

**WEDNESDAY APRIL 23, 2014**

- 08.00-09.00 Registration + Coffee
- 09.00-09.15 Opening
- Prof Dr Lucas HV van der Woude**  
*Conference Chair*
- Prof Dr Folkert Kuipers**  
*Dean University Medical Center Groningen*

**Motor Learning**

*Chairs: Dr Leonora Mouton & Prof Dr Klaas Postema*

- 09.15-10.00 Keynote lecture 1
- Prof Dr Karl Newell**  
PRINCIPLES OF LEARNING AND MOTOR (RE)LEARNING IN REHABILITATION
- 10.00-10.45 Session 1
- 1. Vegter RJK, Lamoth CJC, de Groot S, Veeger HEJ, van der Woude LHV**  
[007] INTER-INDIVIDUAL DIFFERENCES IN THE INITIAL 80 MINUTES OF MOTOR LEARNING OF HANDRIM WHEELCHAIR PROPULSION
- 2. Romkema S, van der Sluis CK, Bongers RM**  
[041] INTERMANUAL TRANSFER IN UPPER LIMB MYOELECTRIC PROSTHETIC TRAINING USING A PROSTHETIC SIMULATOR
- 3. van Delden AEQ, Peper CE, Kwakkel G, Beek PJ**  
[027] UNILATERAL VERSUS BILATERAL UPPER LIMB TRAINING AFTER STROKE
- 10.45-11.15 Coffee-break & Exhibition & Posters

**Wheeled Mobility**

*Chairs: Dr Sonja de Groot & Dr Monique Berger*

- 11.15-12.30 Session 2
- 4. Cowan RE, de Groot S, MacGillivray MM, Sawatzky B**  
[118] WHAT CHANGE IN MANUAL WHEELCHAIR PROPULSION RESISTANCE CAN INDIVIDUALS WITH PARAPLEGIA SENSE?
- 5. Freitas D, Abreu C, Borges R, Magalhães PHPM, Nadler SN, Araujo C**  
[120] SEAT POSITIONING EFFECT ON LOAD DISTRIBUTION IN MANUAL WHEELCHAIR PROPULSION
- 6. Kloosterman MGM, Buurke JH, van der Woude LHV, Rietman JS**  
[132] CLINICAL EVALUATION OF HAND-RIM PROPULSION WITH POWER-ASSIST WHEELS
- 7. Solís-Mozos M, Crespo-Ruiz B, Del Ama-Espinosa A, Jimenez-Diaz F, Gil-Agudo A**  
[30] ULTRASOUND AND KINETIC CHANGES IN SHOULDER JOINT AFTER TWO DIFFERENT WORKLOAD SETTINGS IN A TREADMILL
- 8. Sawatzky J, Hers P, MacGillivray M**  
[028] RELATIONSHIPS BETWEEN KINETIC/TEMPORAL WHEELING PARAMETERS AND WHEELCHAIR SKILLS
- 12.30-13.45 Lunch Break & Exhibition & Posters

## Gait

*Chairs: Dr Helco van Keeken & Dr Marije Vos*

- 13.45-14.30 Keynote lecture 2  
**Prof Dr Bert Otten**  
BALANCE AND ENERGETICS DURING WALKING AND RUNNING IN IMPAIRED ADAPTED SPORTS
- 14.30-15.30 Session 3  
**9. van Ooijen MW, Timmermans C, Roerdink M, Trekop M, Arendse S, Nijenhuis E, Janssen TWJ, Beek PJ**  
[076] C-MILL GAIT ADAPTABILITY TRAINING AFTER FALL-RELATED HIP FRACTURE; USERS PERSPECTIVE AND INTENSITY OF TRAINING  
**10. van Kammen K, Boonstra A, Reinders-Messelink HA, Otter AR**  
[133] MUSCLE ACTIVITY IN THE LOKOMAT: EFFECT OF GUIDANCE AND INTERACTIONS WITH SPEED AND BODYWEIGHT SUPPORT  
**11. Piira AP, Knutsen SFK, Lannem AML**  
[095] ATLET STUDY – RANDOMIZED TRIAL OF BODY WEIGHT SUPPORTED LOCOMOTOR TRAINING IN PERSONS WITH SCI  
**12. Dallmeijer AJ, Scholtes VAB, Becher JG**  
[023] ISOMETRIC MUSCLE STRENGTH AND ITS RELATION TO GROSS MOTOR TASKS IN CHILDREN WITH CEREBRAL PALSY
- 15.30-16.00 Tea Break & Exhibition & Posters

