

Scientific Program (Please use Hyperlinks for more detailed Information)

Wednesday June 14th		Thursday June 15th	Friday June 16th	Saturday June 17th	Sunday June 18th		
Registration 12:00-18:00	Workshops 08:00-17:00	Keynote Lecture 1 Caroline Nicol 8:30-9:15	Oral Sessions 8:30-9:40 12. Track & Field 1 13. Injury Prevention 1 14. Swimming/Aquatic Sports 15. Sensor Technology 1	Oral Sessions 8:30-9:40 22. Jumping & Landing 2 23. Track & Field 2 24. Cycling 25. Sensor Technology 2	Oral Sessions 8:30-9:40 28. Sports Equipment & Technology 2 29. Tennis/Raquet Sports 2 30. Sprint		
		Oral Sessions 9:20-10:30 1. NIA 1 2. Change of Direction 3. Acrobatic Sports 1				Keynote Lecture 3 Peter Weyand 9:45-10:30	Keynote Lecture 5 Martyn Shorten 9:45-10:30
		Coffee Break 10:30-11:00	Coffee Break 10:30-11:00	Coffee Break 10:30-11:00	Oral Sessions 10:10-11:40 31. Running 32. Physical Activity 33. Computer Modelling & Simulation 2 34. Injury Prevention 3		
		Oral & Applied Sessions 11:00-12:30 4. NIA 2 5. Human Performance & Modelling Applied: Bobsleigh	Oral & Applied Sessions 11:00-12:30 16. Muscle Function & Tissue Mechanics 17. Injury Prevention 2 Applied: A) Swimming 1, B) Dynamic Systems	Oral & Applied Sessions 11:00-12:30 26. Teaching & Coaching Biomechanics 27. Adapted Sports 2 Applied: Muscle Tendon		AGM 11:45-12:30	
		Lunch 12:30-13:30	Lunch & Student Mentoring Program 12:30-13:30	Power Poster 12:35-13:10 7. Sprint, Adapted Sports 8. Muscle & Tissue Mech., Neurom. Biom. 9. Jumping & Landing, Inj. Prev. & Combat Sports	Lunch 12:30-13:30		
		Pre-Conference Board Meeting 12:30-15:00	Power Poster 13:30-14:05 1. NIA, Gait & Locomotion, Various Sports 2. Ball Games & Throwing 3. Innov. Methods, Sensor Techn., Model. & Simul.			Poster Session 13:10-13:55	New Investigator Award 13:30-14:15
		Poster Session 14:05-14:50	Poster Session 14:05-14:50	Lunch Boxes 13:55-14:30	Social Tour 14:30	Hans Gros Award Pedro Morouço 14:15-15:00	
		Oral & Applied Sessions 14:50-16:00 6. Tennis/Racket Sports 1 7. Acrobatic Sports 2 Applied: Pole Vault (14:20-16:45)	Oral & Applied Sessions 14:50-16:00 18. Adapted Sports 1 19. Sports Equipment & Technology 1 20. Team Sports 2 Applied: Swimming 2 (14:50-16:20)	Poster Session 13:55-14:30		Closing Ceremony 15:00-15:15	
		Coffee Break 16:00-16:30	Coffee Break 16:00-16:30	Keynote Lecture 2 Hiroaki Hobara 16:45-17:30		Keynote Lecture 4 Gert-Peter Brüggemann 16:30-17:15	Post-Conference Board Meeting 15:30-17:30
		Opening Ceremony 17:15-18:00	Oral Sessions 17:35-19:05 8. Team Sports 1 9. Gait & Locomotion 10. Various Sports 11. Computer Modelling & Simulation 1	Invited Speakers Session 17:20-18:30		Closing Banquet 18:00	
Geoffrey Dyson Lecture Walter Herzog 18:00-19:00	Sponsors Appreciation Night & Student Night 19:00						
Welcome Reception 19:00							

Thursday, 15th		Oral Sessions 1: NIA 1
	ID	Location: Lecture Hall 1 Chair: N. Smith, G. Irwin
9:20-9:33	15_O1	*Optimising Individual Performance In Cricket Fast Bowling. Paul Felton; Mark A. King
9:34-9:47	15_O2	*Adjustment In The Flight Phase Of 1m Springboard Forward Pike Dives. Mohsen Sayyah; Maurice Yeadon; Michael J. Hiley; Mark A. King
09:48-10:01	15_O3	*Coordinative Variability In Forefoot Runners During An Exhaustive Run. Avelino Amado; Carl Jewell; Richard van Emmerik; Joseph Hamill
10:02-10:15	15_O4	Measuring Lower Limb Loading During Dynamic Sporting Actions: Reducing Errors From Soft Tissue Interference And Filtering. Bernhard Hohl; Mark Lake
10:16-10:29	15_O5	Biomechanical Analysis Of The Start In Ski Cross And Snowboard Cross. Matthias Olvermann; Hannes Frühschütz; Maren Goll; Peter Spitzenpfeil; Andreas Huber
		*=NIA finalist

