ICAMPAM 2015 Poster Schedule

Please note that the program is subject to change

Wednesday 10th June

10:30 – 11:45

Poster Session 1:

PS1.1 Association between physical activity and affective reactions in every-day life: Ambulatory Assessment with activity-triggered e-diary
Martina Kanning¹, Ulrich Ebner-Priemer², Wolfgang Schlicht¹
¹University of Stuttgart, Stuttgart, Germany, ²Central Institute of Mental Health, University of Heidelberg, Heidelberg, Baden-Württemberg, Germany.

PS1.2 A comparison of wrist and hip accelerometer counts to measured total daily physical activity energy expenditure
Whitney Welch¹, Scott Strath¹, David Bassett², Nora Miller¹, Ann Swartz¹
¹University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, USA, ²University of Tennessee, Knoxville, Tennessee, USA.

PS1.3 Real Time Physical Activity Detection using a Single Waist Mounted Tri-Axial Accelerometer Sensor
Alan Bourke¹, Gearoid ÓLaighin ², John Nelson³, EAF Ihlen¹, Jorunn Helbostad¹
¹Norwegian University of Science and Technology, Trondheim, Norway, ²National University of Ireland Galway, Galway, Ireland, ³University of Limerick, Limerick, Ireland.

PS1.4 Step detection accuracy in multiple sclerosis: patient-specific error propagation in long-term monitoring of physical activity
Fabio Storm¹, Sivaraman Nair², Alison Clarke³, Jill Van der Meulen⁴, Claudia Mazzà⁵
¹University of Sheffield, Sheffield, South Yorkshire, England, UK, ²Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK, ³Northern General Hospital, Sheffield, South Yorkshire, England, UK, ⁴Royal Hallamshire Hospital, Sheffield, South Yorkshire, England, UK, ⁵The University of Sheffield, Sheffield, South Yorkshire, England, UK.
PS1.5 Quantifying the cadence of free-living walking using event-based analysis
Malcolm Granat¹, Clare Clarke², Ben Stansfield³, Philippa Dall³
¹University of Salford, Manchester, England, UK, ²University of Dundee, Dundee, Scotland, UK, ³Glasgow Caledonian University, Glasgow, Scotland, UK.

PS1.6 When they do and when they don’t: Daily patterns of physical activity in adolescent youth.
Sarahjane Belton¹, Johann Issartel¹, Bronagh McGrane¹, Danielle Powell¹, Wesley O'Brien¹
¹Dublin City University, Dublin, Ireland.

PS1.7 An examination of the accuracy and reliability of three GPS devices
Cormac Powell¹, Alan Donnelly¹, Mark Lyons¹, Ross Anderson¹
¹Department of Physical Education and Sport Sciences, University of Limerick, Limerick, Ireland.

PS1.8 Thirteen years secular trend reveals a dramatic drop in recommended daily physical activity in Swedish boys: a smartphone effect?
Anders Raustorp¹, Peter Pagels², Andreas Fröberg¹, Cecilia Boldemann³
¹University of Gothenburg, Gothenburg, Sweden, ²Linnaeus University, Kalmar, Sweden, ³Karolinska Institutet, Solna, Sweden.

PS1.9 Association between Smartphone-based long-term Monitoring Outcomes and Traditional Clinical Assessment Tools in Community-Dwelling Older People
Sabato Mellone¹, Marco Colpo², Stefania Bandinelli², Lorenzo Chiari¹
¹University of Bologna, Bologna, Italy, ²Azienda Sanitaria Firenze, Florence, Italy.

PS1.10 Effect of physical education class on moderate-to-vigorous physical activity in elementary schools in Qatar
Fuad Almudahka¹, Lena Zimmo¹, Abdulaziz Farooq¹, Izzeldin Ibrahim¹, Mohamed Alkuwari¹
¹ASPETAR- Orthopaedic and Sports Medicine Hospital, Doha, Qatar.

PS1.11 Association of Objectively Measured Physical Activity with Vascular Endothelial Function in Male Adolescents
Sinead Sheridan¹, Niall Moyna²
¹Dublin City University, Dublin, Ireland.

PS1.12 Physical activity and sedentary behaviour of ethnically diverse young adults (DASH)
Philippa Dall¹, Ben Stanfield¹, Oarabile Molaodi², Seeromanie Harding¹
¹Glasgow Caledonian University, Glasgow, Scotland, UK, ²Glasgow University, Glasgow, Scotland, UK.

PS1.13 Posture sensor as feedback when lifting weights
Per Hellstrom¹, Anna Akerberg², Mia Folke¹
¹Malardalen University (MDH), Västerås, Sweden.

PS1.14 Comparison of accelerometer cut-points for determining MVPA in adolescent girls
Elaine Murtagh¹, Angela Carlin², Marie Murphy², Alison Gallagher²
¹Mary Immaculate College, University of Limerick, Limerick, Ireland, ²University of Ulster, Jordanstown, Antrim, Northern Ireland.

PS1.15 Sources of measurement error in a longitudinal lifestyle intervention trial
Juned Siddique¹
¹Northwestern University, Illinois, USA.

PS1.16 Dance for people with Parkinson’s disease: what is the evidence telling us?
Joanne Shanahan¹, Meg Morris², Orfhlaith Ni Bhriain¹, Jean Saunders¹, Amanda Clifford¹
¹Department of Physiotherapy, University of Limerick, Limerick, Ireland, ²La Trobe University, Melbourne, Victoria, Australia.

PS1.17 Steps measured in relation to different amount of physical activity
Anna Åkerberg¹, Mia Folke¹, Maria Lindén¹
¹Mälardalen University, Västerås, Sweden.

PS1.18 QR-codes as a tool to increase physical activity level among school children during class hours
Jeanette Christensen¹, Allan Kristensen¹, Thomas Bredahl¹
¹University of Southern Denmark, Odense, Denmark.

PS1.19 Monitoring of physical activity of the participants in a sports extension course
Masami Miyazaki¹, Takeshi Sato², Eiji Watanabe³, Kazuyoshi Seki¹, Takayuki Watanabe⁴
¹Waseda University, Shinjuku, Tokyo, Japan, ²Jissen Women’s University, Hino, Tokyo, Japan, ³Senshu University School of Commerce, Chiyoda, Tokyo, Japan, ⁴Hachinohe Gakuin University, Hachinohe, Aomori, Japan.
PS1.20 Objective and subjective measures of physical activity: A comparison between Ecological Momentary Assessment and Accelerometer measures
Lars Pieper¹, John Venz¹, Jana Hoyer¹, Catharina Voss¹, Katja Beesdo-Baum¹
¹Technische Universitaet Dresden, Dresden, Germany.

PS1.21 The merit of an individual calibration: estimating physical activity energy expenditure in wheelchair users
Tom Nightingale¹, Jean-Philippe Walhin¹, Dylan Thompson¹, James Bilzon¹
¹University of Bath, Bath, England, UK.

PS1.22 Instantaneous walking speed estimation for daily life activity monitoring based on wrist acceleration
Benedikt Fasel¹, Farzin Dadashi¹, Kamiar Aminian¹
¹Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland.

PS1.23 Postural recognition in stroke and healthy using a trunk-worn inertial and barometric pressure sensor
Rebekka Anker¹, Ruth Turk², Claire Ingham², Jane Burridge³, Kamiar Aminian¹
¹Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland,
²University of Southampton, Southampton, England, UK.

PS1.24 Concurrent Validity of Wrist Worn Accelerometers in Preschool Children
Jane Hislop¹, Nicole Palmer¹, Priya Anand¹, Tara Aldin², Jaclyn Clark¹
¹Queen Margaret University, Edinburgh, Scotland, UK, ²NHS Lothian, Edinburgh, Scotland, UK.