## Prosthetic Walking

*Chairs: Dr Raoul Bongers & Dr Christof Smit*

- 16.00-17.15 Session 4  
**13. Kerkum YL, Houdijk H, Kessels MLC, Sterk A, Steenbrink F, van den Noort JC, Harlaar J**  
[097] THE SHANK-ANGLE-TO-VERTICAL AS A CONTROL PARAMETER FOR TUNING ANKLE-FOOT ORTHOSES  
**14. Heitzmann WW, Wehrli D, Alimusaj AM, Block J, van Drongelen S, Wolf SI**  
[104] ANALYSIS OF A HYDRAULIC PROSTHETIC FOOT IN TRANSFEMORAL AMPUTEES WALKING ON INCLINES  
**15. Ijmker T, Noten S, Houdijk H, Lamoth CJC, Polomski W, Beek PJ, van der Woude LHV**  
[117] EFFECTS OF EXTERNAL STABILIZATION ON ENERGY COST OF WALKING IN LOWER LIMB AMPUTEES  
**16. Hak LH, van Dieën JH, vander Wurff P, Houdijk H**  
[109] STEP LENGTH ASYMMETRY IN TRANSTIBIAL AMPUTEES; A STRATEGY TO REGULATE THE BACKWARD MARGIN OF STABILITY?  
**17. Timmermans C, van Ooijen MW, van Donkersgoed H, Cutti AG, Bosboom O, Roerdink M**  
[108] GAIT ADAPTABILITY EVALUATION IN PERSONS WITH A LOWER-LIMB AMPUTATION
- 17.15-18.00 Reception with refreshments

**Evening Keynote**

*Chair: Dr Leonora Mouton*

18.00-18.45 Keynote lecture 3

**Prof Dr Ir Jaap Harlaar**

FUTURE REHABILITATION DIAGNOSTIC TECHNOLOGY: MATCHING THERAPIES TO PATIENTS

18.45-22.00 Dinner

**Restaurant at University Medical Center Groningen**

*The Drinks are offered to you by the University of Groningen, the Municipality of Groningen and the Province of Groningen*

**THURSDAY APRIL 24, 2014**

08.00-08.30 Coffee

**Exercise & Testing**

*Chairs: Dr Han Houdijk & Dr Liesbeth Simmelink*

08.30-09.15 Keynote lecture 4

**Prof Dr Carol E Garber**

PHYSICAL ACTIVITY GUIDELINES FOR PEOPLE WITH A DISABILITY

09.15-10.15 Session 5

**1. Lin LL, Chen SY, Lan C, Wang YH, Lai JS**

[073] SUBMAXIMAL EXERCISE PARAMETERS DURING ARM ERGOMETRY EXERCISE TESTING IN PERSONS WITH SPINAL CORD INJURIES

**2. Au JS, Totosy de Zepetnek JO, MacDonald MJ**

[103] ACCELERATED PERIPHERAL COMPARED TO CENTRAL PERCEIVED EXERTION DURING MAXIMAL ARM EXERCISE IN SPINAL CORD INJURY

**3. Bloemen M, de Groot JF, Backx FJG, Westerveld RA, Takken T**

[106] ARM ERGOMETRY VERSUS WHEELCHAIR PROPULSION FOR TESTING AEROBIC FITNESS IN WHEELCHAIR-USING CHILDREN

**4. Yeh TS, Chen SY, Lan C, Wang YH, Lai JS**

[081] HEMODYNAMICS DURING HEAD-UP TILT AND CARDIOPULMONARY EXERCISE TESTING IN PERSONS WITH SPINAL CORD INJURIES

10.15-10.45 Coffee-break & Exhibition & Posters

**Physical Activity 1**

*Chairs: Dr Florentina Hettinga & Dr Marga Tepper*

10.45-11.45 Session 6

**5. Williams TL, Smith B, Papatomas A**

[054] NARRATIVES OF ACTIVITY-BASED REHABILITATION FOR PEOPLE WITH SPINAL CORD INJURY

**6. Wezenberg D, van Dijk F, van der Woude LHV, Dekker R, Houdijk H,**

[111] UNDERSTANDING AND QUANTIFYING AEROBIC CAPACITY DURING REHABILITATION IN LOWER LIMB AMPUTEES.