Thursday, 15th		Oral Sessions 2: Change of Direction
	ID	Location: Lecture Hall 2 Chair: M. Lake, G. Weir
9:20-9:33	15_O6	Y-balance Test But Not Functional Movement Screen Scores Are Associated With Peak Knee Valgus Moments During Unplanned Sidestepping: Implications For Assessing Anterior Cruciate Ligament Injury Risk. Marcus Lee; Sophia Sim; Yeo Jiemin
9:34-9:47	15_O7	Pelvic Obliquity And Rotation Influences Foot Position Estimates During Running And Sidestepping: “it’s All In The Hips”. Sean Byrne; Gillian Weir; Jacqueline Alderson; Brendan Lay; Cyril J Donnelly
09:48-10:01	15_O8	Rotation And Braking Strategies To Perform A Successful Cutting Maneuver. Sina David; Ralf Müller; Igor Komnik; Wolfgang Potthast
10:02-10:15	15_O9	A Kinematically Based Algorithm To Estimate The Energy Cost Of Variable-speed Shuttle Running. Matteo Zago; Manuela Galli; Susanna Rampichini; Eloisa Limonta; Fabio Esposito; Chiarella Sforza
10:16-10:29	15_O10	The Inter-laboratory Repeatability Of Unplanned Sidestepping Kinematics. Cyril J Donnelly; Gillian Weir; Chris John Jackson; Jacqueline Alderson; Raihana Sharir; Radin Rafeuddin; Jos Vanrenterghem; Mark A. Robinson

Thursday, 15th		Oral Session 3: Acrobatic Sports 1
	ID	Location: Lecture Hall 3 Chair: G.-P. Brüggemann, M. Kinoshita
9:20-9:33	15_O11	Effect Of Stiffness Of Knee And Ankle Alignment On The Impact Loads During Landing In Gymnastic Floor Exercise. Wei-Ya Hao; Xiao-Fei Xiao; Cheng-Liang Wu; Xu-Hong Li; Yan-Tao Lou
9:34-9:47	15_O12	Using A Kinect Device To Evaluate Amplitude Of Horizontal Rotation On The Pommel Horse. Toshiyuki Fujihara
09:48-10:01	15_O13	Limit Cycle Representation Of The Gymnastics Longswing. Genevieve Williams; Domenico Vicinanza; Gareth Irwin; Karl M. Newell
10:02-10:15	15_O14	Elbow And Wrist Joint Loading In Gymnastics: Injury Risk In Round Off Technique Selection. Roman Farana; Gerda Strutzenberger; Timothy Exell; Jiri Skypala; Gareth Irwin
10:16-10:29	15_O15	The Parallel Bars Movements With Strain Of Bars. AW Suraj Chandana; Lv Wangang; Yi Mingnong; Wei Xubo

Thursday, 15th

Oral Sessions 4: NIA 2

ID Location: Lecture Hall 1 | Chair: N. Smith, G. Irwin

- 11:00-11:13 15_O22 **Longitudinal Manipulation Of The Kinematic Chain Using A Reducing Biofeedback Schedule.** Francis Mulloy; David R. Mullineaux; Gareth Irwin
- 11:14-11:27 15_O23 ***Are Muscle Forces Relevant In The Age Related Rise Of Injuries In Adolescent Soccer Players?** Thomas Dupré; Kristian R. L. Mortensen; Filip Gertz Lysdal; Johannes Funken; Ralf Müller; Jan Mayer; Hartmut Krahl; Wolfgang Potthast
- 11:28-11:41 15_O24 ***Lower Extremity Coordination Variability During Anticipated And Unanticipated Sidestepping: Implications For Acl Injury Prevention.** Gillian Weir; Carl Jewell; Richard Van Emmerik; Joseph Hamill
- 11:42-11:55 15_O25 ***Muscle Activation Strategies During An Unanticipated Stopping Task.** Carl Jewell; Gillian Weir; Katherine A. Boyer; Joseph Hamill
- 11:56-12:09 15_O26 ***The Differences In Rugby Place Kick Technique Between Successful And Less Successful Kickers.** Alexandra Atack; Grant Trewartha; Neil Bezodis
- 12:10_12:23 15_O27 ***Evaluation Of Silhouette-based Markerless Tracking For Kinematics In Sport.** Hannes Frühschütz; Linda Becker; Philipp Russ; Peter Spitzenpfeil

*=NIA finalist

Thursday, 15th		Oral Sessions 5: Human Performance and Modelling ID Location: Lecture Hall 2 Chair: N. Linthorne, W.-T. Tang
11:00-11:13	15_O16	A Simple Method For Assessment Of Muscle Force, Velocity, And Power Producing Capacities From Functional Movement Tasks. Dejan Suzovic; Milena Z. Zivkovic; Sasa Djuric; Ivan Cuk; Slobodan Jaric
11:14-11:27	15_O17	Biomechanical Characteristics Related To Poling Propulsive Effectiveness In Cross-country V2 Skating Technique. Veronica Bessone; Florian Paternoster; Maximilian Stanglmeier; Michael Veith; Robert Schuster; Ansgar Schwirtz; Wolfgang Seiberl
11:28-11:41	15_O18	Ice Hockey Players Produce A Unique Postural Sway Characteristic. Mark Walsh; Eric Slattery; Joshua Haworth
11:42-11:55	15_O19	Towards Real-time Feedback In High Performance Speed Skating. Jeroen van der Eb; Willem Zandee; Timo van den Bogaard; Sjoerd Geraets; Dirk-Jan Veeger; Peter Beek
11:56-12:09	15_O20	The 2D Trochanter Tracking Method: A Potential Low Cost Alternative When Assessing Vertical Power-force-velocity Profiles? Josef Kröll; Julian Fritz; Hermann Schwameder
12:10-12:23	15_O21	Biomechanics Of The Single-handed Dynamic Moves On Campus Board And Effect Of Rung Distance. Arif Mithat Amca; Neal Smith

