



ISMPB

International Society for the
Measurement of Physical Behaviour

www.ismpb.org

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Newsletter

September, 2022

SOCIAL MEDIA

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THIS ISSUE OF THE ISMPB NEWSLETTER WAS A COMBINED EFFORT OF:

- | | |
|-------------------|-----------------------------|
| * Bronwyn Clark | * Alexandra Clarke-Cornwell |
| * Benjamin Maylor | * Sharon Zwack |
| * Aidan Buffey | * Martina Mancini |



Message from the President

Dear ISMPB members and colleagues,

I write this President's message with the renewed enthusiasm that always comes from attending ICAMPAM. We had a wonderful in person meeting in the Colorado mountains and a concurrent virtual event for those who could not attend in person. Some highlights for me were the great variety of keynote speakers and the opportunity to talk with our PhD students and Early Career researchers at our poster event and virtually. As I was lucky enough to attend in person, I really valued the chance to meet our members in person and discuss what we have been doing, plan new works and collaborations and gain new ideas after a three-year hiatus. A lot of hard work goes in to planning and executing a conference and this was certainly the case for our ICAMPAM 2022. I need to single out the contributions of our conference chairs, Jeff Hausdorf and Sarah Kozey-Keadle, our local hosts, Ed Melanson and Kate Lyden and Podium staff, Sharon Zwack, Brian Groos and Marischal De Armond.

We now set course for planning our next ICAMPAM in 2024 and our events over the intervening year. We are very excited to be planning our 2024 ICAMPAM in Rennes, France, and are busy pinning down a venue with our local host, Alexis Le Faucheur from the Ecole Normale Supérieure de Rennes. Stay tuned for our final details of dates and location. We are now planning some online events for our members over the coming year. We have some excellent suggestions from the ICAMPAM feedback survey for the types of seminars and workshops members would like to attend and planning has commenced. If any members have an idea for a workshop or seminar they would like to put on in collaboration with the society we welcome suggestions and proposals.

With approval at the Annual General Meeting at ICAMPAM, we have been able to increase the size of the ISMPB Board and this will spread the workload and allow more activities and initiatives to be undertaken by our society. We welcome to the board our new members, Alexandra Clarke-Cornwell, Marco Giurgiu, Gregore Iven Mielke, Tom Stewart and Asa Tornberg. We look forward to hearing their ideas to grow and increase the influence of our society in the development of the measurement of physical behaviour. The board has



an ever-changing membership, as should be the case, and we are sad to lose Miriam Cabrita, who has ably led our communications portfolio and Sarah Kozey-Keadle, who was a co-chair for ICAMPAM 2022.

My other sad announcement is that our current Editor in Chief of the Journal for the Measurement of Physical Behaviour, Philippa Dall, has announced that she will not be renewing her tenure. The good news is that we have Philippa in the position until mid-2023 and this gives us lots of time to recruit a new editor and for them to have a period of handover with Philippa. Look out for the call for expressions of interest for the position.

On a final note, our membership fees are due this September. The Board has decided to make a small increase in the fees this year for two reasons 1) the fees have remained the same for the last seven years and costs are rising and 2) we intend to have at least two activities before our next ICAMPAM that members are able to attend at either no or lower cost giving added value to the membership. The fees for a full member will increase from USD\$150 to \$175 and for a student \$75 to \$95. Don't forget to renew so you can take advantage of our activities over the coming year. One of the advantages of membership is access to our newsletter. I hope you enjoy this packed edition from our two new Editors, Aidan Buffey and Ben Maylor.

Bron Clark

Member Profile

Dr. Marco Giurgiu

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

Two stations, in particular, helped me as a young researcher. First, I was able to work on various projects as a research assistant very early on in my studies. During this long period, I got to know a variety of aspects of the work as a researcher, which, in retrospect, prepared me very well for my future career. Another important station was my research internship abroad. At the Physical Activity and Nutrition (PRCPAN), I had a great opportunity to develop myself in terms of content, but above all in terms of my personality. I would recommend this opportunity to every student.

Tell us about a current project you are working on.

