

Throughout the last couple of years ISMPB has had to pivot in the manner in which we provide for our members. Most notably we have undertaken more online activities including the first virtual conference in June last year. We are now looking forward to ICAMPAM 2022 and are still planning for an in-person event in Keystone Colorado (a magnificent location) from June 21 – 24. There will be an option for those unable to travel to take part in some of the events and access the research, with at least poster presentations available virtually and some keynote presentations. It is likely that hybrid conferences will be a mainstay in the future and this is important to us to provide for our members who are not able to travel to each ICAMPAM.



One initiative that has been undertaken since my last letter is to enter into a collaboration with The Prospective Physical Activity, Sitting and Sleep consortium (ProPASS). This will enable cross promotion of our activities and sharing and presentation of research central to each of our objectives. We hope to expand this model to promote collaborations with other research groups, whose aims and goals align with ours in the development of ambulatory measurement of physical behaviour.

Further activities include a group working towards a Diversity, Equity and Inclusion Mentoring scheme to be implemented at future ICAMPAMs. Members from areas with low representation will be able to take advantage of the scheme to make the most of the collaborative activities available at the conferences.

Newsletter

January, 2022

SOCIAL MEDIA

Follow us on



WEBSITE

KEEP UP TO DATE ON OUR WEBSITE

<http://www.ismpb.org/>

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IN THIS ISSUE



KEYSTONE, COLORADO, USA 2022

| | |
|----------------------------|-----|
| Message from the President | 1 |
| Member Profile | 3 |
| ICAMPAM 2022 | 4-6 |
| Social media activity | 7 |
| Recent publications | 8 |
| Journal - New Issue | 9 |
| Membership | 10 |
| Job Opportunities | 10 |

Prior to the New Year, I particularly enjoyed the advent calendar our social media committee devised on Twitter. It was great to be reminded of the fantastic research our members have produced, the seminal papers in our area and the great contribution made by the publications in our society journal – JMPB.

Finally, I wish you all a happy New Year and I hope to see as many of you who can make it the Keystone Colorado in June and everyone else online.

Bronwyn Clark



KEYSTONE, COLORADO, USA 2022

STAY TUNED

For the latest info about ICAMPAM 2022, registration costs, DEI Mentorship plan and much more, check out our website and Twitter!!! <https://ismpb.org/icampam/>



ISMPB is working on a collaboration with:
Prospective Physical Activity, Sitting and Sleep Consortium

Member Profile

Dinesh John

Everybody has a unique career path to their current destination. Can you share some of your stops along the way?

I was a track and field athlete who transitioned to a career in marketing. Given a passion for sport and exercise, I chose to alter my career path towards something that was more meaningful to me. This led me to pursue a master's degree in Exercise Science in the US. I enjoyed my education as a master's student, during which I recognized my penchant for scientific research. I am grateful for the opportunity I was given to pursue a PhD under the tutelage of Dr. David Bassett at the University of Tennessee, Knoxville. His mentorship helped me develop skills including critical thinking and written communication, but most importantly, the value of collaboration to scientific progress. Subsequently, I was able to refine this skill set as a postdoc under the guidance of Dr. Patty Freedson. I currently hold the position of an Associate Professor in the Department of Health Sciences at Northeastern University. My experiences over the past 15 years with mentors, colleagues, and my students have shaped my scientific interests in the field of applying sensing technologies to address real-world problems.

Tell us about a current project you are working on.

My lab is currently conducting work funded by the National Institutes on Aging that integrates wearable sensors, wireless data transmission, two-way communication, machine learning, and behavior change theory to implement a 6 month near-real-time intervention aimed at modifying physical behavior in adults >60 y. This is a collaborative effort among experts and graduate students in aging, neurocognition, personal health informatics, and exercise science. This work is being led by Mr. Diego Arguello who is a PhD student in my lab.

What do you think are the most important research advancements in this area?

Overall, leveraging technology to tailor an intervention at a granularity that was not possible previously is an important advancement that holds immense promise in developing effective behavior change applications. Improved technology now allows longitudinal data

collection and transmission throughout the intervention, enables capture of both micro and macro interactions between an interventionist and their client– via wireless two-way communication modalities, while simultaneously enabling the detection of high-resolution ongoing or recent behavior– via efficient wireless sensing and data processing.

