



ISSUE 22 · APRIL 2024

SOCIAL MEDIA:



# ISMPB NEWSLETTER

Official Newsletter of the International Society for the Measurement of Physical Behavior

WEBSITE:  
[HTTP://WWW.ISMPB.ORG/](http://www.ismpb.org/)

## Message from the president

BY ALAN DONNELLY

We are now in the last few months before ICAMPAM 2024, to be held in the historic city of Rennes in Brittany, France.



The ICAMPAM 2024 conference is being hosted by the Movement, Sport and Health Sciences Laboratory (MS2 Lab) from the École Normale Supérieure de Rennes. The conference will be held at the campus of Université Rennes 2, about 2km from Rennes city centre.

This ICAMPAM conference has many exciting offerings, including an increased number of symposia (we received the highest number of symposia proposals in the history of the conference!), workshops, four keynotes, four invited speakers, and wide range of oral and poster sessions. Social events include an opening reception, the conference dinner in La Prison St-Michel and an early Career Researcher event with a local Breton flavour.

I would like to thank the local host chair Dr Alexis le Faucheur and the Scientific Programme chairs Åsa Tornberg and Tom Stewart whose hard work and enthusiasm has crafted an outstanding ICAMPAM, with a programme, speakers, sessions, and events that will provide scientific excellence, opportunities to network and will highlight the best research in ambulatory measurement of physical behaviours.

Abstract review for ICAMPAM 2024 is now complete and presenters should have received information on acceptance. Remember to register as soon as possible to get the best rates for registration!



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## Contributors:

Bronwyn Clark, Martina Mancini, Alexandra Clarke-Cornwell



The Society's journal, the Journal for the Measurement of Physical Behaviour has continued to grow in stature and impact, helped by the recent listing of the journal by SCOPUS. The journal's development has benefited from the expertise and hard work of the previous editor in chief, Dr Philipa Dall. Philipa has stepped down after completing her term last year, and we are very pleased to welcome Professor Charlotte Edwardson from the University of Leicester in England, who is now Editor in Chief for JMPB.

On behalf of the ISMPB board I look forward to welcoming you to ICAMPAM 2024, and I hope to see you all in Rennes this June!

## Member profile

BY PROF. CHARLOTTE EDWARDSON

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

When I started my Masters in Physical Activity and Health at Loughborough University in 2004, I wasn't sure whether I wanted to do a PhD but once I started my dissertation, which was investigating the validity of the activPAL accelerometer, I developed a passion for conducting research, and specifically around accelerometry. I am very grateful to Professor Trish Gorely who introduced me to the activPAL device, supervised my MSc dissertation and ignited my interest in accelerometry. By the time I completed my dissertation in August it was too late to apply for funded PhDs for the new academic term so I applied for a part time Research Associate position at the Institute of Youth Sport, Loughborough University to evaluate a school based physical activity intervention, where the main outcome would be accelerometer-assessed physical activity.

On completion of my PhD in 2010, I became a Project Manager on several randomised controlled trials of sitting reduction and physical activity interventions in adults at risk of type 2 diabetes, working across Loughborough University and the Leicester Diabetes Centre based within the University Hospitals of Leicester NHS Trust. Although not an academic role I could use the accelerometer skills learnt during my MSc project and PhD for these trials whilst developing my skills around conducting randomised controlled trials in a clinical setting. Being a Project Manager for 3 years (and a part time RA for 5 years whilst doing my PhD) provided a great foundation for my academic career which has largely focused on developing interventions to reduce sitting time and increase physical activity in a range of populations and contexts and evaluating these using randomised controlled trials.

“Our aim is to better understand how we can prevent and manage chronic disease through the application of human movement across the physical activity intensity spectrum”



Leicester Lifestyle & Health Research Group



In 2013 I transferred to a Lecturer position at the University of Leicester, although still based in the clinical setting of the Leicester Diabetes Centre, University Hospitals of Leicester NHS Trust. I was promoted to Associate Professor in 2016 and Professor in 2023. During my time at Leicester, myself and my colleague Professor Tom Yates have established the [Leicester Lifestyle & Health Research Group](#), which conducts research to understand how movement behaviours can prevent and manage long-term health conditions, such as type 2 diabetes, with robust measurement of physical behaviours underpinning this.