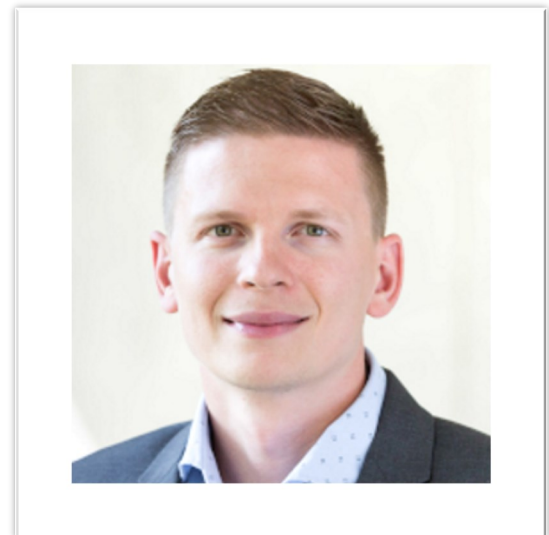
Since May 2022, I have been working on my own DFG (German Research Foundation) funded project. The project is a further development of my Ph.D. thesis ("Sedentary behaviour in daily life: Assessment issues, psychological antecedents and consequences"). Specifically, it involves the application of a newly developed study design ("within-person encouragement design") aimed at testing the causal effects of sedentary breaks on affective and cognitive parameters in daily life. With this work, we aim to methodologically extend our knowledge of causality in everyday life studies and to understand the effects of sedentary breaks (especially in the setting of office workers) on affective and cognitive outcomes.

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

Technological development offers us completely new possibilities for the study of phenomena in everyday life. For example, the assessment of physical behaviour has changed tremendously in just a decade. Small wearable sensors provide us with information about movement and non-movement patterns in a high-resolution way. Probably, the potential has certainly not been fully exhausted. Thus, it's fascinating to see how quickly development is progressing here. Despite all these advantages, the scientific quality should not be compromised by the speed of technological development.

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

In 2019, I attended ICAMPAM in Maastricht for the first time. The conference inspired me in many ways. Great talks and presentations, an excellent opportunity for



discussions and international networking, and rounded off by a fantastic organization. Since the conference, I have been closely following the ISMPB events and participating in workshops and other events. This year's ICAMPAM in Denver was again a wonderful opportunity to get into personal contact since the difficult COVID-19 times. For me, it is a great opportunity to be now actively involved in Society's development as a Board Member.

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

I would like to see ISMPB continue to grow and become a forerunner in the field of capturing 24-hour physical behaviour. I would like to see the Society provide opportunities for early career as well as experienced researchers to work together to address the challenges in the field. The important contribution of research to the public (e.g. better understanding of the determinants and consequences of 24-hour physical behaviour or enabling people to be more active and healthier) can, in my opinion, only be achieved through teamwork. At this point, the ISMPB can also contribute in the sense of an open science culture.

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Google Scholar:

<https://scholar.google.com/citations?user=I-6pnjIAAAAJ&hl=en>

Journal for the Measurement of Physical Behaviour - Volume 5, Issue 2 (June 2022)

Original Research

Validity of the Garmin Vivofit Jr. to Measure Physical Activity During a Youth After-School Program

[Karissa L. Peyer](#) and [Kara C. Hamilton](#)

Concurrent Agreement Between ActiGraph and activPAL for Measuring Physical Activity in Pregnant Women and Office Workers

[Melissa A. Jones](#), [Sara J. Diesel](#), [Bethany Barone Gibbs](#), and [Kara M. Whitaker](#)

Validity of a Novel Algorithm to Detect Bedtime, Wake Time, and Sleep Time in Adults

[Kyle R. Leister](#), [Jessica Garay](#), and [Tiago V. Barreira](#)

ActiGraph Cutpoints Impact Physical Activity and Sedentary Behavior Outcomes in Young Children

[Becky Breau](#), [Hannah J. Coyle-Asbil](#), [Jess Haines](#), [David W.L. Ma](#), [Lori Ann Vallis](#), and [on behalf of the Guelph Family Health Study](#)

Comparison of activPAL and Actiwatch for Estimations of Time in Bed in Free-Living Adults

[Mary C. Hidde](#), [Kate Lyden](#), [Josiane L. Broussard](#), [Kim L. Henry](#), [Julia L. Sharp](#), [Elizabeth A. Thomas](#), [Corey A. Rynders](#), and [Heather J. Leach](#)

Calibrating the Physical Activity Vital Sign to Estimate Habitual Moderate to Vigorous Physical Activity More Accurately in Active Young Adults: A Cautionary Tale