PS1.25 Validation of Health Examinees Cohort Study Physical Activity Questionnaire in Korea: a pilot study
Ji-Yeob Choi¹, Miyoung Lee², Hyo-Joo Lee¹, Jung-Min Lee³, Yeon Jung Kim⁴, Dahee Kang¹, Jong-koo Lee¹
¹Seoul National University, Seoul, South Korea, ²Kookmin University, Seoul, South Korea, ³University of Nebraska Omaha, Nebraska, USA, ⁴Korea Centers for Disease Control & Prevention, South Korea.

PS1.26 Validation of the activity monitor Activ8: energy expenditure during walking and running
Joost Oomen¹, Dennis Arts¹, Steven Vos¹
¹Fontys University of Applied Sciences, Eindhoven, Netherlands

PS1.27 Calibration of Accelerometer and Self-Reported Measures of Physical Activity Using Biomarker data in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL)
Pamela Shaw¹, Robert McMurray², Nancy Butte³, Daniela Sotres-Alvarez², Hengrui Sun², Mark Stoutenberg⁴, Kelly Evenson², Ashley Moncrief⁵, Lisa Sanchez-Johnsen⁶, Mercedes Carnethon⁷, Elva Arredondo⁸, Charles Matthews⁹, Yasmin Mossavar-Rahmani¹⁰
¹University of Pennsylvania, Philadelphia, USA, ²University of North Carolina at Chapel Hill, North Carolina, USA, ³Baylor College of Medicine, Houston, Texas, USA, ⁴University of Miami Miller School of Medicine, Miami, Florida, USA, ⁵University of Miami, Miami, Florida, USA, ⁶University of Illinois at Chicago, Chicago, Illinois, USA, ⁷Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA, ⁸San Diego State University, San Diego, California, USA, ⁹National Cancer Institute, Maryland, USA ¹⁰Albert Einstein College of Medicine, New York, USA.

PS1.28 Differential actigraphy for monitoring asymmetry in motor behavior: accuracy and test-retest reliability
Marco Rabuffetti¹, Paolo Meriggi², Chiara Pagliari³, Paolo Bartolomeo⁴, Maurizio Ferrarin²
¹Fondazione Don Carlo Gnocchi Onlus, ²IRCCS Don Carlo Gnocchi Foundation, ³Catholic University, ⁴INSERM, France & Catholic University, Italy.

PS1.29 Equivalence of the activPAL3 and activPAL in measuring physical activity
Ben Stansfield¹, Ceri Sellers¹, Margaret Grant¹
¹Glasgow Caledonian University, Glasgow, Scotland, UK.

PS1.30 Comparison of Raw Accelerometry Output from Commercial Devices; Importance of Body Position and Gait Velocity.
Michelle Norris¹, Kieran Dowd¹, Ian Kenny¹, Alan Donnelly¹, Ross Anderson¹
¹Department of Physical Education and Sport Sciences, University of Limerick, Limerick, Ireland.

PS1.31 Criterion validity and calibration of the GENEActiv accelerometer in adults.
Christina Dillon¹, Cormac Powell², Kieran Dowd², Brian Carson², Alan Donnelly²
¹University College Cork, Cork, Ireland, ²University of Limerick, Limerick, Ireland.

PS1.32 VALIDITY OF A NEW MOTION SENSOR UNDER FREE-LIVING CONDITIONS
Fernanda Faria¹, Paulo Amorim²
¹Santa Catarina State University, Florianópolis, Santa Catarina, Brazil ²Federal University of Viçosa, Viçosa, Minas Gerais, Brazil.
PS1.33 Free-living validation of consumer-based activity trackers as measures of physical activity and sedentary behaviour: Jawbone UP and Fitbit One
Sjaan Gomersall¹, Norman Ng¹, Toby Pavey¹, Wendy Brown¹
¹The University of Queensland, Queensland, Australia

PS1.34 Body acceleration as indicator for walking economy in an ageing population
Giulio Valenti¹, Alberto Bonomi², Klaas Westerterp¹
¹Maastricht University, Maastricht, Limburg, Netherlands, ²Philips Research Laboratories, Eindhoven, Netherlands.

PS1.35 Ecological Validity of a Random Forest Activity Classifier for Wrist-Mounted Accelerometer Data
Stewart Trost¹, Toby Pavey², Sjaan Gomersall³, Bronwyn Clark²
¹Queensland University of Technology, Queensland, Australia ²University of Queensland, Queensland, Australia.

PS1.36 Calibration of the ActiGraph GT3X+ accelerometer for the estimation of physical activity intensity in children with intellectual disabilities
Arlene McGarty¹, Victoria Penpraze¹, Craig Melville¹
¹University of Glasgow, Glasgow, Scotland, UK.

PS1.37 Comparison of hip and low back worn Axivity AX3 and GT3X+ activity monitors
Jan Brønd¹, Niels Møller¹, Daniel Arvidsson¹
¹University of Southern Denmark, Odense, Denmark.

PS1.38 An Evaluation of the Clock Drift Phenomenon with the ActiGraph Accelerometer
John Schuna¹, Tiago Barreira³, Catrine Tudor-Locke³
¹Oregon State University, Portland, Oregon, USA, ²Syracuse University, New York, USA, ³Pennington Biomedical Research Center, Baton Rouge, Louisiana, USA.

PS1.39 Factors associated with consent and withdrawal in an accelerometer-based study conducted among breast cancer survivors
Terry Boyle¹, Jeff Vallance³, Emily Ransom³, Brigid Lynch⁴
¹BC Cancer Agency, Vancouver, British Columbia, Canada, ²Athabasca University, Athabasca, Alberta, USA, ³The University of Western Australia, Crawley, Western Australia, Australia, ⁴Cancer Council Victoria, Melbourne, Victoria, Australia

PS1.40 Physical activity levels and patterns in Chinese one-year-old children, an Early STOPP China study.
PS1.41 Accelerometer Based School Aged Children's Physical Activity Variability Patterns: a longitudinal Analysis during Schooldays
Xia Li¹, Patricia Kearney¹, Eimear Kearney¹, Janas Harrington¹, Tony Fitzgerald¹
¹University College Cork, Cork, Ireland.

PS1.42 Bike-train measurement study: Measuring physical activity in children with accelerometers, GPS and machine-learned classifiers
Katherine Ellis¹, Jacqueline Kerr¹, Suneeta Godbole¹, Eileen Johnson¹, Gert Lanckriet¹
¹UC San Diego, San Diego, California, USA.

PS1.43 Activity monitoring as an outcome measure in total knee arthroplasty: Reference data and comparison with healthy controls.
BPL Grimm¹, Sonia Ahmadinezhad ², Matthijs Lipperts³, Rachel Senden¹, Ide Heyligers¹
¹AHORSE Foundation, Atrium-Orbis Medical Center, Heerlen, Netherlands, ²Zuyd University of Applied Science, Heerlen, Netherlands ³St. Anna Hospital, Herne, Germany.
Wednesday 10th June

16:15 – 17:30  Poster Session 2:

**PS2.1 A comparison of the activPAL and ActiGraph thigh and waist inclinometer functions for identifying lying, sitting and upright postures**
Charlotte Edwardson¹, Sarah Bunnewell¹, James Sanders², Tom Yates¹
Leicester Diabetes Centre, University of Leicester, Leicester, UK,
²Loughborough University, Leicestershire, England, UK.