**Tell us about a current project you are working on.**

One of the projects I am currently working on is around investigating whether we can identify fatigue from a combination of physical activity and physiological data collected by a wrist accelerometer and a fitbit. In this project we are asking people living with cancer to wear these devices continuously for 6 weeks, 3 weeks prior to treatment starting and 3 weeks on treatment commencement, whilst also recording their fatigue level. We will use these data to describe physical behaviours over the 6 weeks in this population, investigate associations between fatigue and physical activity and to use machine learning approaches to identify which physical activity (e.g., steps, average acceleration) and physiological (e.g., heart rate variability, breathing rate) metrics predict mental and physical fatigue.

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

The second ICAMPAM meeting in Glasgow in 2011 was my first introduction to ISBPM events and I have attended every face-to-face conference since, bar the 2022 conference in Keystone as I had just returned to work from maternity leave. It's fantastic to have a conference solely dedicated to the assessment of movement behaviours and I've met some great collaborators from across the world through networking at these events, including one that subsequently led to the development of Processing PAL, the software for bulk processing, visualising and summarising activPAL data.

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

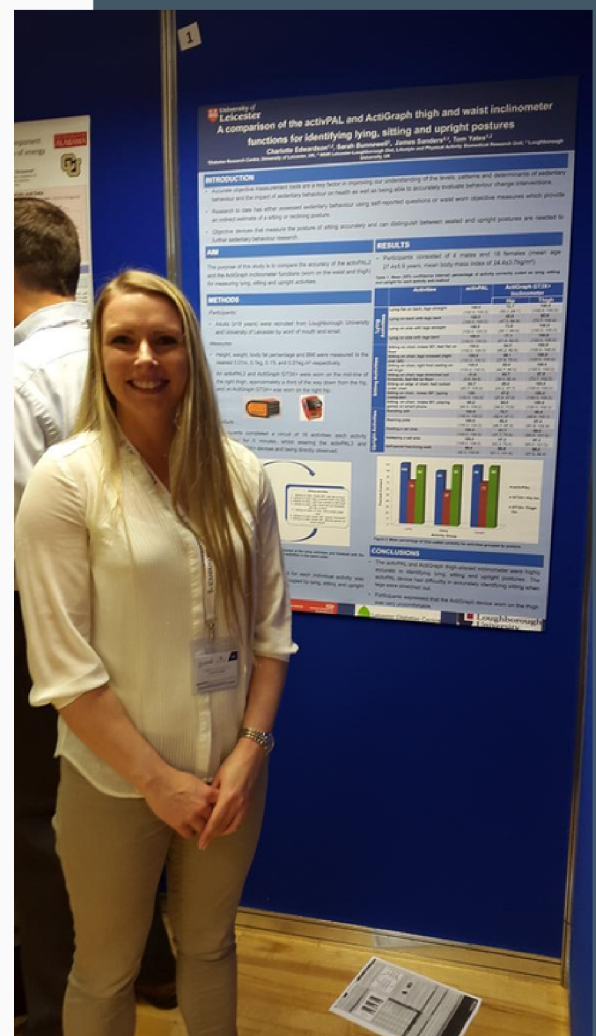
I would like to see ISMPB offer short webinars a few times a year on key issues related to the measurement of physical behaviours.

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Google Scholar: [Charlotte Edwardson - Google Scholar](#)







*Save the Date!*  
 June 18 – 21, 2024  
 Rennes, Brittany, France  
 Rennes University Campus

JOIN NEWSLETTER FOR CONFERENCE UPDATES!



## OUR HOST INSTITUTION FOR ICAMPAM 2024 IS THE ÉCOLE NORMALE SUPÉRIEURE DE RENNES HOME TO THE MOVEMENT, SPORT AND HEALTH SCIENCES LABORATORY (M2S LAB)

ISMFB IS GRATEFUL FOR THEIR SUPPORT IN ORGANIZING AND SUPPORTING ICAMPAM 2024



We can't wait to see you all in beautiful Rennes!