Specific to our project, an improved understanding of the challenges in integrating and implementing multiple technologies to work seamlessly in an intervention has been insightful. Based on our learnings, we are currently working on: (1) addressing discrepancies (e.g., clock, data type, data resolution) among different kinds of active and passively gathered data streams, (2) the automation of data processing to facilitate a rapid generation of meaningful information to enable a truly adaptive intervention, and (3) on developing visualization tools that help an interventionist to obtain an interpretable representation of ongoing/recent behavior.

Have you participated in any ISMBP events? If so, can you please describe your experiences?

I have attended several ICAMPAM conferences, which have been both productive and meaningful to my career, and enjoyable on a personal level as well.

In the future, what would you like to see from the ISMPB?

Continuing its ongoing effort to identify and address areas of growth for the society via collaboration with other scientific societies/organizations/avenues. The society's mission and the diverse scientific interests of its members are likely to make us an attractive collaboration opportunity to scientists from academic disciplines that fall under STEM and end-user practitioners who are looking for improved solutions to improve patient/client experience. Growth in members from such areas of expertise and applications will allow us to increase our impact on the field and accelerate the achievement of our mission.

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d.john@northeastern.edu





We can't wait to see you all in the beautiful mountains of Colorado.

If your circumstances permit, please plan to be with us in-person in Keystone, from June 21-24, 2022

Local Host Chairs:



Prof. Ed Melanson



Dr. Kate Lyden



Prof. Jeff Hausdorff



Prof. Sarah K Keadle

Scientific Program Chairs:

We are hoping to see many of you in person. We will be offering a limited virtual presentation of research for those who cannot travel.

Main themes:

- Applications
- Big Data and Statistical Analysis
- Technology and algorithm development

IMPORTANT MESSAGE:

To allow more time for people to prepare submissions and to make plans for ICAMPAM attendance, the ISMPB scientific committee is delighted to announce that we are extending the submission deadline.

ABSTRACT
SUBMISSION



New deadline for all submissions (workshop, symposia and abstracts) will be **March 1st, 2022**

Destination

KEYSTONE LODGE & SPA / CONFERENCE VILLAGE

About 90mins from Denver, the outdoor options and breathtaking views in Keystone will help you both engage and relax in new ways.

The Keystone Lodge & Spa is surrounded by the majestic Rocky Mountains and thousands of acres of national forest. Keystone Lodge is on the shuttle route, and the Lodge also boasts easy access to a host of activities, including mountain biking, golf, tennis, rock climbing, whitewater rafting and more.

[Book the hotel!](#)[Important travel information](#)

ICAMPAM Keynote Speakers

- **Dr. Matthew Diamond**, Digital Health Center of Excellence, FDA
- **Prof. Robert Motl**, University of Alabama
- **Prof. Fay Horak**, Oregon Health & Science University
- **Dr. Jessylin Dunn**, Duke University
- **Prof. I-Min Lee**, Harvard Medical School
- **Prof. Mai Chin A Paw**, Amsterdam UMC
- **Prof. Steve Robinovich**, Simon Fraser University
- **Prof. Charlotte Edwardson**, University of Leicester
- **Dr. Richard Troiano**, National Cancer Institute

MEET FEW OF OUR KEYNOTE SPEAKERS

Issues and Solutions in the Measurement of Physical Activity and Multiple Sclerosis: Lessons Learned and Implications for Other Neurological Diseases.



Prof. Robert Motl

University of Alabama

Biography: Prof. Robert Motl has systematically developed a research agenda that focuses on physical activity and its measurement, predictors, and consequences in persons with neurological diseases, particularly multiple sclerosis (MS). Prof. Motl has generated a body of research on the validity of common physical activity measures in persons with MS. This has resulted in foundational research on quantifying differences in physical activity, particularly rates of moderate-to-vigorous physical activity, in persons with MS. These two lines of research have provided the basis for examining the outcomes of physical activity in MS, particularly beneficial adaptations in brain structure, cognition, depression, fatigue, walking disability, and quality of life. Prof. Motl has undertaken research on social-cognitive predictors of physical activity that has informed the design of behavioral interventions for increasing physical activity in MS. This agenda serves as a test-bed for application and expansion into other conditions such as spinal cord injury and Parkinson's disease.