**PS2.2 Feature selection vs. Principal Component Analysis in multi-sensor estimation of energy expenditure**
Edward Sazonov¹, Kate Lyden², Edward Melanson²
¹The University of Alabama, Tuscaloosa, Alabama, USA, ²The University of Colorado, Boulder, Colorado, USA.

**PS2.3 Automated identification of waking wear time from continuously worn activPAL3 data: a SAS tool**
Elisabeth Winkler¹, Genievieve Healy¹, Sebastien Chastin², Bodicoat Danielle³, Edwardson Charlotte³, Kishan Bakrania³, David Dunstan⁴, Neville Owen⁴
¹The University of Queensland, Queensland, Australia, ²Glasgow Caledonian University, Glasgow, Scotland, UK, ³University of Leicester, Leicestershire, England, UK, ⁴Baker IDI Heart and Diabetes Institute, Melbourne, Victoria, Australia.

**PS2.4 Associations of Daily Weather Conditions withAccelerometer-Measured Physical Activity during School Days among Children**
Xia Li¹, Patricia kearney¹, Eimear Kearney¹, Janas Harrington¹, Tony Fitzgerald¹
¹University College Cork, Cork, Ireland.

**PS2.5 An interactive MATLAB GUI tool for graphical exploration of raw accelerometry data**
Jaroslaw Harezlak¹, Marcin Straczkiewicz², Jacek Urbanek³
¹Indiana University RM Fairbanks School of Public Health, Indianapolis, USA, ²AGH University of Science and Technology, Kraków, Poland, ³Johns Hopkins Bloomberg School of Public Health, Maryland, USA.

**PS2.6 Sampling frequency of accelerometer data collection affects the activity counts generated from the ActiLife Data Analysis Software**
Jan Brønd¹, Daniel Arvidsson¹
¹University of Southern Denmark, Odense, Denmark.
PS2.7 Assessing velocity ranges using global positioning system data analysis in children: a new definition of sprinting in children
Georges Baquet¹, Abd-Elbasset Abaida², Gregory Dupont³
¹Université de Lille, Lille, France, ²Université de Lille and Lille Olympique Sporting Club, Lille, France, ³Lille Olympique Sporting Club, Lille, France.

PS2.8 Effect of Wavelet and Scale on Accelerometer-Based Postural Transition Detection
Aodhán Hickey¹, Brook Galna¹, John Mathers¹, Lynn Rochester¹, Alan Godfrey¹
¹Newcastle University, Newcastle, England, UK.

PS2.9 Method for Accelerometry-Based Detection and Identification of Walking in Observational Studies
Jacek Urbanek¹, Vadim Zipunnikov¹, Tamara Harris², Nancy Glynn³, Jaroslaw Harezlak⁴, Ciprian Crainiceanu¹
¹Johns Hopkins Bloomberg School of Public Health, Maryland, USA, ²National Institute on Aging, Bethesda, Maryland, USA, ³University of Pittsburgh, Pittsburg, Pennsylvania, USA, ⁴Indiana University Fairbanks School of Public Health, Indianapolis, USA.

PS2.10 Automatic Pattern Recognition of Functional Upper-Limb Activities Using Hidden Markov Models
Arturo Vega-Gonzalez¹, Sergio Parra-Sanchez¹, Juan Manuel Gomez-Gonzalez³, Irais Quintero-Ortega¹, Birzabith Mendoza-Novelo¹, Mayra Cuellar-Cruz¹, Jorge Delgado-Garcia¹
¹Universidad de Guanajuato, División de Ciencias e Ingenierías, Leon, Mexico, ³Universidad Nacional Autonoma de Mexico, Mexico City, Mexico.

PS2.11 Developing and validating generalizable intensity-based thresholds on raw accelerometer data for sedentary behaviour and light activity discrimination - a MAD approach
Kishan Bakrania¹, Thomas Yates¹, Charlotte Edwardson¹
¹University of Leicester, Leicester, Leicestershire, England, UK.

PS2.12 Variability of Estimating Physical Activity Levels Employing Different Prediction Equations and Epoch Lengths Utilizing Actigraph GT3X in Children
Miyoung Lee¹, Jung-Hwan Cho², Muncheong Choi¹, Jiye Min¹, Kwanghee Lee¹, Jaemyung Kim¹
¹Kookmin University, Seoul, South Korea, ²Seoul Womens University, Seoul, South Korea.

PS2.13 Functional Statistical Approaches for Actigraphy Data
Vadim Zipunnikov¹
PS2.14 Continuous monitoring of turning and its relation to Parkinson's disease
Martina Mancini¹, Aner Weiss², Talia Herman², Fay Horak¹, Jeffrey Hausdorff²
¹Oregon Health & Science University, Portland, Oregon, USA, ²Tel Aviv Sourasky Medical Center, Tel Aviv, Israel.

PS2.15 Knee Joint Angles and Spatio-Temporal Parameters Estimated via Wearable Inertial Sensors
Salvatore Tedesco¹, Andrea Urru¹, Michael Walsh¹, Brendan O’Flynn¹, Danilo Demarchi²
¹Tyndall National Institute, University College Cork, Cork, Ireland, ²Politecnico Torino, Torino, Italy.

PS2.16 Cross-sectional analysis of weekly levels and patterns of objectively measured physical behaviour with cardiometabolic health in middle-aged adults
Christina Dillon¹, Catherine Phillips¹, Darren Daly¹, Alan Donnelly², Patricia Kearney¹, Ivan Perry¹, Xia Li¹, Kirsten Rennie³
¹University College Cork, Cork, Ireland, ²University of Limerick, Limerick, Ireland, ³University of Hertfordshire, Hertfordshire, England, United Kingdom.

PS2.17 Simulation of accelerometer data reduction choices on sample size and select physical activity and sedentary outcomes in older adults
Scott Strath¹, Young Cho¹, Hotaka Maeda¹, Taylor Rowley¹, Nora Miller¹, Jeremy Steeves¹, Ann Swartz¹
¹University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, USA.

PS2.18 A Comparison of Two Methods for Applying Cut-Points to 1-Sec Count Data From Hip and Wrist-Worn Actigraphs Using the Enformia Informatics Platform
Amanda Hickey¹, Albert Mendoza¹, Duane Jung², John Staudenmayer¹, Evan Ray¹, Patty Freedson¹
¹University of Massachusetts, Massachusetts, USA, ²Enformia Inc., Huntersville, North Carolina, USA.

PS2.19 A comparison of wrist and hip accelerometers for free-living behavior classification
Katherine Ellis¹, Jacqueline Kerr¹, Suneeta Godbole¹, Eileen Johnson¹, Gert Lanckriet¹
¹UC San Diego, San Diego, California, USA.
PS2.20 Does excluding the first day of accelerometry monitoring matter?
Anna Timperio¹, Nicola Ridgers¹, Catherine Cash¹, Karen Lamb¹, Jo Salmon¹
¹Deakin University, Melbourne, Victoria, Australia.

PS2.21 A taxonomy of physical behaviour data for monitoring technology
Sebastien Chastin¹, Alan Bourke², Espen F. Ihlen², Jorunn L. Helbostad²
¹Glasgow Caledonian University, Glasgow, Scotland, UK, ²Norwegian University of Science and Technology, Trondheim, Norway

PS2.22 Experience sampling and physical activity measurements to improve workday satisfaction
Simone Boerema¹, Mirka Evers¹, Miriam Cabrita¹, Miriam Vollenbroek¹, Hermie Hermens²
¹Roessingh Research and Development, Enschede, Netherlands ²University of Twente, Enschede, Netherlands.