[REGISTER NOW](#)

### Local Host Chair

Alexis Le Faucheur  
 Ecole normale supérieure de Rennes, France



### Scientific Program Chairs

Åsa Tornberg  
 Lund University, Sweden

Tom Stewart  
 Auckland University of Technology, New Zealand

### KEY DATES

ABSTRACTS	
November 2023	Abstract Submissions Open for all format types (Workshops, Symposia, Orals, and Posters)
Extended to January 8, 2024	Submissions close for Workshops & Symposia
Early February 2024	Acceptance notices for Workshops & Symposia sent out
Extended to February 5, 2024	Submissions close for Orals and Posters
Late February 2024	Acceptance notices for Orals and Posters sent out
REGISTRATION	
March 1, 2024	Registration opens for ICAMPAM 2024
April 2024	Early bird registration rates end
May 2024	Regular registration rates end





**ICAMPAM**

RENNES, BRITTANY, FRANCE 2024

## Coming to Rennes for ICAMPAM?

There is plenty to get excited about during conference down time in Rennes and Brittany. The town of Rennes is known for its half-timbered houses, cobbled streets and its lively café terraces. There are many historic buildings and places to walk such as the Parc du Thabor and along the River Vilaine. For those staying on, the Saturday market of Marché des Lices is the second largest food market in France and has been operating for over 400 years.

Further a field there are canals, beaches, ancient monuments and picturesque town such as Dinan.

In the vain of soaking up the history of Rennes, we have fantastic venues for our ICAMPAM social events:



Our **ECR event** will be held at The Roof and Origines, which contains a bar microbrewery, a bistro where you can eat home-made dishes made from home-grown products, and also an indoor climbing wall! The venue is with in the Hôtel-Dieu Hospital, founded in 1358, which closed its maternity ward in 2009. It is now used as a site for sports and socialising while preparations are made for rehabilitation and reconversion.

### ECR EVENT LOCATION



Our **conference evening social event** will be at the Prison Saint-Michel. This was originally the site of the Priory of Saint Michel but was transformed into a prison in 1455, which it continued to be until 1902. After some time housing shops and businesses it became Club PSM in 1966 a unique place for evening outings in Rennes. The entire courtyard Prison Saint Michel is classified as a historical monument and we will have the run of the venue for the evening for a cocktail dinner and drinks. I think all will agree that this is a unique venue for us to gather.



# Our keynote speakers

## **Prof. Fiona Bull, World Health Organization (WHO)**

***WHO Global progress on physical activity – The role of wearables and digital technologies***



Professor Fiona Bull MBE, Phd, is the Head of the Physical Activity Unit in the Department of Health Promotion at the World Health Organization (WHO) Headquarters in Geneva, Switzerland.

At WHO, Professor Bull leads a team working on the cross-cutting agenda of promoting more participation in physical activity via active transport, sports and everyday activities through advancing science, policy, and practice. Dr Bull led the development of the Global Action Plan on Physical Activity 2018-2030: More Active People for a Healthier World, the Global Guidelines on Physical Activity and Sedentary Behaviours and the recent Global Status Report on Physical Activity 2022.

## **Dr. Guillaume Chevance, Barcelona Institute for Global Health, ISGlobal**

***Being interested in both the intensive monitoring of physical activity and behavior and climate change mitigation: some proposition for managing cognitive dissonance***



Guillaume Chevance is an interdisciplinary researcher with a first MSc in Sport Sciences, a second in Health Psychology, and a Ph.D. in Human Movement Sciences from the University of Montpellier (France). At the beginning of his research journey, he studied motivation towards health-related behaviours. He then completed a postdoc at the University of California San Diego (US) with a team interested in the design of digital behaviour change interventions.

Guillaume is mainly interested in the dynamics of health behaviour change, such as physical activity, eating behaviors, and sleep, in a context of climate change mitigation and adaptation.

## **Prof. Kerstin Bach, Norwegian University of Science and Technology**



Kerstin is a professor in artificial intelligence at the Department of Computer Science at NTNU. Her research interests are Machine Learning and Artificial Intelligence and is currently deputy head of the Data and Artificial Intelligence group, program manager of the Norwegian Research Center for AI Innovation (NorwAI), and associated with the Norwegian Open AI Lab. She was awarded a Dr. rer. nat. (summa cum laude) in Computer Science from the University of Hildesheim, Germany in 2012. Kerstin's main research interests are data-driven decision support systems as well as knowledge-intensive Case-Based Reasoning. She is the chair of the German Society for Computer Science's Special Interest Group on Knowledge Management, co-chair of the AI4EU gender board, and a board member of the Norwegian AI society.