Thursday, 15th		Power Poster 1 – NIA, Gait & Locomotion, Various Sports
	ID	Location: Lecture Hall 1 Chair: N. Smith
13:30-13:32	15_P1	*Modeling And Optimal Control Of Able-bodied And Unilateral Amputee Running. Anna Lena Kleesattel; Debora Clever; Johannes Funken; Wolfgang Potthast; Katja Mombaur
13:33-13:35	15_P2	*Relationship Between Performance And Vertical Stiffness In Triathlon Running During A Competition. Keigo Takahashi; Atsushi Aoyagi; Yoshiharu Nabkura
13:36-13:38	15_P3	*The Throwing Performance And Trunk Kinematics Of Quarterbacks During A Football Throw While Wearing Rib Protector Garments. Marika Walker; Kathy Simpson; Christine
13:39-13:41	15_P4	*Kinematic Analysis Of A Televised Eversion Ankle Sprain. Francesca Wade; Kam-Ming Mok; Daniel T. P. Fong
13:42-13:44	15_P5	*Relationship Of Motions Between The Arm And The Legs In The Diving Motion Of Soccer Goalkeepers. Naoki Numazu; Norihisa Fujii
13:45-13:47	15_P6	*Matching Triceps Surae Muscle Strength And Tendon Stiffness Eliminates Age-related Differences In Drop-jump Performance. Matthias König; Svenja Hemmers; Christopher McCrum; Gaspar Epro; Thijs Ackermans; Ulrich Hartmann; Kiros Karamanidis
13:48-13:50	15_P7	*Ground Reaction Forces During The Golf Swing Using Different Golf Clubs In Female Golfers. Tomoya Hirano; Yu Kashiwagi; Yuki Inoue; Yuji Kihara; Seiji Shimatani; Kazuo Funato; Michiyoshi Ae
13:51-13:53	15_P8	*Establishing Evidence Of Reliability And Validity For The Use Of A Pneumatic Helmet Impact System. Leigh Jeffries; Stephen Carlson; Carlos Zerpa; Eryk Przysucha; Paolo Sanzo
13:54-13:56	15_P9	Effects Of Custom-made 3d Printed Insoles For Flat-foot People On Gait Parameters: A Preliminary Study. Young-Kwan Kim; Young-Kwan Joo
13:57-13:59	15_P10	Does Expectation Of Higher Performance In A Knee Brace Actually Affect Gait? Mark Geil; Brittany Balsamo
14:00-14:02	15_P11	Lower Extremity Muscle Activities And Gait Kinematics In Hiking Using Trekking Shoes And High-cuff Hiking Boots. Hermann Schwameder; Susanne Kraft; Nathalie Alexander
14:03-14:05	15_P12	Bobsleigh Start Interval Times And Three-dimensional Motion Analysis Of The Lower Limb Joints In Preparation For The 2018 Pyeongchang Winter Olympics. Seungbum Park; Kyungdeuk Lee; Daewoong Kim; Junghyeon Yoo; Jaemin Jung; Kyunghwan Park; Sungwon Park; Jinhoon Kim
14:06-14:08	15_P13	A Study On The Correlation Between The Foot Features And Gait Characteristics During Over-ground Walking. Jinwook Kim; Kyung-Ryoul Mun; Seon Jong Choi Sungkuk Chun; Junggi Hong
		*=NIA Finalist