PS2.23 Behavioral periodicity detection from 24h waveform wrist accelerometry
Matthew Buman¹, Feiyuan Hu², Eamonn Newman², Alan Smeaton², Dana Epstein³
¹Arizona State University, Phoenix, Arizona, USA ²Dublin City University, Dublin, Ireland, ³Phoenix Veteran Affairs Health Care System, Phoenix, Arizona, USA

PS2.24 Adherence to a 6-month multicomponent physical activation intervention in young men
Riikka Ahola¹, Maarit Kangas¹, Lauri Tuovinen¹, Pekka Siirtola¹, Riitta Pyky², Anna-Maiju Jauho¹, Jaakko Tornberg², Matti Mäntysaari³, Juha Rönning¹, Timo Jämsä¹, Raija Korpelainen²
¹University of Oulu, Oulu, Finland, ²Oulu Deaconess Institute, Oulu, Finland, ³Center for Military Medicine, Finnish Defense Forces, Helsinki, Finland.

PS2.25 Effects of different Actilife software Wear Time Validation settings on data scoring in an intervention study of children with spastic cerebral palsy wearing Actigraphs
Emiel Sneekes¹, Fabiënne Schasfoort¹, Herwin Horemans¹, Johannes Bussmann¹
¹Erasmus MC University Medical Centre, Rotterdam, Netherlands.

PS2.26 Bag of Words Model for Accelerometer Activity Classification
Scott Crouter¹, Kevin Amaral², Ping Chen², Wei Ding²
¹The University of Tennessee Knoxville, Knoxville, Tennessee, USA, ²University of Massachusetts Boston, Massachusetts, USA.
PS2.27 Measuring sedentary behaviour in people with back pain
Ciara Campbell¹, Daniel Kerr¹, Suzanne Mc Donough¹, Marie Murphy¹, Mark Tully²
¹Ulster University, Jordanstown, Co. Armagh, Northern Ireland, ²Queens University Belfast, Belfast, Co. Antrim, Northern Ireland.

PS2.28 Validity in young adults of automated detection of waking wear from hip-worn accelerometer data with a continuous wear protocol
Joanne McVeigh¹, Elisabeth Winkler², Genevieve Healy², James Slater³, Peter Eastwood³, Leon Straker¹
¹Curtin University, Bentley, Western Australia, Australia, ²The University of Queensland, Queensland, Australia, ³University of Western Australia, Western Australia, Australia.

PS2.29 An Objective Actigraphy Data Analysis Algorithm to Identify Novel Endpoints
Rebecca Spencer¹, Arnaud Moreau², Barry Peterson²
¹University of Massachusetts, Amherst, Massachusetts, USA, ²Philips Respironics.

PS2.30 Comparison of the Heart Rate Readings between a Photoplethysmography device and Electrocardiography
Lay Khoon Lau¹, Alex Ong¹, Joseph Hamill², Hock Soon Seah³, Yiong Huak Chan⁴, Mallya Jagadish Ullal⁵, Denis Martin⁶, John Dixon⁶
¹Republic Polytechnic, Singapore, ²University of Massachusetts, Amherst, Massachusetts, USA, ³Nanyang Technological University, Singapore, ⁴National University of Singapore, Singapore, ⁵Khoo Teck Puat Hospital, Singapore, ⁶Teeside University, Newcastle, England, UK.

PS2.31 SenseWheel: Development of a device to measure everyday push styles of wheelchair users
Catherine Holloway¹, Andrew Symonds¹, Stephen Taylor¹, Michael Mentink¹, Peter Smitham¹, Tatsuto Suzuki¹
¹University College London, London, England, UK.

PS2.32 A survey of the technical capabilities of currently available commercial physical activity monitors
Ben Heller¹
¹Sheffield Hallam University, Sheffield, South Yorkshire, England, UK.

PS2.33 Interactive ambulatory assessment of physical activity in daily life
Jürgen Stumpf¹, Jörg Ottenbacher¹, Ulrich Großmann¹, Stefan Hey¹
¹Movisens GmbH, Karlsruhe, Germany.
PS2.34 (In)direct observation methods for physical activity behavior
Pedro Silva¹, Sérgio Soares², Jorge Mota¹, Paula Viana²,³, Pedro Carvalho²,³
¹CIAFEL, FADE-University of Porto, Porto, Portugal, ²Polytechnic of
Porto - School of Engineering, Porto, Portugal, ³INESC TEC, Porto,
Portugal.

PS2.35 The Assessment of Stride Frequency in Running using a Single
Accelerometer
Robin Healy¹, Niamh Whelan¹, Ian Kenny¹, Andrew Harrison¹
¹Department of Physical Education and Sport Sciences, University of
Limerick, Limerick, Ireland.

PS2.36 Optical Distance Measurement Sensors on the Shoes for
Capturing the Gap Between Shoe and Floor
Kimio Oguchi¹, Tomoya Yamaguchi¹
¹Seikei University, Tokyo, Japan.

PS2.37 Stand-Up during working hours: The effectiveness of an (in-)activity triggered smartphone application
Jan-Philipp Lange¹, Martina Kanning¹
¹University of Stuttgart, Stuttgart, Germany.

PS2.38 Validation of a mobile app to measure sitting time and step counts
Judit Bort-Roig¹, Anna Puig-Ribera¹, Ruth Contreras¹, Joan Martori¹,
James McKenna²
¹Universitat de Vic, Barcelona, Spain, ²Leeds Metropolitan University,
Leeds, England, UK.
Thursday 11th June

11:45 – 13:00 Poster Session 3:

PS3.1 Characterizing physical activity and sedentary behavior change in response to a step goal
Ann Swartz¹, Michael Widlansky², Chi Cho¹, Nora Miller¹, Whitney Welch¹, Scott Strath¹
¹University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, USA, ²Medical College of Wisconsin Milwaukee, Wisconsin, USA.

PS3.2 Determinants of Prolonged Length of Stay and Functional Decline of Older Hospitalised Patients
Ruth McCullagh¹, Christina Dillon¹, N. Frances Horgan², Suzanne Timmons¹
¹University College Cork, Cork, Ireland, ²Royal College of Surgeons in Ireland, Dublin, Ireland.

PS3.3 Surgical procedure effect on short and long term post-surgery activity levels of total hip arthroplasty patients
Vassilios Vardaxis¹, Laura Covill¹, John Nettour², Graig Mahoney¹
¹Des Moines University, Iowa, USA, ²Iowa Ortho, Iowa, USA.

PS3.4 Reallocation of sleep, sedentary, and active behaviors on waist circumference in breast cancer survivors: An isotemporal substitution analysis
Terry Boyle¹, Jeff Vallance², Matthew Buman³, Brigid Lynch⁴
¹BC Cancer Agency, Vancouver, British Columbia, Canada, ²Athabasca University, Athabasca, Alberta, USA, ³Arizona State University, Tempe, Arizona, USA, ⁴Cancer Council Victoria, Melbourne, Victoria, Australia

PS3.5 Sedentary behavior in chronic post stroke patients
Johannes Bussmann¹, Malou Fanchamps¹, Rita van den Berg-Emons¹
¹Erasmus MC University Medical Center, Rotterdam, Netherlands.

PS3.6 Changes in accelerometry measures following surgery for lumbar spinal stenosis related more to self-report outcomes than laboratory measures
Christy Tomkins-Lane¹, Matthew Smuck¹, Ming-Chih Kao¹, William Haskell¹, Matthew Buman², Agnes Ma¹
¹Stanford University, Stanford, California, USA, ²Arizona State University, Tempe, Arizona, USA.
PS3.7 Non-Hodgkin’s lymphoma survivors’ health-related quality of life and time spent in sleep, sedentary, and active behaviors: An application of the isotemporal substitution paradigm
Jeff Vallance¹, Brigid Lynch², Matthew Buman³, Terry Boyle⁴
¹Athabasca University, Alberta, Canada, ²Cancer Council Victoria, Melbourne, Victoria, Australia, ³Arizona State University, Tempe, Arizona, USA, ⁴British Columbia Cancer Agency, British Columbia, Canada.