How to select balance and gait outcomes from body-worn sensors for clinical trials on Parkinson's disease



Prof. Fay Horak

Oregon Health &
Science University

Biography: Dr. Horak is the Jay Nutt Endowed Professor of Neurology (Parkinson Center) at Oregon Health and Science University and Chief Scientific Officer of APDM Wearable Technologies, Clario. She is a fellow of the American Physical Therapy Association and neuroscientist who studies neural control and rehabilitation of balance and gait in patients with neurological disorders. Dr. Horak has quantified balance disorders in patients with Parkinson's disease, Multiple Sclerosis, Vestibular Disorders, Cancer Drug toxicity, age-related high fall risk, etc. Dr. Horak also helped start a small company, that makes body-worn, inertial sensors with software to quantify balance and gait and movement disorders via precision motion monitoring. APDM was recently acquired by Clario, the largest company that provides technology for clinical trials. Recently, her laboratory has been comparing gait and turning characteristics collected passively during natural activities in daily life with characteristics collected activity during prescribed, clinical tests. She has over 300 peer-reviewed scientific articles and has received numerous awards.

Avoiding catastrophe during a fall: Insights from video capture on the landing strategies of older adults during real-life falls



Prof. Steve Robinovitch

Simon Fraser University

Biography: Steve Robinovitch, Ph.D. is Professor in the Department of Biomedical Physiology and Kinesiology at Simon Fraser University. Steve's program on Technology for Injury Prevention in Seniors (www.sfu.ca/tips) focuses on the cause and prevention of falls and fall-related injuries in older adults. Steve received his B.A.Sc. in Mechanical Engineering from the University of British Columbia in 1988 and his Ph.D. in Medical Engineering from MIT/ Harvard in 1995. He worked as an Assistant Professor In-Residence in Orthopedics at the University of California San Francisco before joining SFU in 2000. He has published over 120 peer-reviewed papers, and is a past recipient of a Canada Research Chair, a Scholar Award from the Michael Smith Foundation for Health Research, and a New Investigator Award from CIHR.

ISMPB ON SOCIAL MEDIA



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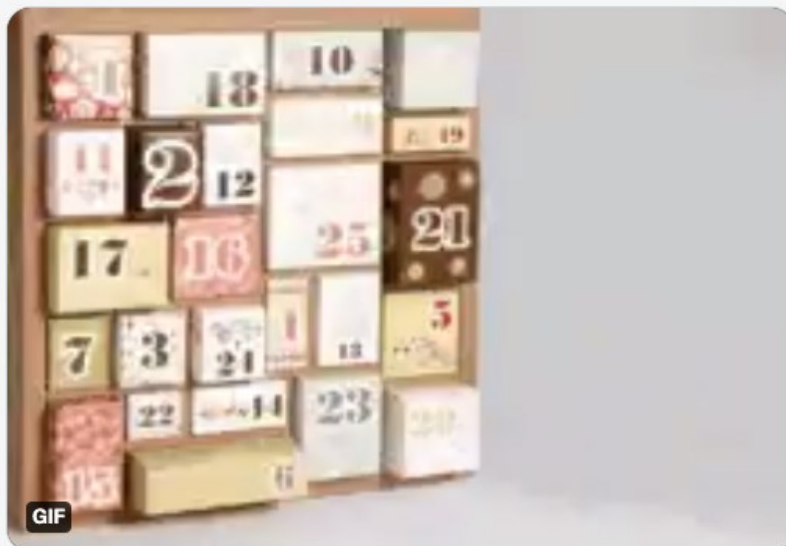
ISMPB @ismpb_org · Oct 26, 2021

Yippee!! We've now reached 1500 followers!! Thank you for all your support, follows, retweets etc. [#ICAMPAM2022](#) [#PhysicalActivity](#) [#SedentaryBehavior](#) [#PhysicalBehavior](#)



ISMPB @ismpb_org · Nov 30, 2021

We will be highlighting a different paper each day throughout advent, counting down to Christmas 🎄 Let us know if there are any papers that you'd like to see [#PhysicalActivity](#) [#CountdowntoChristmas](#) [#SedentaryBehaviour](#) [#Accelerometry](#) [#AdventCalendar](#) 2/2



Did you follow our advent calendar?