**7. Nooijen CFJ, Post MWM, Spooren AL, Valent LJ, Broeksteeg R, Sluis TA, Stam HJ, van den Berg-Emons HJG**

[083] WHAT DETERMINES EXERCISE SELF-EFFICACY IN PERSONS WITH RECENT SPINAL CORD INJURY?

**8. Martin Ginis A, Perrier MJ, The SHAPE-SCI Research Group**

[062] MODIFIABLE PREDICTORS OF PHYSICAL ACTIVITY AMONG MOBILITY DEVICE USERS: A STUDY OF ADULTS WITH SCI

**Poster session**

11.45-12.30 Poster session 1  
12.30-13.45 Lunchbreak & Exhibition & Posters

**Physical Activity 2**

*Chairs: Dr Karin Gerrits & Dr Hurnet Dekkers*

13.45-14.30 Keynote lecture 5  
**Prof Dr Joseph Czerniecki**  
THE COST OF IMPAIRED WALKING

14.30-15.30 Session 7

**9. Perrier MJ, Martin Ginis KA, Salci L**

[063] A COMPARISON OF WHEELING: ACTIVITY OF DAILY LIVING VERSUS LEISURE-TIME PHYSICAL ACTIVITY

**10. Balemans ACJ, van Wely L, Becher JG, Dallmeijer AJ**

[036] LONGITUDINAL RELATIONSHIP BETWEEN FITNESS, WALKING-RELATED PHYSICAL ACTIVITY, MOBILITY AND FATIGUE IN CHILDREN WITH CEREBRAL PALSY

**11. Arnet U, Hinrichs T, Bertschy S, Frei H, Lay V, Brinkhof MWG**

[105] HANDCYCLING IN SWITZERLAND: A CROSS-SECTIONAL ANALYSIS OF THE SWISS POPULATION WITH SPINAL CORD INJURY

**12. Abel TA, Vanessa VS, Anneken VA**

[114] TAILWIND - HANDCYCLING FOR CHILDREN WITH SPECIAL NEEDS

15.30-16.00 Teabreak & Exhibition & Posters

**Training & Intervention**

*Chairs: Dr Annet Dallmeijer & Prof Dr Coen van Bennekom*

16.00-17.15 Session 8

**13. Bakkum AJT, Paulson TAW, Bishop NC, Goosey-Tolfrey VL, Stolwijk-Swüste JM, van Kuppevelt D, de Groot S, Janssen TWJ**

[018] EFFECTS OF HYBRID VERSUS HANDCYCLE EXERCISE ON CARDIOVASCULAR DISEASE RISK FACTORS IN SPINAL CORD INJURY

**14. Davis M, O'Brian D, Raymond J**

[079] ACTIVITY-BASED THERAPY AND CURRENT GUIDELINES FOR EXERCISE IN SCI INDIVIDUALS

**15. Slaman J, Roebroek ME, Stam HJ, van den Berg-Emons HJG**

[050] EFFECTIVENESS OF A LIFESTYLE INTERVENTION IN ADOLESCENTS AND YOUNG ADULTS WITH CEREBRAL PALSY

**16. Hasnan N, Engkasan JP, Davis GM, Husain R**

[127] PSYCHOPERCEPTUAL RESPONSES FOLLOWING HIGH-INTENSITY FUNCTIONAL ELECTRICAL STIMULATION EXERCISE TRAINING IN SPINAL CORD-INJURED INDIVIDUALS

**17. Leicht CL, Kouda K, Umemoto Y, Banno M, Kinoshita T, Moriki T, Bishop NC, Goosey-Tolfrey VL, Tajima F**

[034] HOT WATER IMMERSION ELEVATES INTERLEUKIN-6 (IL-6) AND IL-1RA IN CERVICAL SPINAL CORD INJURY

17.15-17.45 Reception with refreshments

**Evening Keynote**

*Chair: Dr Han Houdijk*

17.45-18.30 Keynote lecture 6

**Prof Dr Mike McNamee**

ETHICAL CONSIDERATIONS IN (ELITE) ADAPTED SPORTS

19.00-22.00 Dinner

**Academy Building, University of Groningen (see map city center)**

MUSIC PROVIDED BY: MUNK!