PS3.8 A pedometer based motivational intervention to increase PA following total hip replacement
Ben Stansfield¹, Artaban Jeldi¹, David Allen², Angela Deakin², Margaret Grant¹, Malcolm Granat³, David McDonald²
¹Glasgow Caledonian University, Glasgow, Scotland, UK, ²Golden Jubilee National Hospital, Clydebank, Dunbartonshire, UK, ³University of Salford, Manchester, England, UK.

PS3.9 Does the accelerometer improve compliance with recommended physical activity in obese children?
Marian Stelmach¹, Piotr Protas², Edyta Tenderenda-Banasiuk², Marta Pszczolkowska², Elzbieta Kuroczycka-Sanućytcz², Anna Wasilewska²
¹Pope John Paul II State School of Higher Education in Biała Podlaska, Poland, ²Medical University of Białystok, Białystok, Poland.

PS3.10 Feasibility and pre-operative activity patterns in pancreatic and hepatobiliary cancer survivors undergoing surgical treatment
David Conroy¹, Andrea Murray², Niraj Gusani²
¹Northwestern University, Illinois, USA, ²Penn State Hershey Cancer Institute, Pennsylvania, USA.

PS3.11 How can commercially available physical activity monitors be used in therapy? Study design for the development of a decision aid
Kim van Vijven¹, Susy Braun¹, Melanie Kleynen¹, Emmylou Beekman¹, Albine Moser¹, Raymond Swinkels¹, Anna Beurskens¹
¹Zuyd University of Applied Sciences, Heerlen, Netherlands.

PS3.12 An 8 week Targeted Functional Rehabilitation Intervention for the Treatment of Chronic Neck Pain; A Pilot Study
Cliona O’Riordan¹, John Nelson¹, Pepijn Van De Ven¹, Amanda Clifford¹
¹University of Limerick, Limerick, Ireland.

PS3.13 Head and trunk accelerations during gait as a measure of walking stability in Parkinson’s disease?
Christopher Buckley¹, Lynn Rochester², Brook Galna¹, Claudia Mazzà¹
¹University of Sheffield, Sheffield, South Yorkshire, England, UK, ²Newcastle University, Newcastle, England, UK.
PS3.14 Using Smart Phone Data to detect fall risk
Laura Comber¹, Ailish Hannigan¹, Christopher McGuigan², Damien Meere¹, Pepijn Van de Ven¹, Susan Coote¹
¹University of Limerick, Limerick, Ireland, ²St Vincents University Hospital, Dublin, Ireland.

PS3.15 Choosing a criterion for a valid day of accelerometer monitoring in adults with mental illness
Justin Chapman¹, Wendy Brown¹, Nicola Burton¹
¹The University of Queensland, Queensland, Australia.

PS3.16 Exploring the relationship between motor and functional recovery in the first six months following right hemisphere stroke using a multilevel approach to data analysis
Stella Stein¹
¹Brunel University, Middlesex, England, UK.

PS3.17 Accelerometer vector magnitude cut-points for older adults with osteoporosis
Ing-Mari Dohrn¹, Agneta Ståhle¹, Maria Hagströmer¹
¹Karolinska Institutet, Solna, Sweden.

PS3.18 Accelerometer Cut Points for Physical Activity Assessment of Older Adults with Parkinson’s Disease
Håkan Nero¹, Martin Benka Wallén¹, Erika Franzén¹, Agneta Ståhle¹, Maria Hagströmer¹
¹Karolinska Institutet, Solna, Sweden.

PS3.19 Validation of the ActivPAL Activity Monitor for Sedentary and Physical Activity Behavior in the Rheumatoid Arthritis population
Joanne Shanahan¹, Birgitta Nordgren², Charles Brand¹, Alexander Fraser¹, Norelee Kennedy¹, Louise Larkin¹
¹University of Limerick, Limerick, Ireland, ²Karolinska Institutet, Solna, Sweden.

PS3.20 Hesitation between sit to stand and walking is a measurable characteristic of free living mobility: A comparison of healthy and stroke populations
Daniel Rafferty¹, Malcolm Granat², Kristen Hollands ², Andrew Kerr³
¹Glasgow Caledonian University, Glasgow, Scotland, UK, ²University of Salford, Manchester, England, UK, ³University of Strathclyde, Glasgow, Scotland, UK.

PS3.21 Physical behavior among geriatric inpatients in relation to functional level
Kristin Taraldsen¹, Sigurd Evensen¹, Pernille Thingstad¹, Jorunn Helbostad1, Ingvild Saltvedt³, Helga Reklev³, Randi Granbo³, Olav Sletvold²
¹Norwegian University of Science and Technology, Trondheim, Norway, ²Norwegian University of Science and Technology, Trondheim, Norway and St.Olavs Hospital, Trondheim, Norway, ³St.Olavs Hospital, Trondheim, Norway.

PS3.22 A new effective model of exercise referral scheme in primary care to promote physical activity among inactive patients presenting with chronic conditions
Carme Martín-Borràs¹, Anna Puig-Ribera², Angela Mª Beltrán Hernández³, Elena Martínez Ramos⁴, Jordi Real Gatius⁵, Mercè Solà Gonfaus⁶, Eva Castillo Ramos⁷, Ana María Guezala Bielsa⁸, Sandra Curto Sancho⁸, MªJesús Valderas Sánchez⁹, Marta Prats Guardiola¹⁰, Arantxa Iturbide Zugasti¹¹, Jordi Martí Carbonell¹², Marta Villanueva Perez¹³, SEDESTACTIV Group¹⁴
¹FPCEE Blanquerna – URL, Barcelona, Spain, ²Universitat de Vic - Universitat Central de Catalunya, Barcelona, Spain, ³Lifestyles Study Group, RediAPP, Institut Universitari d’Investigació en Atenció Primària Jordi Gol, Barcelona, Spain, ⁴Primary Healthcare Vilanova 1, ICS, Barcelona, Spain, ⁵Research Unit of Barcelona and Lleida, Primary Healthcare Research Institution IDIAP Jordi Gol, Barcelona, Spain, ⁶Primary Healthcare Centre Les Planes, Barcelona, Spain, ⁷Primary Healthcare Centre Santa Coloma de Cervelló, Barcelona, Spain, ⁸Primary Healthcare Centre Lluis Millet, ⁹Primary Healthcare Centre Carles Ribas, ¹⁰Primary Healthcare Centre Cornellà/ Lluis Millet, ¹¹Primary Healthcare Centre Passeig Sant Joan, ¹²Primary Healthcare Centre Vilanova 1, ¹³Primary Healthcare Centre Viladecans 2, ¹⁴Research Unit of Barcelona, Primary Healthcare Research Institution IDIAP Jordi Gol.

PS3.23 Development of tailored feedback strategies to improve effectiveness of mobile activity coaches
Reinoud Achterkamp¹, Miriam M. R. Vollenbroek-Hutten¹, Hermie Hermens¹
¹Roessingh Research and Development, Enschede, Netherlands

PS3.24 Directly measured physical activity and heart rate variability among workers with and without musculoskeletal disorders.
Eugene Lyskov¹, David Hallman¹, Svend Erik Mathiassen¹
¹University of Gävle, Gävle, Sweden.