January, 26th!



ISMPB @ismpb_org · 6h

Happy Australia 🇦🇺 G'Day to our lovely President [@bron_clark](#) and to all our lovely members down under 🇺🇸🇦🇺



LOOK WHAT OUR MEMBERS HAVE BEEN UP TO

Journal of Physical Activity and Health, 2022, 19, 37-46
<https://doi.org/10.1123/jpah.2021-0334>
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Human Kinetics 
 ORIGINAL RESEARCH

Differences in Accelerometer-Measured Patterns of Physical Activity and Sleep/Rest Between Ethnic Groups and Age: An Analysis of UK Biobank

Nathan P. Dawkins, Tom Yates, Cameron Razieh, Charlotte L. Edwardson, Ben Maylor, Francesco Zaccardi, Kamlesh Khunti, and Alex V. Rowlands

CURRENT OPINION

Open Access

24-Hour Physical Behavior Balance for Better Health for All: "The Sweet-Spot Hypothesis"



Andreas Holtermann^{1,2*}, Charlotte Lund Rasmussen¹, David M. Hallman³, Ding Ding^{4,5}, Dorothea Dumuid⁶ and Nidhi Gupta¹

Diabetes Care Volume 45, February 2022



Associations of Daily Steps and Step Intensity With Incident Diabetes in a Prospective Cohort Study of Older Women: The OPACH Study

Diabetes Care 2022;45:339-347 | <https://doi.org/10.2337/dc21-1202>

Alexis C. Garduno,^{1,2} Andrea Z. LaCroix,² Michael J. LaMonte,³ Kelly R. Evenson,⁴ David W. Dunstan,^{4,5} Guangxing Wang,⁷ Chongzhi Di,⁷ Benjamin T. Schumacher,^{1,2} and John Bellettiere²

Feasibility and Validity of Assessing Low-Income, African American Older Adults' Physical Activity and Sedentary Behavior Through Ecological Momentary Assessment

in *Journal for the Measurement of Physical Behaviour*

Jaclyn P. Maher^{*1}, Kourtney Sappenfield^{*1}, Heidi Scheer^{*2}, Christine Zecca^{*3}, Derek J. Hevel^{*1}, and Laurie Kennedy-Malone^{*4}

View Less —


Review

Evolution of accelerometer methods for physical activity research

FREE

Richard P Troiano¹, James J McClain¹, Robert J Brychta², Kong Y Chen²

Correspondence to Dr Richard P Troiano, Risk Factor Monitoring and Methods Branch, Applied Research Program, National Cancer Institute, NCI Shady Grove, 9609 Medical Center Dr, MSC 9762, Bethesda, MD 20892-9762, USA; troiano@mail.nih.gov

BMJ Learning  Take the Test

Latest issue of JMPB!

[CLICK HERE](#)


The December 2021 issue rounds off the fourth volume of JMPB, marking another milestone in the journal's journey. As usual there are articles covering a range of different topics, including articles exploring feasibility of methods and adherence in different populations, and two articles addressing the impact of sampling rate in tri-axial accelerometers on outcome measures. There is also a scoping review of the use of equivalence testing as used in validation studies for physical behaviour outcomes. I am looking forward to seeing what comes in 2022.

Finally, a reminder to take advantage of your membership benefits if you want to publish open access in JMPB. Authors can opt in to open access and ISMPB members get a 50% discount!



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Editor-in-chief, Dr. Philippa Dall at philippa.dall@gcu.ac.uk.