# Our keynote speakers

## **Prof. Jasper Schipperijn, University of Southern Denmark**

*Assessing the context of physical activity behavior*



Jasper Schipperijn is a Professor in Active Living Environments at the Department of Sports Science and Clinical Biomechanics, University of Southern Denmark. He has been leading the World Playground Research Institute since 2022. He has an MSc degree in Forest and Nature Management from Wageningen University, The Netherlands, and a PhD degree in Greenspace Management from the University of Copenhagen, Denmark. His research interests revolve around three main topics: playgrounds, conducting multi-disciplinary intervention studies to create active living environments, and developing tools and methods that make it possible to measure active living and the environment it takes place in. Jasper has contributed to over 150 peer-reviewed articles and was President of the International Society for Physical Activity and Health (ISPAH) from 2020-2022.

## **Prof. Kim Meredith Jones, University of Otago**

*The past, present, and future of sleep assessment and monitoring*



Kim Meredith-Jones, an Associate Professor at the University of Otago, (New Zealand), specializes in evaluating 24-hour movement patterns, particularly focusing on objective sleep assessment. Leading major research projects involving over 2000 participants, she has played a pivotal role in assessing physical activity and sleep. As an invited member of academic panels, Kim contributed to both the 2018 and 2022 NZ Physical Activity Report Cards for Children and Youth, including contributions to assessing sleep patterns in NZ children. Her expertise also extends to consulting on optimal measurement methods for sleep across a wide range of randomized controlled trials, including studies on movement behaviours in infants and toddlers and the effects of probiotics on sleep and gut health in adults.

# Invited speakers

## **Prof. Orjan Ekblom, The Swedish School of Sports and Health Sciences**

*On measuring physical activity in young participants*



Örjan Ekblom is a professor at the Swedish School of Sports and Health Sciences in Stockholm, Sweden. His research areas are acute physiological and psychological effects of physical activity, as well as epidemiological studies on relations between physical activity indices and health-related variables across ages. Using genetically informed designs, we try to shed light on potential causal relations. In previous and ongoing studies, we have focused on relationship between physical activity and brain health, i.e. mental health and cognitive abilities in healthy populations and among individuals with dementia, depression, anxiety, and first-episode psychosis.

# Invited speakers

**Prof. Severine Sabia**, National Institute of Health and Medical Science (Inserm U1153), and University College London

*PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR PATTERNS IN OLD AGE: THEIR DETERMINANTS AND IMPACT ON CARDIOVASCULAR DISEASE AND MORTALITY*



S everine Sabia is a research professor in epidemiology at the National Institute of Health and Medical Science (Inserm) in France. Her main research domain is on health behaviours, including physical activity and sleep, with a particular interest in methodology. She set up the Whitehall II accelerometer study in 2012 and has led the methodological and substantive research to study the role of objectively measured physical activity and sleep for ageing outcomes. She is a contributor of the GGIR R package for analyses of raw accelerometer. She now leads a project on circadian rhythm and dementia using data from a general population and memory centre patients, funded by the European Commission.

## Early Career Invited speakers

**Dr. Boris Cheval**, Ecole normale superieure de Rennes

*Uncovering the neuropsychological barriers to physical activity behavior*



Professor Boris Cheval's research focuses on understanding the socio-economic and neuro-behavioral mechanisms that drive physical activity behaviors to improve health. He is the author of more than 100 articles and one book, all of which have made significant contributions to these areas of study.

**Dr. Jairo Migueles**, University of Granada

*Developing tools to decipher wearable sensor data: lessons learnt by a physical activity researcher*



Jairo H. Migueles is a physical activity researcher with expertise in the measurement of physical activity using accelerometers and the comprehensive analysis of data from wearable sensor technologies. Currently, he holds a postdoctoral position at the University of Granada (Spain), while also engaging in freelance consultancy. At present, Jairo is heavily involved in development of methods for quantifying physical activity and sleep.



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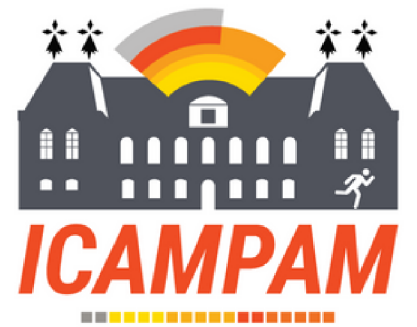
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RENNES, BRITTANY, FRANCE 2024

# The ActiGraph Digital Data Summit 2024 Event Recap



Actigraphy has been used for decades to support academic and public health research with real-world, objective, and continuous measures of physical activity, mobility, and sleep. This body of work has contributed significantly to our understanding of human health, and the field continues to evolve and provide new opportunities for insights into human behavior. Recent advancements in technology, novel data analysis techniques, and broader adoption of wearables in drug development were driving factors for bringing together digital health leaders from academia and the biopharmaceutical industry at the 2024 ActiGraph Digital Data Summit (ADDS), which took place in Pensacola Beach, Florida in late February. The two-day conference featured 20+ scientific presentations, a scientific poster session, and dedicated networking opportunities, all set amid the picturesque white sand beaches and clear waters of the Gulf of Mexico.