PS3.25 Steps/day Screening Strategy and Thresholds for a Clinical Exercise Trial
PS3.26 Habitual activity levels of patients after total hip arthroplasty compared to healthy controls: Small difference in total levels but large in temporal event distribution.
Bernd Grimm¹, Rachel Senden¹, Matthijs Lippert², Ide Heyligers¹
¹AHORSE Research Foundation, Atrium-Orbis Medical Center, Heerlen, Netherlands, ²Dept. Clinical Physics, St. Anna Hospital, Herne, Germany

PS3.27 Objectively measured physical activity and sedentary behaviour in older adults: diurnal patterns and their determinants
Claudio Sartini¹, S Goya Wannamethee¹, Steve Iliffe¹, Richard Morris¹, Sarah Ash¹, Lucy Lennon¹, Peter Whincup¹, Barbara Jefferis¹

PS3.28 Is there an association between objectively measured occupational sitting time and intense neck-shoulder pain among blue-collar workers?
David Hallman¹, Nidhi Gupta², Svend Erik Mathiassen¹, Andreas Holtermann²
¹University of Gävle, Gävle, Sweden, ²National Research Centre for the Working Environment, Copenhagen, Denmark.

PS3.29 Determining the context of sedentary behaviour in older adults using lifelogging body worn sensors (timelapse camera, activPAL).
Calum Leask¹, Juliet Harvey¹, Dawn Skelton¹, Sebastien FM Chastin¹
¹Glasgow Caledonian University, Glasgow, Scotland, UK.

PS3.30 Comparison between a self-reported and objective measure of sedentary behaviour in persons post-stroke
Mona Aaslund¹, Bård Bogen¹, Rolf Moe-Nilssen¹
¹University of Bergen, Bergen, Norway

PS3.31 A feasibility study to reduce sedentary behaviour in frail older adults using activity monitors with real time and follow-up feedback
Juliet Harvey¹, Sebastien FM Chastin¹, Dawn Skelton¹
¹Glasgow Caledonian University, Glasgow, Scotland, UK.

PS3.32 Validity of the last 7-d sedentary behavior questionnaire (SIT-Q-7d) in cardiac rehabilitation (Phase II) setting
Borja del Pozo-Cruz¹, Romina Villamonte¹, Kyla Mc Ilwee²
¹University of Auckland, Auckland, New Zealand, ²California Polytechnic State University, California, USA.

PS3.33 A unified platform for outcome measures and exergames with 3D accelerometry
Martijn Daumer¹, Timur Nuritdinow², Christian Lederer³
¹SLC - The Human Motion Institute / Trium / TUM, Munich, Germany, ²SLC - The Human Motion Institute, Munich, Germany, ³SLC - The Human Motion Institute / TUM, Munich, Germany.

PS3.34 The Effect of Exercise on Postural Control in Older Men with Different Levels of Habitual Physical Activity
Robert Szeklicki¹, Rafal Stemplewski¹
¹E. Piasecki University School of Physical Education

PS3.35 Dynamic balance performance is associated to physical activity level in Parkinson’s disease
Maria Hagstromer¹, Hong Mei², Elin Johansson¹, Yuelin Xiong², Lanlan Zhang², Jianduan Zhang ², Claude Marcus¹
¹Karolinska Institutet, Solna, Sweden, ²Huazhong University of Science and Technology, Tongji Medical College, Wuhan, Hubei, China.

PS3.36 UL Hospitals Falls Collaborative - A comparison of the FRASE to the Timed up and GO and the Impact of Cognitive Impairment on Falls Prevalence
Catherine Quinn¹, Doris Liddy¹, Chris Queally Fitzgerald¹, John G Devitt¹, Patricia Buckley¹, Mary Boland¹
¹HSE Mid-West – University of Limerick Hospitals- Ennis Hospital, Ireland.

PS3.37 Real-World Fall Temporal and Kinematic Variables for Fall Detection Algorithm Development for the L5 Location
Alan Bourke¹, Jochen Klenk², Lars Schwickert², Kamiar Aminian³, Espen Ihlen¹, Jorunn Helbostad¹, Lorenzo Chiari⁴, Clemens Becker²
¹Norwegian University of Science and Technology, Trondheim, Norway, ²Robert Bosch Hospital, Stuttgart, Germany, ³Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, ⁴University of Bologna, Bologna, Italy.

PS3.38 Targeting in-home monitoring to where and when people with Parkinson’s Disease are most likely to fall
Emma Stack¹, Ann Ashburn¹, Veena Agarwal¹, Ting-Ray Lindley¹
¹University of Southampton, Southampton, England, UK.

PS3.39 Dual Task Gait Analysis in Frail and Mild Cognitive Impairment Patients
Alicia Martínez Ramírez¹, Ion Martinikorena Aranburu², Pablo Lecumberri Villamediana³, Marisol Gomez Fernandez², Nora Millor Muruzabal², Mikel Izquierdo Redin²
¹Public University of Navarra, Navarra, Spain, ²Universidad Pública de Navarra, Navarra, Spain.

PS3.40 Attaching An Acceleration+Angular Sensor to Walking Stick for Human Fall Detection
Kimio Oguchi¹, Seidai Kitamura¹
¹Seikei University, Tokyo, Japan.

PS3.41 Assessment of Algorithm Performance During Variation of Sensor Location and Protocol
Naomi Hurwitz¹, Aodhán Hickey¹, John Mathers¹, Lynn Rochester¹, Alan Godfrey¹
¹Newcastle University, Newcastle, England, UK.
Thursday 11th June

15:15 – 16:30  Poster Session 4:

PS4.1 Differentiating lying down from sitting using a single activPAL3™ monitor: A pilot study
Philippa Dall¹, Kate Lyden², Dinesh John³, Malcolm Granat⁴
¹Glasgow Caledonian University, Glasgow, Scotland, UK, ²University of Colorado, Boulder, Colorado, United States, ³Northeastern University, Boston, Massachusetts, USA, ⁴Salford University, Manchester, England, UK.

PS4.2 More sedentary time is associated with slower walking speed, The Maastricht Study
Jeroen van der Velde¹, Hans Savelberg¹, Nicolaas Schaper², Julianne van der Berg¹, Coen Stehouwer², Paul Willems¹, Miranda Schram³, Simone Sep², Carla van der Kallen², Ronald Henry², Pieter Dagnelie¹, Tineke van Geel¹, Annemarie Koster¹
¹Maastricht University, Maastricht, Limburg, Netherlands, ²Maastricht University Medical Centre+, Maastricht, Limburg, Netherlands

PS4.3 Measuring occupational sitting time, transitions and step counts in free living conditions of sedentary workplaces: Criterion validity of a mobile app
Anna Puig-Ribera¹, Judit Bort-Roig¹, Ruth Contreras¹, Joan Carles Martori¹, Jim McKenna²
¹Universitat de Vic-Universitat Central de Catalunya, Barcelona, Spain, ²Leeds Beckett University, Leeds, England, UK.

PS4.4 Measuring sedentary accumulation with non-postural accelerometers: potential biases from differential misclassification
Elisabeth Winkler¹, Genevieve Healy¹, Sebastien Chastin², Neville Owen³, David Dunstan³
¹The University of Queensland, Queensland, Australia, ²Glasgow Caledonian University, Glasgow, Scotland, UK, ³Baker IDI Heart and Diabetes Institute, Melbourne, Victoria, Australia.

PS4.5 Kids are not little adults: Evidence supporting a 2.0 MET threshold for sedentary behaviour in children
Pedro Saint-Maurice¹, Youngwon Kim¹, GregoryWelk¹, Glenn Gaesser²
¹Iowa State University, Iowa, USA, ²Arizona State University, Tempe, Arizona, USA.