Thursday, 15th		Power Poster 2- Ball Games & Throwing
	ID	Location: Lecture Hall 2 Chair: P. Hume
13:30-13:32	15_P14	Vertical Jump Characteristics And Lower Limbs Muscular Contribution In Chileans Volleyball Players During The Countermovement Jump (cmj). Fabio Dal Bello; Enrique Navarro Cabello; Javier Rueda; Esteban Aedo Munoz
13:33-13:35	15_P15	Use Of Accelerometers In Australian Football To Identify A Kick. Susanne Ellens; Stephanie Blair; James Peacock; Shannon Barnes; Kevin Ball
13:36-13:38	15_P16	Estimation Of The Jump Height For The Volleyball Spike By A Mobile Imu Unit. Thomas Jaitner; Georg Ebker; Marcus Schmidt
13:39-13:41	15_P17	The Effects Of Deep Squat “rom” On Baseball Throwing Dynamics Of Lower Extremities Of Position Players. Weihsuan Lin; Jungtang Kung; Shuwei Chen; Daniel Burgee; Wen Tzu Tang
13:42-13:44	15_P18	The Biomechanical Analysis Of Load Characteristics During Discus Throws With Various Weight Implements. Kenichi Hirose; Kei Maeda; Yasutada Noguchi; Keigo Ohyama Byun
13:45-13:47	15_P19	Relationship Between The Ball Velocity And Upper Extremity Kinematics During An Overarm Throwing Self-practice Program. Gizem Ozkaya; Mi Sun Kim; Hye Ree Kim; Seong Jun Kim; Ki Kwang Lee
13:48-13:50	15_P20	The Role Of The Internal Rotation Of The Upper Arm In Javelin Throwing. Hans-Peter Köhler; Frank Lehmann; Maren Witt
13:51-13:53	15_P21	Kinematics Analysis Of The Upper Extremity during The Two-handed Backhand Drive Volley for Female Tennis Players. Mu-Lin Tai; Chun-Ju Yang; Kai-Lung Chang; Yi-Chun Lin; Wen-Tzu Tang
13:54-13:56	15_P22	Influence Of The Ball Speed On The Displacement Of The Center Of Gravity During Baseball Batting Motion. Takahito Tago; Kenichi Kaneko; Daisuke Tsuchioka; Nobuko Ishii; Tadashi Wada
13:57-13:59	15_P23	Wrist-elbow Coordination In Technique Selection: Influence Of Hand Position During The Back Handspring. Sophie Burton; Laurie Needham; Timothy Exell; Roman Farana; Gareth Irwin
14:00-14:02	15_P24	Weight Transfer Changes During Golf Shots From Different Lies. Glen Martin Blenkinsop; Nicholas J. Gallimore; Michael Hiley

Thursday, 15th		Power Poster 3- Innovative Methods, Sensor Technology, Modelling & Simulation
	ID	Location: Lecture Hall 4 Chair: H. Bayne
13:30-13:32	15_P25	Markerless Motion Capture Within Sport: An Exploratory Case Study. L. Needham; Michael Long; Gareth Irwin
13:33-13:35	15_P26	A Method To Obtain 3d Kinematics Data Of Whole High Jump Movement. Kangwei Ai; Haibin Yu
13:36-13:38	15_P27	3D Reconstruction Accuracy Of Two Moving Motion Analysis Systems: Preliminary Results. Gustavo Ramos Dalla Bernardina; Isabella M. Rodrigues; Heber T. Pinto; Tony Monnet; Pietro Cerveri; Amanda P. Silvatti
13:39-13:41	15_P28	Investigating The Use Of Sample Entropy To Detect Fatigue. Paul G Taylor; James A Ross; Justin W L Keogh
13:42-13:44	15_P30	A Study On The Representative Point Of Horse's Center Of Gravity. Shuping Li; Qiangqiang Dong; Yang Yu; Lin Li; Jiang Tao
13:45-13:47	15_P31	Lower Limb Muscle Lengths In Rowing: A Preliminary Study. Maeva Retailleau; Mathieu Domalain; Mathieu Menard; Floren Colloud
13:48-13:50	15_P32	Muscle Contributions To Body Mass Center Velocity During Vertical And Forward Jumping. Yuta Suzuki; Yasuto Kobayashi; Munenori Murata; Megumi Takizawa
13:51-13:53	15_P33	Modeling A Springboard In Gymnastics. Thomas Lehmann; Axel Schleichardt; Falk Naundorf; Klaus Knoll
13:54-13:56	15_P34	A Musculoskeletal Modeling Approach Of Iliotibial Band Syndrome In Cycling. Implications For Injury Prevention. Mathieu Menard; Mathieu Domalain; Patrick Lacouture
13:57-13:59	15_P35	Validation Of The Photoelectric Optogait System To Measure Race Walking Biomechanical Parameters On A Treadmill. Daniel Álvarez de la Cruz; Andres Sebastian; Laura Pellitero; Ventura Ferrer-Roca
14:00-14:02	15_P36	Wireless Insoles To Measure Ground Reaction Forces: Step-by-step Validity In Hopping, Walking, And Running. Geoffrey Burns; Jessica Deneweth Zandler; Ronald F. Zernicke
14:03-14:05	15_P37	A New Method For Measuring Kinetics And Kinematics In Field Resisted Running: Comparison To Laboratory Tethered Running. Filipe Antonio Barros Sousa; Claudio Alexandre Gobatto

Thursday, 15th		Oral Sessions 6: Tennis/ Racket Sports 1
	ID	Location: Lecture Hall 1 Chair: B. Elliott, A. Veloso
14:50-15:03	15_O28	Influence Of The Laboratory Context And The Size Of The Markers Set On The Tennis Serve Evaluation. Francois Tubez; Bénédicte Forthomme; Jean-Louis Croisier; Vincent Denoel; Olivier Brüls; Julien Paulus; Cédric Schwartz
15:04-15:17	15_O29	How Do Tennis Players Control Their Balance During The Serve? Parunchaya Jamkrajang; Mark A. Robinson; Weerawat Limroongreungrat; Jos Vanrenterghem
15:18-15:31	15_O30	Kinematics Of Shoulder Joints During Tennis Serve In Young Female Athletes: Influence Of History Of Shoulder Pain. Benoit Gillet; Mickael Begon; Christian Berger-Vachon; Isabelle Rogowski
15:32-15:45	15_O31	The Shoulder Alignment As An Estimate Of The Angular Momentum In Tennis Ground Strokes - A Kinematic Analysis From A Bird's Eye View. Steffen Hannappel; Nils Eckardt; Sebastian Fischer; Armin Kibele
15:46-15:59	15_O32	Kinematics Of The Hand And Key Rotation In A Tennis Forehand Drive Of Tennis Players. Bruno Pedro; Filipa Joao; Jerusa P. R. Lara; António P. Veloso