[Liam P. Pellerine](#), [Derek S. Kimmerly](#), [Jonathon R. Fowles](#), and [Myles W. O'Brien](#)

Validation of Body-Worn Sensors for Gait Analysis During a 2-min Walk Test in Children

[Vincent Shieh](#), [Cris Zampieri](#), [Ashwini Sansare](#), [John Collins](#), [Thomas C. Bulea](#), and [Minal Jain](#)

Comparison of Child and Adolescent Physical Activity Levels From Open-Source Versus ActiGraph Counts

[Kimberly A. Clevenger](#), [Kelly A. Mackintosh](#), [Melitta A. McNarry](#), [Karin A. Pfeiffer](#), [Alexander H.K. Montoye](#), and [Jan Christian Brønd](#)

In this newsletter we are highlighting both the June 2022 and September 2022 issues of JMPB.

The September 2022 issue leads with a joint commentary from members of the Prospective Physical Activity, Sitting, and sleep consortium - known as ProPASS – and the ISMPB board. The commentary highlights the recent partnership between the two organisations and explores planned and future collaboration. The issue also contains a comprehensive scoping review diving deep into the different methodologies of data collection and analysis of accelerometers used to measure the physical behaviours of young children.

Society members explore the measurement of physical behaviour across the life-course, but the June 2022 issue also focused on the early stages of life, with six of the eight original articles using data collected from pregnant women, children, adolescents and young adults. Between them, these studies showcase a range of study designs, including validation of devices and self-report measures, agreement between monitors worn concurrently, and exploration of the effects of processing options.

This year we are again publishing the abstracts of symposia, oral presentations and posters from the ICAMPAM conference in a special issue. Something to watch out for in the next few months. It is always nice to see when work featured in ICAMPAM conferences progressing to peer reviewed article, and I hope to see some of the work featured in Colorado submitted to JMPB in future.

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.



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

Journal for the Measurement of Physical Behaviour

Volume 5, Issue 3 (September 2022)

Review

The Use of Accelerometers in Young Children: A Methodological Scoping Review

[Becky Breau](#), [Hannah J. Coyle-Asbil](#), and [Lori Ann Vallis](#)



Commentary

A Physical Behaviour Partnership From Heaven: The Prospective Physical Activity, Sitting, and Sleep Consortium and the International Society for the Measurement of Physical Behaviour

[Emmanuel Stamatakis](#), [Bronwyn K. Clark](#), [Matthew N. Ahmadi](#), [Joanna M. Blodgett](#), [Malcolm H. Granat](#), [Alan Donnelly](#), [Andrew J. Atkin](#), [Li-Tang Tsai](#), [Gregore I. Mielke](#), [Richard M. Pulsford](#), [Nidhi Gupta](#), [Patrick Crawley](#), [Matthew Stevens](#), [Peter Johansson](#), [Laura Brocklebank](#), [Lauren B. Sherar](#), [Vegar Rangul](#), [Andreas Holtermann](#), [Mark Hamer](#), and [Annemarie Koster](#)

Original Research

Simulation-Based Evaluation of Methods for Handling Nonwear Time in Accelerometer Studies of Physical Activity

[Kristopher I. Kapphahn](#), [Jorge A. Banda](#), [K. Farish Haydel](#), [Thomas N. Robinson](#), and [Manisha Desai](#)

Calibration of an Accelerometer Activity Index Among Older Women and Its Association With Cardiometabolic Risk Factors

[Guangxing Wang](#), [Sixuan Wu](#), [Kelly R. Evenson](#), [Ilsuk Kang](#), [Michael J. LaMonte](#), [John Bellettiere](#), [I-Min Lee](#), [Annie Green Howard](#), [Andrea Z. LaCroix](#), and [Chongzhi Di](#)

Tracking of Walking and Running for Exercise: Alignment Between Ecological Momentary Assessment and Accelerometer-Based Estimates

[Kelley Strohacker](#), [Lindsay P. Toth](#), [Lucas F. Sheridan](#), and [Scott E. Crouter](#)

Depressive Symptoms Are Associated With Accelerometer-Measured Physical Activity and Time in Bed Among Working-Aged Men and Women

[Pauliina Husu](#), [Kari Tokola](#), [Henri Vähä-Ypyä](#), [Harri Sievänen](#), and [Tommi Vasankari](#)