PS4.6 Concurrent validity of energy monitoring and wearable cameras as measures of TV viewing: a pilot study
Adam Loveday¹, Lauren Sherar¹, Dale Esliger¹
¹Loughborough University, Loughborough, Leicestershire, UK.

PS4.7 The Effects of Altering Sitting Behavior on Energy Expenditure and Muscle Activation
Nicholas Lerma¹, Scott Strath¹, Kevin Keenan¹, Bethany Forseth¹, Ann Swartz¹
¹University of Wisconsin-Milwaukee, Wisconsin, Milwaukee, USA.

PS4.8 Relationship of a comprehensive sedentary behaviour measure (SIT-Q) with activity energy expenditure assessed via doubly-labelled water
Brigid Lynch¹, Christine Friedenreich², Neville Owen³, David Dunstan³, Rémi Rabasa-Lhoret⁴, Farah Khandwala², Paula Robson², Ilona Csizmadi²
¹Cancer Council Victoria, Melbourne, Victoria, Australia, ²Cancer Control Alberta, Alberta Health Services, Alberta, Canada, ³Baker IDI Heart and Diabetes Institute, Melbourne, Victoria, Australia, ⁴Université de Montréal, Montreal, Quebec, Canada.

PS4.9 Investigating the accuracy of the 24-hour recall method in assessing sedentary behavior: Physical Activity Measurement Survey (PAMS) project
Youngwon Kim¹, Gregory Welk¹
¹Iowa State University, Iowa, USA.

PS4.10 Correlation and agreement between a composite self-report measure and activPAL-derived sitting time: AusDiab 3
Elisabeth Winkler¹, Brigid Lynch², Bronwyn Clark¹, Paul Gardiner¹, Genevieve Healy², David Dunstan³, Neville Owen³
¹The University of Queensland, Queensland, Australia, ²Cancer Council Victoria, Melbourne, Victoria, Australia, ³Baker IDI Heart and Diabetes Institute.

PS4.11 Validity and reliability of the accelerometer-determined sedentary time against activPAL in a sample of bus drivers
Veronica Varela Mato¹, Tom Yates¹, David Stensel², Stuart Biddle², Stacy Clemes¹
¹Loughborough University, Loughborough, Leicestershire, UK, ²Institute of Sport, Exercise & Active Living (ISEAL), Victoria University, Melbourne, Victoria, Australia.

PS4.12 Repurposing the LUMOback posture sensor as a sedentary behaviour self-monitor: A controlled validation study
James Sanders¹, Charlotte Edwardson², Sarah Bunnewell², Thomas Yates², Dale Esliger²
1Loughborough University, Leicestershire, England, UK, 2 NIHR Leicester-Loughborough Diet, Lifestyle and Physical Activity Biomedical Research Unit, UK.

PS4.13 Validation of two physical activity questionnaires and an inactivity questionnaire with accelerometry
Kenn Konstabel¹, Triin Rääsk², Jarek Mäestu², Jaak Jürimäe²
¹National Institute for Health Development, Tallinn, Estonia, ²University of Tartu, Tartu, Estonia.

PS4.14 A comparison of young children's physical activity levels and sedentary time measured via Actical and ActiGraph accelerometers
Leigh Vanderloo¹, Patricia Tucker¹, Natascia D’Alimonte², Nicole Proudfoot², Brian Timmons²
¹University of Western Ontario, London, Ontario, Canada, ²McMaster University, Hamilton, Ontario, Canada.

PS4.15 Bidirectional associations between adiposity, sedentary behavior and physical activity: a longitudinal study in children
Chiaki Tanaka¹, Xanne Janssen², Mark Pearce³, Kathryn Parkinson³, Laura Basterfield¹, Ashley Adamson³, John Reilly²
¹J. F. Oberlin University, Machida, Tokyo, Japan, ²University of Strathclyde, Glasgow, Scotland, UK, ³Newcastle University, Newcastle, England, UK.

PS4.16 Occupational physical activity and energetic work load of Finnish police officers
Jussi Konttinen¹, Janne Halonen¹, Harri Lindholm¹, Jorma Niemi², Sirpa Lusa¹
¹Finnish Institute of Occupational Health, Helsinki, Finland, ²The East-Uusimaa Police / University of Eastern Finland, Joensuu, Finland.

PS4.17 Quantifying Time Spent Sitting, Standing And Stepping At University With The Activpal Monitor
Arturo Vega-Gonzalez¹, Mayra Cuellar-Cruz², Juan Manuel Gomez-Gonzalez³, Irais Quintero-Ortega², Birzabith Mendoza-Novelo³, Jorge Delgado-Garcia²
¹Universidad de Guanajuato, División de Ciencias e Ingenierías, ²Universidad de Guanajuato, Leon, Mexico, ³Universidad Nacional Autonoma de Mexico, Mexico City, Mexico.

PS4.18 Classification of occupational activity categories using accelerometry: NHANES 2003-2004
Jeremy Steeves¹, Catrine Tudor-Locke², Rachel Murphy³, Scott Strath¹, George King¹, Eugene Fitzhugh⁵, Tamara Harris³
¹University of Wisconsin-Milwaukee, Milwaukee, Wisconsin, USA, ²Pennington Biomedical Research Center, Baton Rouge, Louisiana,
PS4.19 Measuring sedentary behaviour and physical activity in truck drivers: Different approaches to data reduction
Toby Pavey¹, Stewart Trost¹, Nicholas Gilson¹
¹The University of Queensland, Queensland, Australia.

PS4.20 Daily physical activity and sedentary behavior patterning evaluated by triaxial accelerometer in Japanese adults
Shigeho Tanaka¹, Takaumi Ando¹, Tomoko Aoyama¹, Kazuko Ishikawa-Takata¹, Sho Nagayoshi²
¹National Institute of Health and Nutrition, Japan, ²Omron Healthcare Co. Ltd.

PS4.21 Comparison of accelerometer-based and self-reported level of physical activity and sitting time in young men
Riikka Ahola¹, Maisa Niemelä³, Raija Korpelainen², Riitta Pyky², Anna-Maiju Jauho¹, Lauri Tuovinen¹, Pekka Siirtola¹, Jaakko Tornberg², Matti Mäntysaari³, Sirkka Keinänen-Kiukaanniemi¹, Juha Röning¹, Timo Jämsä¹
¹University of Oulu, Oulu, Finland, ²Oulu Deaconess Institute, Oulu, Finland, ³Centre for Military Medicine, Finnish Defense Forces, Helsinki, Finland.

PS4.22 Comparison of Actigraph GT3X, Hookie AM20 and Polar Active physical activity measurement devices under free-living conditions
Anna-Maiju Jauho¹, Janne Kulmala³, Harto Hakonen², Henri Vähä-Ypyä³, Juha Auvinen¹, Raija Korpelainen⁴, Harri Sievänen³, Tuula Tammelin², Timo Jämsä³, Riikka Ahola⁵
¹University of Oulu, Oulu, Finland, ²LIKES - Research Center for Sport and Health Sciences, Jyväskylä, Finland, ³UKK Institute, Tampere, Finland, ⁴Oulu Deaconess Institute, Department of Sports and Exercise Medicine, Oulu, Finland, ⁵Medical Imaging, Physics and Technology (MIPT) consortium, University of Oulu, Oulu, Finland.