Thursday, 15th		Oral Sessions 7: Acrobatic Sports 2
	ID	Location: Lecture Hall 4 Chair: R. Farana, G. Williams
14:50-15:03	15_O33	Twist Limits Of Late Twisting Double Somersaults On Trampoline. Maurice Yeadon; Michael Hiley
15:04-15:17	15_O34	Functional Variability In A Whole Body Co-ordinated Movement. Michael Hiley; Maurice (Fred) Yeadon
15:18-15:31	15_O35	Three-dimensional Analysis Of Yurchenko Layout With 360° Twist In Female Vaults: Modified Deterministic Model And Judges' Scores. Young-Kwan Kim; Cheol-Hee Park
15:32-15:45	15_O36	The Potential Effect Of Mini-trampoline Stiffness On Take-off Behaviour Of Gymnasts – A Methodological Study. Uwe G. Kersting; August P. Brandi; Andrew B. Rosendal; Jacob F.S.G. Hansen; Mark B. Kristensen; Martin L. Gregersen
15:46-15:59	15_O37	Thoracoabdominal Motion During Different Exercises Of Classical Ballet: Preliminary Results. Isabella Martins Rodrigues; Gustavo Bernadina; Carlo Massaroni; Karine Sarro; Andres Chiapeta; Pietro Cerveri; Amanda Silvatti

Thursday, 15th		Oral Sessions 8: Team Sports 1
	ID	Location: Lecture Hall 1 Chair: K. Ball, K. Gianikellis
17:35-17:48	15_O50	Kinematics Of The Axial Skeleton During One-man Rugby Union Scrums. Adrien Cerrito; Kerrie Evans; Roger Adams; Claudio Pizzolato; Peter Milburn
17:49-18:02	15_O51	Biomechanics Of Goal-kicking Accuracy In Australian Football Using An Inertial Measurement System. Stephanie Blair; Grant Duthie; Sam Robertson; Kevin Ball
18:03-18:16	15_O52	The Influence Of Side Dominance On Upper Body Kinematics During Rugby Passes From The Ground. Mark Sayers; Rohan Ballon
18:17-18:30	15_O53	The Relationship Between Impact Characteristics And Forced Plantar-flexion During Football Kicking. James Peacock; Kevin Ball
18:31-18:44	15_O54	Determining The Dynamic Contributions To Kicking Foot Speed In Rugby Place Kicking. Sekiya Koike; Neil Bezodis
18:45-18:58	15_O109	Subject- And Joint-specific Strategies Used By Male Basketball Players To Maximize Countermovement Jump Height. Kristof Kipp; Michael Kiely; Matthew Giordanelli; Philip Malloy; Christopher Geiser

Thursday, 15th

Oral Sessions 9: Gait and Locomotion

ID Location: Lecture Hall 2 | Chair: M. Robinson, D. Fong

17:35-17:48 15_O55 **Interaction Effects Of Posture And Uneven Ground On Able-bodied Walking Kinetics.** Soran Aminiaghdam; Christian Rode; Reinhard Blickhan

17:49-18:02 15_O56 **Are There Gender-specific Differences In Elementary Motor Speed Ability?** Juergen Krug; Gerald Voss; Maren Witt

18:03-18:16 15_O57 **Principal Component Analysis Of Neural And Kinematic Parameters Of Forward And Backward Walking Across Different Inclines.** Konstantinos Angeloudis; Stuart Miller

18:17-18:30 15_O58 **Determination Of Functional Groups In Different Levels In Running Gait; Lower Limb Mechanical Energy Analysis.** Mansour Eslami; Esmaeil Hosseininejad; Fatemeh Salari Esker; Rohollah Yousefpour; Afshin Fayyaz Movaghar; Heydar Sadeghi

18:31-18:44 15_O59 **Effects Of Triceps Surae Fatigue On Gait Local Dynamic Stability In Women As Practitioners And Non-practitioners Of Strength Training.** Gergia Cristina; Rina Magnani; Fábio Rodrigues; Gustavo Souza; Viera Marcus

18:45-18:58 15_O60 **Kinematic Strategies To Keep An Unchanged Margin Of Stability During Treadmill Running On An Even And Uneven Surface.** Nils Eckardt; Alessandro Santuz; Antonis Ekizos; Adamantios Arampatzis; Armin Kibele

18:59-19:12 18_O154 **Recovery Of Daily Activity Patterns In Patients After Acl Reconstruction.** Dieter Rosenbaum; Maik Sliepen; Benedikt Schliemann; Johannes Glasbrenner; Simon Lenschow; Mirco Herbort; Michael Raschke; Clemens Kösters

Thursday, 15th

Oral Sessions 10: Various Sports

ID Location: Lecture Hall 3 | Chair: J. Hamill, L.-A. Furlong

17:35-17:48 15_O38 **Elite Rowers Apply Different Forces Between Stationary And Sliding Ergometers, & On-water Rowing.** Sarah-Kate Millar; Duncan Reid; Lisa McDonnell; Jay Lee; Sophia Kim