Effectiveness of Fitbit Activity Prompts in Reducing Sitting Time and Increasing Physical Activity in University Employees: A Randomized Controlled Trial

[Benjamin D. Boudreaux](#), [Julie A. Schenck](#), [Zhixuan Chu](#), and [Michael D. Schmidt](#)

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ICAMPAM 2022 SUMMARY



The ISMPB ICAMPAM was held over June 21st to 24th, 2022 in Keystone, Colorado, USA

Number of Attendees:

In Person Attendees: 171 Attendees

Virtual Attendees: 57 Attendees

Number of Posters:

In Person Posters: 46 Attendees

Virtual Posters: 25 Attendees

**WHOVA Access
Expires September
24th, 2022**

Number of Oral Presenters:

Oral Presenters 58 Attendees (six submitted videos)

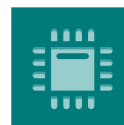
Best Oral Presentation, Prize Donated Privately in Honour of David Basset and Rick Troiano:

Christopher Moore, University of North Carolina

"Interrelationships between open-source, proprietary, and machine learning-derived accelerometry metrics"

Award Winners Sponsored by Sensors:

Best In Person Poster: **Julian Martinez**, University of Wisconsin



sensors

an Open Access Journal by MDPI

"Comparison of physical activity intensity estimated by direct observation to whole room indirect calorimetry"

Best Virtual Poster: **Astrid Ustad**, Norwegian University of Science & Technology

"Classification of daily physical behaviour in older adults using machine learning"

ICAMPAM 2022 HIGHLIGHTS AND PHOTOS



Local Host Chairs
Prof. Ed Melanson (Left); Dr. Kate Lyden (Middle)



Local Celebrities Spotted



**Early Career Research
Boat Trip**



**Evening Networking
Hike**

ICAMPAM 2024 IN RENNES, FRANCE

ICAMPAM 2024 IN RENNES, FRANCE

AT ICAMPAM 2022, WE WERE PROUD TO ANNOUNCE THAT ICAMPAM WILL BE HOSTED BY PROF. ALEXIS LE FAUCHEUR IN RENNES, BRITTANY, FRANCE IN 2024.



SPOTLIGHT: THREE NEW COLLABORATIONS

New Partnerships/Collaborations

ISMPB is proud to announce three new collaborations, in later Newsletter issues we hope to provide a spotlight feature to each of these collaborations.

PROPASS:

We now have in place a partnership with ProPASS. The essence of this partnership is mutual support for each group to advance the field of physical activity research. Examples of activities are the recent symposium presented at ICAMPAM 2022 and our collaborative publication announcing the partnership. Future opportunities include mutual activities for early career researchers and invitations to future meetings to advance the research agenda. Details about the partnership can be found in a commentary publication explaining how the partnership came about and what the partnership is about found below:

[HTTPS://JOURNALS.HUMANKINETICS.COM/VIEW/JOURNALS/JMPB/AOP/ARTICLE-10.1123-JMPB.2022-0027/ARTICLE-10.1123-JMPB.2022-0027.XML](https://journals.humankinetics.com/view/journals/JMPB/AOP/ARTICLE-10.1123-JMPB.2022-0027/ARTICLE-10.1123-JMPB.2022-0027.XML)



GPS-HRN SPECIAL INTEREST GROUP:

SPECIAL INTEREST GROUP

The Global Positioning Systems in Health Research Network (GPS-HRN) is an international collaboration of academics and health professionals interested in GPS technology. GPS HRN have been an active research network over a number of years in the area of spatial measurement and health. We are very excited that the GPS HRN group have joined ISMPB as a special interest group. We had two workshops on GPS methods at our ICAMPAM 2022, which were excellent and we look forward to hearing more about using GPS methods going forward. Head to our website to hear more about the special interest group.



THE PHYSICAL ACTIVITY RESEARCHER:

Olli Tikkanen

"Physical Activity Researcher Podcast is honoured to have the possibility to collaborate with the International Society for the Measurement of Physical Behaviour. Collaboration is a great fit as both organisations are working to disseminate scientific knowledge, advance physical activity research and measurement technology." Look out for content from our ICAMPAM 2022 student prize winners.



ISMPB NEW BOARD MEMBERS

Dr. Alexandra Clarke-Cornwell

School of Health & Society, The University of Salford, UK



Alex has been involved in a range of research projects that have used her experience of epidemiology and Statistics. Her current research projects focus on the associations between sedentary behaviour and health-related outcomes in the workplace, and the measurement of physical behaviours in the free-living environment.