PS4.23 Association Between Body Mass Index and Objectively Measured Sitting Patterns at Work and During Leisure Among Blue-Collar Workers
Nidhi Gupta¹, David Hallman ², Svend Erik Mathiasssen², Mette Korshøj¹, Andreas Holtermann¹
¹National research centre for the working environment, Copenhagen, Denmark, ²University of Gävle, Gävle, Sweden.
PS4.24 Changes in Objectively Measured Physical Activity and Sedentary Behaviour In Adolescent Females Over A 12 Month Period.
Grainne Hayes¹, Kieran Dowd¹, Deirdre Harrington², Ailish Hannigan³, Helen Purtill¹, Sarah Kelly⁵, Niall Moyna⁶, Clodagh O’ Gorman³, Alan Donnelly¹
¹Department of Physical Education and Sport Sciences, University of Limerick, Limerick, Ireland, ²Leicester Diabetes Centre, University of Leicester, Leicester, UK, ³Graduate Entry Medical School, University of Limerick, Limerick, Ireland, ⁴Department of Mathematics and Statistics, University of Limerick, Limerick, Ireland, ⁵Institute of Technology Carlow, ⁶School of Health and Human Performance, Dublin City University, Dublin, Ireland.

PS4.25 Convergent validity of wrist acceleration and physical activity energy expenditure from combined heart-rate and movement sensing
Thomas White¹, Kate Westgate¹, Simon Griffin¹, Nick Wareham¹, Soren Brage¹
¹MRC Epidemiology Unit, Cambridge, UK.

PS4.26 Relevance of age, BMI, and movement detection threshold to accelerometer measures of walking energy expenditure in older women.
David Buchner¹, Chongzhi Di², Kelly Evenson³, Michael LaMonte⁴, I-Min Lee⁵, Eileen Rillamas-Sun², Marcia Stefanick⁶, Lesley Tinker², Yuzheng Zhang², Andrea LaCroix⁷
¹University of Illinois Urbana-Champaign, Illinois, USA, ²Fred Hutchinson Cancer Research Center, Seattle, Washington, USA, ³University of North Carolina, North Carolina, USA, ⁴University at Buffalo of The State University of New York, New York, USA, ⁵Harvard University, Cambridge, Massachusetts, USA, ⁶Stanford University, Stanford, California, USA, ⁷University of California San Diego, San Diego, California, USA.

Peter Ladlow¹, Tom Nightingale¹, Polly McGuigan¹, Alexander Bennett², Russ Coppack², James Bilzon¹
¹University of Bath, Bath, UK, ²Defence Medical Rehabilitation Centre, Leatherhead, Surrey, UK.

PS4.28 Quality sleep is associated with overnight metabolic rate in healthy elderly
Giulio Valenti¹, Alberto Bonomi², Klaas Westerterp¹
¹Maastricht University, Maastricht, Limburg, Netherlands, ²Philips Research Laboratories, Eindhoven, Netherlands.
PS4.29 Step/min Cut-points Based on Walking Do Not Predict Intensity of Non-Walking Activities
David Bassett¹, Scott Crouter¹, Dinesh John²
¹University of Tennessee, Knoxville, Tennessee, USA, ²Northeastern University, Boston, Massachusetts, USA.

PS4.30 Investigating the energetic cost of turning: influence of speed, angle and aerobic fitness
Melitta McNarry¹, Rory Wilson¹, Mark Holton¹, Kelly Mackintosh¹
¹Swansea University, Swansea, Wales, UK.

PS4.31 Energy Expenditure Estimation using the Accelerometer of the Smartphone
Joana Silva¹, Susana Carneiro¹, Bruno Aguiar¹, Tiago Rocha¹, Inês Sousa¹
¹Associação Fraunhofer Portugal Research, Porto, Portugal.

PS4.32 Distinguishing periods of wake during overnight sleep using the activPAL activity monitor
Kate Lyden¹, Dinesh John², Philipa Dall³, Malcolm Granat⁴, Thomas Moehlman⁵, Christopher Depner⁵, Kenneth Wright⁵, Edward Melanson¹
¹University of Colorado, Anschutz Medical Campus, Aurora, Colorado, USA, ²Northeastern University, Boston, Massachusetts, USA, ³Glasgow Caledonian University, Glasgow, Scotland, UK, ⁴University of Salford, Manchester, England, UK, ⁵University of Colorado, Boulder, Colorado, USA.

PS4.33 Accelerometry + GPS: Assessment of Children’s Free-Play Intensity and Location During Recess
Kimberly Clevenger¹, Gaurav Sinha¹, Brian Ragan², Matthew Jackson¹, Cheryl Howe¹
¹Ohio University, Athens, Ohio, USA, ²Middle Tennessee State University, Murfreesboro, Tennessee, USA.

PS4.34 Relating physical activity, pleasure, and daily satisfaction of older adults: a pilot study
Miriam Cabrita¹, Monique Tabak¹, Miriam Vollenbroek¹
¹Roessingh Research and Development, Enschede, Netherlands

PS4.35 Influence of acute physical activity on blood pressure: Insights from continuous sensing
Andrew Kingsnorth¹, Dale Esliger¹
¹Loughborough University, Loughborough, Leicestershire, England, UK.

PS4.36 Validation of the activPAL3 micro
Cormac Powell¹, Brian Carson¹, Kieran Dowd¹, Alan Donnelly¹
¹Department of Physical Education and Sport Sciences, University of Limerick, Limerick, Ireland.

**PS4.37 Who spent more time daily sitting? Analysis of sedentary behavior in primary healthcare patients who are overweight or mildly obese**

Carme Martín-Borrás¹, Anna Puig-Ribera², Angela Mª Beltrán Hernández³, Elena Martínez Ramos⁴, Jordi Real Gatus⁵, Mercè Solà Gonfaus⁶, Eva Castillo Ramos⁷, Ana Maria Guezala Bielsa⁸, Sandra Curto Sancho⁹, Mª Jesús Valderas Sánchez⁹, Marta Prats Guardiola¹⁰, Arantxa Iturbide Zugasti¹¹, Jordi Martí Carbonell¹², Marta Villanueva Perez¹³, SEDESTACTIV Group¹⁴
¹FPCEE Blanquerna – URL, Barcelona, Spain, ²Universitat de Vic - Universitat Central de Catalunya, Barcelona, Spain, ³Lifestyles Study Group, RedIAPP, Institut Universitari d'Investigació en Atenció Primària Jordi Gol, Barcelona, Spain, ⁴Primary Healthcare Vilanova 1, ICS, Barcelona, Spain, ⁵Research Unit of Barcelona and Lleida, Primary Healthcare Research Institution IDIAP Jordi Gol, Barcelona, Spain, ⁶Primary Healthcare Centre Les Planes, Barcelona, Spain, ⁷Primary Healthcare Centre Santa Coloma de Cervelló, Barcelona, Spain, ⁸Primary Healthcare Centre Lluis Millet, ⁹Primary Healthcare Centre Carles Ribas, ¹⁰Primary Healthcare Centre Cornellà/ Lluis Millet, ¹¹Primary Healthcare Centre Passeig Sant Joan, ¹²Primary Healthcare Centre Vilanova 1, ¹³Primary Healthcare Centre Viladecans 2, ¹⁴Research Unit of Barcelona, Primary Healthcare Research Institution IDIAP Jordi Gol.

**PS4.38 SmartStep: an Insole-Based Physical Activity Monitor**

Edward Sazonov¹, Nagaraj Hegde¹, Edward Melanson¹
¹The University of Alabama, Tuscaloosa, Alabama, USA.

**PS4.39 Automatic car driving detection using raw accelerometry data**

Jaroslaw Harezlak¹, Marcin Straczkiewicz², Jacek Urbanek³
¹Indiana University RM Fairbanks School of Public Health, Indianapolis, USA, ²AGH University of Science and Technology, Kraków, Poland, ³Johns Hopkins Bloomberg School of Public Health, Maryland, USA.