17:49-18:02 15_O39 **Intra- And Inter-rater Reliability Of A Video-based Method To Quantify Stroke Synchronisation In Crew-boat Sprint Kayaking.** Cheryl Tay; Pui Wah Kong

18:03-18:16 15_O40 **A Simple Mathematical Model Of A Single Sculling Technique.** Michal Wychowanski; Grzegorz Sługocki; Grzegorz Orzechowski; Zbigniew Staniak; Dariusz Radomski; Aleksander Trzciński; Andrzej Wit

18:17-18:30 15_O41 **Feedback On Rowers' Mechanical Power Output Improves Compliance To Intended On-water Training Intensity.** Lotte L. Lintmeijer; Mathijs J. Hofmijster; Freek S. Robbers; A.J. "Knoek" van Soest; Peter J. Beek

18:31-18:44 15_O42 **Does Specialization In Karate Affect Reaction Time In Specific Karate Kumite Situations?** Aleksandar Nedeljkovic; Milos Mudric; Ivan Cuk; Srecko Jovanovic; Slobodan Jaric

18:45-18:58 15_O43 **Three-dimensional Neck Kinematics During Breakfall For Osotogari And Its Association With Neck Strength In Novice Judokas.** Sentaro Koshida; Takanori Ishii; Tadimitsu Matsuda; Toshihiko Hashimoto

Thursday, 15th		Oral Sessions 11: Computer Modelling and Simulation 1 ID Location: Lectuer Hall 4 Chair: F. Yeadon, J. Vanrenterghem
17:35-17:48	15_O44	Prescribing Joint Co-ordinates During Model Preparation In Opensim Improves The Accuracy Of Lower Limb Kinematics. Chris John Jackson; Jacqueline Alderson; Gillian Weir; Cyril J Donnelly
17:49-18:02	15_O45	Comparing Estimated And Measured Muscle Activation During Highly Dynamic And Multidirectional Movements-a Validation Study. Mareike Dietzsch; Sina David; Thomas Dupré; Igor Komnik; Wolfgang Potthast
18:03-18:16	15_O46	Muscle Force Estimation In Clinical Biomechanics: Anybody Vs OpenSim. Ursula Trinler; Nathalie Alexander; Hermann Schwamender; Richard Baker
18:17-18:30	15_O47	Soft Tissue Artefacts Cause An Underestimation In Knee Flexion Angle In Skinmarker Based Squat Simulations. Silvio Lorenzetti; Michael Plüss; Florian Schellenberg; Renate List; Pascal Schütz; William R. Taylor
18:31-18:44	15_O48	A Non-invasive Method To Investigate Foot Bone Kinematics. Kilian Rauner; Anja Krautter; Stefan Lehner; Jürgen Mitternac; Veit Senner
18:45-18:58	15_O49	Predicting Ground Reaction Forces From Trunk Kinematics: A Mass-spring-damper Model Approach. Niels J Nedergaard; Mark A. Robinson; Barry Drust; Paulo Lisboa; Jos Vanrenterghem

Friday, 16th		Oral Sessions 12: Track & Field 1
	ID	Location: Lecture Hall 1 Chair: L. Charalambous, N. Bezodis
8:30-8:43	16_O65	Use Of Statistical Parametric Mapping To Reveal Novel Athlete-specific Kinetic Determinants Of Sprint Start Performance. Steffi L. Colyer; Aki I.T. Salo
8:44-8:57	16_O66	The Effect Of Warm-up On Sprinting Kinematics. Pedro Morouço; Maria Helena Gil; Henrique P. Neiva; Mário C. Marques; António Sousa; Daniel A. Marinho
8:58-9:11	16_O67	Kinetic Analysis Of The Block Start And First Two Contacts In Sprinting. Philip Graham-Smith; Chris Brandner; Joong Hyun Ryu; Luke Gallagher
9:12-9:25	16_O68	The Relationship Between Reactive Strength Measures And Sprinting Performance. Robin Healy; Carol Smyth; Andrew J Harrison
9:26-9:39	16_O69	Comparison Of Step-by-step Kinematics Of Resisted, Normal And Assisted 30 M Sprints In Experienced Sprinters. Roland van den Tillaar; Paul Gamble

Friday, 16th		Oral Sessions 13: Injury Prevention 1
	ID	Location: Lecture Hall 2 Chair: C. Nicol, A. Veloso
8:30-8:43	16_O70	A Previous Hamstring Injury Affects Limb Dominance In Soccer Kicking. Archit Navandar; Santiago Veiga; Carlos Garcia; Javier Rueda; Gonzalo Torres; David Chorro; Enrique Navarro
8:44-8:57	16_O71	Lower Body Stiffness Variations And Associated Injury Risk During Sports Specific Tasks. Emma Millett; Mark Moresi; Mark Watsford; Paul Taylor; David Greene
8:58-9:11	16_O72	Influence Of Exercise History On Fall-induced Hip Fracture Risk. Shinya Abe; Nathaniel Narra; Riku Nikander; Jari Hyttinen; Reijo Kouhia; Harri Sievänen
9:12-9:25	16_O73	The Effect Of Fatigue Induced From A Simulated Hockey Match On Biomechanical Acl Injury Risk Factors In Elite Female Field Hockey Players. Gillian Weir; Jacqueline Alderson; Daniel Hiscock; Marc Smith; Alexis Alicea; Cyril J Donnelly
9:26-9:39	16_O74	Depth Jump - Damping Mechanism In Non-contact Acl Injury Prevention. Antonio Squillante