Journal for the Measurement of Physical Behaviour Volume 4, Issue 4 (December 2021)

Original Research:

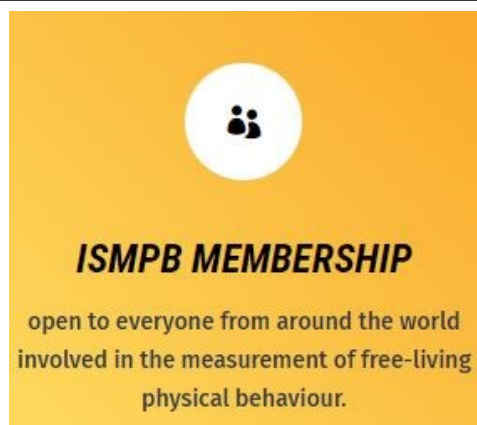
- **Correlates of the Adherence to a 24-hr Wrist-Worn Accelerometer Protocol in a Sample of High School Students.** Marcus V.V. Lopes, Bruno G.G. da Costa, Luis E.A. Malheiros, Rafael M. Costa, Ana C.C. Souza, Inacio Crochemore-Silva, and Kelly S. Silva
- **Impact of ActiGraph Sampling Rate and Intermonitor Comparability on Measures of Physical Activity in Adults.** Kimberly A. Clevenger, Jan Christian Brønd, Daniel Arvidsson, Alexander H.K. Montoye, Kelly A. Mackintosh, Melitta A. McNarry, and Karin A. Pfeiffer
- **Impact of Reduced Sampling Rate on Accelerometer-Based Physical Activity Monitoring and Machine Learning Activity Classification.** Scott Small, Sara Khalid, Paula Dhiman, Shing Chan, Dan Jackson, Aiden Doherty, and Andrew Price
- **A Transparent Method for Step Detection Using an Acceleration Threshold.** Scott W. Ducharme, Jongil Lim, Michael A. Busa, Elroy J. Aguiar, Christopher C. Moore, John M. Schuna Jr., Tiago V. Barreira, John Staudenmayer, Stuart R. Chipkin, and Catrine Tudor-Locke
- **Validity of a Global Positioning System-Based Algorithm and Consumer Wearables for Classifying Active Trips in Children and Adults.** Chelsea Steel, Katie Crist, Amanda Grimes, Carolina Bejarano, Adrian Ortega, Paul R. Hibbing, Jasper Schipperijn, and Jordan A. Carlson
- **Simultaneous Validation of Count-to-Activity Thresholds for Five Commonly Used Activity Monitors in Adolescent Research: A Step Toward Data Harmonization.** Gráinne Hayes, Kieran Dowd, Ciaran MacDonncha, and Alan Donnelly
- **Feasibility and Validity of Assessing Low-Income, African American Older Adults' Physical Activity and Sedentary Behavior Through Ecological Momentary Assessment.** Jaclyn P. Maher, Kourtney Sappenfield, Heidi Scheer, Christine Zecca, Derek J. Hevel, and Laurie Kennedy-Malone

Review:

- **Implications and Recommendations for Equivalence Testing in Measures of Movement Behaviors: A Scoping Review.** Myles W. O'Brien

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MEMBERSHIP



This ISMPB membership term runs from **October 1, 2020 to September 30, 2022.**

Membership fees support the mission of ISMPB in creating a vibrant community bringing together people from a wide variety of backgrounds and expertise, including researchers, clinicians, therapists, signal analysts, computational scientists and commercial companies.

Link <http://www.ismpb.org/membership/>

JOIN TODAY!

Member Benefits:

- ⇒ Reduced registration rates at official meetings/webinars organized by ISMPB, including the biannual ICAMPAM
- ⇒ Access to online subscription to the Journal for the Measurement of Physical Behaviour, the official journal of ISMPB, published quarterly by Human Kinetics
- ⇒ Join one of the ISMPB Committees and get directly involved in the activities of the society
- ⇒ Vote on Society matters and elections
- ⇒ Join colleagues from all over the world at the ISMPB meetings/e-meetings and create a global network
- ⇒ Quarterly e-newsletter with most important information from the Society

Fees:

| Category | Dues |
|---------------------|-------|
| Student | \$75 |
| Regular / Post Doc | \$150 |
| All dues are in USD | |

JOB OPPORTUNITIES



Researcher in Health Data Science!

[Details here!!!](#)

The **Oxford University Big Data Institute (BDI)** is an interdisciplinary research centre aiming to develop, evaluate and deploy efficient methods for acquiring and analysing biomedical data at scale and for exploiting the opportunities arising from such studies.

Closing date February 16th, 2022