The ADDS agenda was divided into **four areas of focus**: physical activity, gait and mobility, sleep, and emerging science. Keynote speaker **Richard Troiano** of the US Public Health Service began with a historical overview of decades of research that reinforced the notion that physical activity is a very impactful measure when it comes to human health. Exciting new results were presented by AbbVie and J&J from clinical trials that began over 5 years ago using measures of physical activity to track clinically meaningful outcomes in immunological and respiratory diseases.

Presentations from the **Patient Centered Solution team at IQVIA** and **Peter Fernandes** of Bellerophon Therapeutics highlighted a key advantage of digital health measures is the ability to quantify aspects of health that are meaningful to patients. This is especially impactful in areas with gaps in current assessment methods and where there are opportunities to collect more sensitive measures of patient functioning.

Attendees learned about the clinical relevance of gait in Parkinson's disease and how this can be measured with wearables from **Jeff Hausdorff** of Tel Aviv University.



# The ActiGraph Digital Data Summit 2024 Event Recap

Subsequent presentations, including one by **Jaroslav Harezlak** of Indiana University, built upon this idea by sharing the potential of novel AI data analysis techniques to help us develop fit-for-purpose algorithms in patient populations with impaired gait.

**Catherine Lang** of Washington State University and **Jonathan Soslow** of Vanderbilt presented data related to upper limb mobility as meaningful measures that inform functioning in patients with muscular dystrophy, ALS, stroke, ADHD, and autism. Additional talks in the emerging science section of the conference shared how PPG sensors on wearable devices, such as the ActiGraph LEAP, can remotely capture data for measures of vital signs and sleep staging.

Another highlight of the conference were presentations that demonstrated how strategic partnerships can help move the field forward. ActiGraph and partners from academia and industry are conducting work to generate analytical validation evidence for digital measures in heart failure, ALS, multiple sclerosis, down syndrome, atopic dermatitis, and psoriasis with our Digital Endpoint Accelerator Research (DEAR) grants and Digital Endpoint Collaboration to accelerate Outcome DEvelopment (DECODE) working group.

While innovations in the clinical research field are challenging, we can develop improved therapies and care for patients more quickly if we work together.

This is the main motivation for hosting ADDS, where we can bring together the best minds from academic and industry to share knowledge, inspire and build partnerships, and advance healthcare for all.



**ActiGraph**<sup>™</sup>

# Social Media

You can find us on X (formerly Twitter) and we have a new page on LinkedIn



and Facebook,

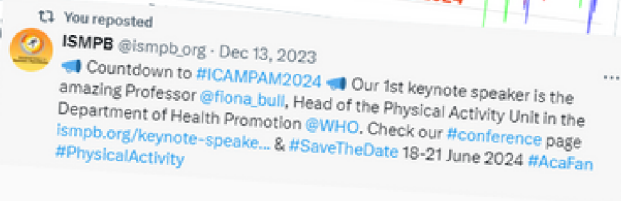


We post information about research on the measurement of physical behaviour and information about upcoming events – the focus of the next few weeks will be about our conference in Rennes in June ☺  
#ICAMPAM2024

**#ICAMPAM2024** Looking forward to the return of the roving picture frame

You can link to our social media on the following pages:

- [https://twitter.com/ismpb\\_org](https://twitter.com/ismpb_org)
- <https://www.facebook.com/ISMPB.org>
- <https://www.linkedin.com/company/the-international-society-for-the-measurement-of-physical-behaviour/mycompany/>



**Journal for the Measurement of Physical Behaviour** @JMPBjourm · Apr 16

Two key take aways about the comparability of 24-hour activity cycle outputs from #ActiGraph counts generated in ActiLife and #RStudio:

to article: [doi.org/10.1123/jmpb.2023.00000](https://doi.org/10.1123/jmpb.2023.00000)