Friday, 16th		Oral Sessions 14: Swimming / Aquatic Sports
	ID	Location: Lecture Hall 3 Chair: P. Morouço, N. Alexander
		Is There Any Transfer Between Countermovement Jump And Swimming Track Start Performance? Diogo António
8:30-8:43	16_O61	Duarte Carvalho; Pedro Fonseca; Daniel A. Marinho; António J. Silva; Rodrigo Zacca; Luís Mourao; Ricardo J. Fernandes; Paulo Vilas-Boas
		The Validation Of A Swimming Turn Wall-contact-time Measurement System. Victoria Brackley; Kevin Ball; Elaine Tor
8:44-8:57	16_O62	
		A Method Of Improving The Measurement Of Kinematic Parameters Above And Under Water In Swimming Start. Hideki Takagi; Takuma Tatsumoto; Shin Sakai
8:58-9:11	16_O63	
		Three-dimensional Flow Field And Leg Motion During Undulatory Underwater Swimming. Hirofumi Shimojo; Ryo Murakawa; Rio Nara; Yasuhiro Baba; Yasuo Sengoku; Jun Sakakibara; Yoshimitsu Shimoyama; Shozo Tsubakimoto; Hideki Takagi
9:12-9:25	16_O64	

Friday, 16th		Oral Sessions 15: Sensor Technology 1
	ID	Location: Lecture Hall 4 Chair: M. Shorten, J. Kröll
8:30-8:43	16_O75	Estimation Of The Centre Of Mass Kinematics In Alpine Ski Racing Using Inertial And Magnetic Sensors. Benedikt Fasel; Matthias Gilgien; Jörg Spörri; Kamiar Aminian
8:44-8:57	16_O76	On The Use Of Inertial Sensors To Determine Trunk Displacement During Walking: A Validation Study. Martin Fleron; Niels Ubbesen; Francesco Battistella; David Leandro Dejtjar; Anderson S.C. Oliveira
8:58-9:11	16_O77	Estimation Of The Centre Of Mass And Pelvis Movement In Running Using An Inertia Sensor Mounted On Sacrum. Yasushi Enomoto; Takehiro Aibara; Kanami Sugimoto; Seki Keitaro; Toshiharu Yokozawa; Ryota Murata
9:12-9:25	16_O78	Contact Time And Foot Strike Angles Estimation Using Foot Worn Inertial Sensors In Running. Mathieu Falbriard; Frédéric Meyer; Benoît Mariani; Grégoire P. Millet; Kamiar Aminian
9:26-9:39	16_O79	Analysis Of Grip Force During A Golf Putting At Different Distance - Pilot Study. Yu-Te Wang; Po-Cheng Su; Yen-Lei Wu; Jia-Hao Chang

Friday, 16th		Oral Sessions 16: Muscle Function and Tissue Mechanics Location: Lecture Hall 2 Chair: K. Karamanidis, A. Arampatzis
11:00-11:13	16_O80	Does Central Fatigue Limit Muscle Force Generation Capacity During Fatigue? Alessio Puleo; Paola Contessa
11:14-11:27	16_O81	Comparison Of The Reliability Of Peak Force Measured During An Isometric Mid-thigh Pull And Isometric Squat. Claire J. Brady; Andrew J. Harrison; Eamonn P. Flanagan; Thomas M. Comyns
11:28-11:41	16_O82	Force-velocity Relationship Of Leg Muscles Assessed By Motorized Treadmill Tests. Slobodan Jaric; Slobodanka Dobrijevic; Sasa Djuric; Vladimir Ilic
11:42-11:55	16_O83	Comparison Of Three Emg-based Muscle Fatigue Assessments In Dynamic Contractions. Nihat Özgören; Serdar Arıtan
11:56-12:09	16_O85	Operating Length And Velocity Of Human M. Vastus Lateralis Fascicles During Vertical Jumping. Maria Elissavet Nikolaidou; Robert Marzilger; Sebastian Bohm; Falk Mersmann; Adamantios Arampatzis

Friday, 16th		Oral Sessions 17: Injury Prevention 2
	ID	Location: Lecture Hall 4 Chair: W. Alt, B. Vanwanseele
		Head Acceleration During A Simulated Match Load Of Tackles.
11:00-11:13	16_O86	Georgianne Nichols; Negin Loh; Andrew Lavender; Simon Rosalie; Paul Davey; Kevin Netto
		Relevance Of Early Stretching In Overhead Athletes. Cédric
11:14-11:27	16_O87	Schwartz; François Tubez; Jean-Louis Croisier; Vincent Denoël; Olivier Brüls; Bénédicte Forthomme
		Biomechanical Loads In Rugby Union Tackling Are Affected By Tackle Direction And Impact Shoulder. Ezio Preatoni; Elena Seminati;
11:28-11:41	16_O88	Dario Cazzola; Grant Trewartha; Sean Williams
		Functional Adaptations In Isokinetic Performance And Shoulder Mobility In Elite Ultimate Frisbee Players. Christoph Koeble;
11:42-11:55	16_O89	Wolfgang Seiberl
		The Effect Of Kinesiotaping Compared To No Tape On Surface Emg Activity Of The Shoulder Muscles During Overhead Functional Movements. Kenneth Charles Henning Groop; Paolo Sanzo; Carlos Zerpa
11:56-12:09	16_O90	
		Risk Of Injury In Trail Running: A Preliminary Study. Rachel
12:10-12:23	16_O91	Christy Reid Bean; Gregory Schwartz; Yumna Albertus; Danielle Prins; Nicholas Tam