Dr. Marco Giurigu is a post-doctoral researcher at the Department of Sport and Sport Science, Karlsruhe Institute of Technology (KIT). His research areas are examining associations between device-based measured physical behaviour and momentary psychological outcomes by using innovative data collection approaches in real-time (e.g., via smartphone diaries) and validating wearables for the assessment of 24-hour physical behaviour.

Dr. Marco Giurigu

Department of Sport and Sport Science,
Karlsruhe Institute of Technology, Germany



Dr. Grégore Mielke

School of Public Health, The University of Queensland, Australia



Dr Grégore Mielke is an NHMRC Emerging Leadership Fellow, Grégore is an epidemiologist whose research focuses on measuring and understanding 1) patterns of physical activity and sedentary behaviour across the lifespan; and 2) inequalities in population health. Grégore has been involved in various population-based cohort studies, including the Australian Longitudinal Study on Women's Health (ALSWH) and the Pelotas (Brazil) Birth Cohort Studies. Before moving to Australia in 2018, Grégore had professional experience working on the Coordination of Chronic Non-Communicable Diseases Surveillance and Health Promotion in the Brazilian Ministry of Health. During his short career (PhD awarded in 2017), most of his work has involved multidisciplinary research, transitioning from an early focus on physical education to the behavioural epidemiology of physical activity.

Dr. Åsa Tornberg

Department of Health Sciences, Lund University, Sweden



Åsa (Birgitta) Tornberg has a PhD in clinical physiology from Lund University. Her research is about how physical activity can be adapted to different target groups to increase health and wellbeing. Åsa is a senior lecturer and an associate professor, active in research and teaching at Lund University at the Department of Health Sciences.

Dr. Tom Stewart

Human Potential Centre, Auckland
University of Technology, New Zealand



Dr Stewart is a Senior Research Fellow and biostatistics advisor at the Human Potential Centre, located at Auckland University of Technology, New Zealand. His research is broadly based in public health, with a focus on physical activity epidemiology, understanding the environmental determinants of health, and finding preventative solutions for reducing the prevalence of obesity and other chronic diseases. His recent interests include combining big data and machine learning to tackle a range of public health research challenges.

NEW NEWSLETTER EDITORS

Aidan Buffey *Fourth year PhD candidate at the University of Limerick, Ireland*

My PhD focuses on the 'Design and evaluation of an intervention to reduce sedentary behaviour and improve health in older adults'. This project aims to implement an office-based intervention designed to interrupt sedentary behaviour with light-intensity physical activity with an emphasis on improving cardiometabolic health markers.

During my PhD, I have served as a committee member for two PhD and Postdoctoral networks, the Health Research Institute Hub Network and the EMERGE PhD Network at the University of Limerick. These are both peer-to-peer support networks, where we have planned and hosted many webinars aimed at early career researchers.

I look forward to working closely with the ISMPB Board of Directors and committees in producing these Newsletter Issues. I would gladly take any suggestions or requests from ISMPB members of topics or spotlights, that they would like to see.

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Dr. Ben Maylor *Post-doctoral researcher, Diabetes research Centre, University of Leicester, UK*

My research over the past 5 years has focused particularly on the effects of interventions reducing sedentary behaviour and/or increasing physical activity levels on health. This has ranged from acute lab-based studies simulating a working day, to NIHR-funded RCT's such as SMART Work and Life and Snacktivity™. In tandem with this, I work with colleagues in the Assessment of Movement Behaviours (AMBer) special interest group at Leicester, which specialises in developing methods for describing physical behaviours using data from wearable accelerometers. We work collaboratively, internally and externally, to apply the methods we develop to a wide range of diverse datasets.

I have been a member of the ISMPB social media committee for the past two years and am looking forward to working with Aidan in producing these quarterly newsletters to help keep other fellow ISMPB colleagues updated on the activities of the society. Please feel free to reach out to myself or Aidan if you have any news or information that you think other members of ISMPB would like to know about.

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TIME TO RENEW THE MEMBERSHIP

This ISMPB membership term runs from **October 1, 2022 to September 30, 2024**.

Watch your email for your renewal notice the week commencing September 19, 2022.

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

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/>

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	\$95
Regular / Post Doc	\$175
All dues are in USD	



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