22.00-01.00 Optional: Pubtour

**FRIDAY APRIL 25, 2014**

08.00-08.30 Coffee

**Sports Analysis**

*Chairs: Prof Dr Thomas Janssen & Dr Rienk Dekker*

08.30-9.15 Keynote lecture 7

**Dr Claudio Perret**

ELITE ADAPTED SPORTS PERFORMANCE

9.15-10.15 Session 9

**1. Mason BS, Lenton JP, Rhodes JM, Cooper RA, Goosey-Tolfrey VL**

[053] THE VALIDITY OF A MINUTUARISED DATA LOGGER FOR ACCURATELY MONITORING WHEELCHAIR RUGBY PERFORMANCE

**2. Valent LJM, Postma K, van Vliet L, Gobets D, de Groot S**

[075] TRAINING FOR A HANDCYCLING MOUNTAIN TIME TRIAL: PILOT STUDY ON THE BENEFITS FOR FITNESS

**3. Goosey-Tolfrey VL, Paulson TAW, Tolfrey K, Eston RG**

[008] PREDICTION OF PEAK OXYGEN UPTAKE FROM DIFFERENTIATED RATINGS OF PERCEIVED EXERTION IN TRAINED WHEELCHAIR SPORTSPERSONS

**4. Zeller S, Abel T, Foitschik T, Rojas-Vega S**

[086] ACUTE CHANGES IN BRAIN-DERIVED NEUROTROPHIC FACTOR CONCENTRATION DURING WHEELCHAIR RUGBY TRAINING

10.15-10.45 Coffeebreak & Exhibition & Posters

**Exercise Physiology**

*Chairs: Dr Casper van Koppenhagen & Dr Daphne Wezenberg*

10.45-11.45 Session 10

**5. Bongers CCWG, Eijsvogels TMH, Thijssen DHJ, Hopman MTE**

[101] EFFECTS OF WEARING A COOLING VEST DURING EXERCISE ON THERMOREGULATION OF SPINAL CORD INJURED INDIVIDUALS

**6. Graham TS, Perret C, Tolfrey VL**

[042] EFFECTS OF CAFFEINE SUPPLEMENTATION ON SPRINT AND 4-MIN PUSH PERFORMANCE IN WHEELCHAIR RUGBY ATHLETES

**7. West R, Gee M, Voss C, Hubli M, Currie D, Krassioukov V**

[047] AUTONOMIC CONTROL AND ELITE PARACYCLING PERFORMANCE IN SPINAL CORD INJURY

**8. Krassioukov AK, West CW**

[048] AUTONOMIC CARDIOVASCULAR CONTROL IN PARALYMPIC ATHLETES WITH SPINAL CORD INJURY

**Poster session**

11.45-12.30      Poster session 2  
12.30-13.45      Lunchbreak & Exhibition & Posters

**Wheelchair sports**

*Chairs: Dr Marcel Post & Dr Maurits Sloots*

13.45-14.30      Keynote lecture 8  
**Dr Nick Webborn**  
SPORTS INJURIES  
14.30-15.30      Session 11  
**9. Hutzler YH, Rosenberg RR, Meckel YM**  
[092] THE RELATIONSHIP OF REPEATED SPRINT TEST AND RELATED FIELD TEST OUTCOMES IN WHEELCHAIR BASKETBALL PLAYERS  
**10. Oliveira SFM, Bione AAG, Leite LIG, Freitas F, Costa MC**  
[137] COMPARISON ON PROPULSIVE POWER ASYMMETRY IN BASKETBALL PLAYERS AND ABLE BODIED SUBJECT  
**11. Jaarsma EA, Dekker R, Dijkstra PU, Geertzen JHB**  
[057] BARRIERS AND FACILITATORS OF SPORTS IN PEOPLE WITH PHYSICAL DISABILITIES  
**12. Hart L, Porter G, Altmann C**  
[065] EVIDENCE BASED PRACTICE IN CLASSIFICATION: SYSTEMATIC REVIEW TO REVISE HAND EVALUATION IN WHEELCHAIR RUGBY  
15.30-16.00      Teabreak & Exhibition & Posters

**Closing Keynote**

*Chairs: Prof Dr Thomas Janssen & Dr Sonja de Groot*

16.00-16.45      Keynote lecture 9  
**Prof Dr James Rimmer**  
AGING, CHRONIC DISEASE, ACTIVE LIFESTYLE & SPORTS  
16.45-17.00      Closing session