@AlexMontoye @KimberlyClev @DRBenBoudreaux

<b>COMPARABILITY OF 24-HR ACTIVITY CYCLE OUTPUTS FROM ACTIGRAPH COUNTS GENERATED IN ACTILIFE AND RSTUDIO</b>	<b>Take away #1:</b> Counts and 24-hour behaviour outcomes generated from ActiLife and RStudio packages are generally equivalent, with only minor and inconsequential differences in some files.	<b>COMPARABILITY OF 24-HR ACTIVITY CYCLE OUTPUTS FROM ACTIGRAPH COUNTS GENERATED IN ACTILIFE AND RSTUDIO</b>	<b>Take away #2:</b> Researchers can now generate counts data outside of ActiLife if the deem counts to be an attractive way to analyse and interpret their data.
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**We are looking for new members** who could help us post items, including looking at how we can disseminate scientific research via TikTok!

If you are interested, please contact: [a.m.clarke-cornwell@salford.ac.uk](mailto:a.m.clarke-cornwell@salford.ac.uk)



# Latest issue of JMPB



In January 2024, Dr Philippa Dall handed over the Editor in Chief reigns of JMPB to me and I look forward to building on the success of previous Editors, Drs. Freedson and Dall, over the next 3 years. JMPB is still a young journal, but can now be found on Scopus, increasing visibility and access to our articles and we have a CiteScore. We are hopeful that our first impact factor is also just around the corner. And remember - as ISMPB members you get a 50% discount if you opt to publish open access in JMPB.

In this newsletter we are highlighting articles published in JMPB over the last few months, this includes brief reports, original research, a commentary and systematic review, including articles from our recent Special Issue on '*Understanding Open-Source ActiGraph Counts*' which closed at the end of last year. Recent news from JMPB includes changing to the publishing model from an issue based to a continuous based publication model, an expansion of the Editorial Board and Associate Editor team and plans for more special issues in the future and joint webinars with ISMPB.

*WELCOME*

Editor in Chief, Professor Charlotte Edwardson: [ce95@le.ac.uk](mailto:ce95@le.ac.uk)

## Journal for the Measurement of Physical Behaviour

### Volume 7, Issue 1 (January 2024)

#### Brief Report

Colleen J. Chase, Sarah Burkart, and Katie Potter . The KID Study (Kids Interacting With Dogs): Piloting a Novel Approach for Measuring Dog-Facilitated Youth Physical Activity

Paul H. Lee, Ali Neishabouri, Andy C.Y. Tse, and Christine C. Guo. Comparative Analysis and Conversion Between Actiwatch and ActiGraph Open-Source Counts

#### Original Research

Yanlin Wu, Myles W. O'Brien, Alexander Peddle, W. Seth Daley, Beverly D. Schwartz, Derek S. Kimmerly, and Ryan J. Frayne. Criterion Validity of Accelerometers in Determining Knee-Flexion Angles During Sitting in a Laboratory Setting

Marc Weitz, Bente Morseth, Laila A. Hopstock, and Alexander Horsch. Influence of Accelerometer Calibration on the Estimation of Objectively Measured Physical Activity: The Tromsø Study

Duncan S. Buchan. Comparison of Sleep and Physical Activity Metrics From Wrist-Worn ActiGraph wGT3X-BT and GT9X Accelerometers During Free-Living in Adults

### Volume 6, Issue 4 (December 2023)

#### Commentary

Tyler D. Quinn and Bethany Barone Gibbs. Context Matters: The Importance of Physical Activity Domains for Public Health

#### Review

Kimberly A. Clevenger and Alexander H.K. Montoye. Systematic Review of Accelerometer Responsiveness to Change for Measuring Physical Activity, Sedentary Behavior, or Sleep Original Research

See more articles on our journal page!!





# MEMBERSHIP

*Membership renewals are now open. The current ISMPB membership term expires September 30, 2024.*

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.

## Member benefits:

- Reduced registration rates at official meetings 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
- Receive 50% discount in publishing Open Access at the Society's official journal – JMPB
- 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 and create a global network
- Receive a quarterly e-newsletter with most important information from the Society



## ISMPB MEMBERSHIP

open to everyone from around the world involved in the measurement of free-living physical behaviour.

[JOIN TODAY](#)

## FEES:

Regular-Academic members: \$175

Post-doc members: \$175

Student members: \$95