Friday, 16th		Power Poster 4 – Team Sports
	ID	Location: Lecture Hall 1 Chair: H. Nunome
13:30-13:32	16_P38	Kinematic And Kinetic Comparison Between American And Japanese College Pitchers. Brittany Dowling; Caitlin P Owen; Walter T Laughlin; Glenn S Fleisig
13:33-13:35	16_P39	Relationship Of Simultaneous Hip And Knee Kinetic & Kinematic Magnitudes And Timings On Potential Acl Injury Risk During Football Match Play Cutting Maneuvers. Rajiv Kaila; Gareth Irwin
13:36-13:38	16_P40	When Do Kinetic Changes Place Greatest Risk For Non-contact Acl Injury During The Stance Phase Of Football Cutting Maneuvers In Match Play Conditions? Rajiv Kaila; Gareth Irwin
13:39-13:41	16_P41	Relationship Of Throwing Arm Mechanics And Interval Throwing Distance In High School Baseball Players. Brittany Dowling; Caitlin Owen; Travis Tubbs; Joshua Dines; Christopher Camp
13:42-13:44	16_P42	The Effect Of Concussion On Reaction Time And Dual Tasking Ability In A Simulated Driving Environment. Dennis Dumphy; Carlos Zerpa; Thomas Hoshizaki; Bruce Weaver; Dave McKee; Michel Bédard; Paolo Sanzo
13:45-13:47	16_P43	The Effect Of Approach Velocity On Centre Of Mass Motion And Performance Of The Maximal Instep Soccer Kick. Simon Augustus; Neal Smith; Penny Hudson
13:48-13:50	16_P44	Effect Of Projection Variables On Throw Distance And Flight Time In An American Football Throw. Nick Linthorne; Alessandro-Sky Modebe
13:51-13:53	16_P45	Comparison Of Properties Of A Pitched-ball Rotation Measured By Three Different Methods. Tomoyuki Matsuo; Hiroki Nakamoto; Masahiro Kageyama
13:54-13:56	16_P47	Pelvic Rotation Dynamics Of Accuracy Enhanced, Submaximal Effort Instep Soccer Kicking. Koichiro Inoue; Hiroyuki Nunome
13:57-13:59	16_P48	An Assessment Of The Coordination And Coordination Variability Between The Thorax And Pelvis During A Maximal Instep Kick. Robert Alan Needham; Jamie A Gosling; Nachiappan Chockalingam
14:00-14:02	16_P49	Differences In Kicking Dynamics Of Futsal And Soccer Ball. James Peacock; Alessandro Garofolini; Luca Oppici; Fabio Serpiello; Kevin Ball
14:03-14:05	16_P50	Kinematics Of Soccer Dribbling In Different Tasks. Jia-Hao Chang; Tang-Yun Lo; Wu-Ye Chang; Yo Chen

Friday, 16th		Power Poster 5- Running, Sports Equipment & Technology
	ID	Location: Lecture Hall 2 Chair: S. Willwacher
		Compression Profile Of Sport Compression Stockings In Runners.
13:30-13:32	16_P51	Francisco Javier Oficial Casado; Inmaculada Aparicio; Iván Julián; Pedro Pérez-Soriano
		Do Sport Compression Stockings Improve Comfort And
13:33-13:35	16_P52	Accelerometry Parameters In Runners? Francisco Javier Oficial Casado; Inmaculada Aparicio; Iván Julián; Pedro Pérez-Soriano
		Analysis Of The Transformation Of The Velocity Of The Center Of
13:36-13:38	16_P53	Gravity In Running Single Leg Horizontal Jump. Atsushi Shibata; Hiroyuki Koyama; Yasushi Enomoto
		Evaluation Of The Accuracy Of Gait Events Detected Using Three
13:39-13:41	16_P54	Different Methods During Running. Shiwei Mo; Daniel Hung Kay Chow
		Acute Effects Of Different Cushioned Footwear On The
13:42-13:44	16_P55	Biomechanics Of Running. Michael Bohne; Taylor Standifird; Amy Nelson; Dani Robinson
		Leg Stiffness During Jogging On Small Curved Path. Kazuhiro
13:45-13:47	16_P56	Ishimura; Shinji Sakurai
		Effect Of Fatigue On Kinematics And Kinetics Of Youth Runners: A
13:48-13:50	16_P57	Pilot Study. Susan Basile; John Oliver; Mark Geil
		Effect Of Shoes And Tights With The Support Function On Support
13:51-13:53	16_P58	Leg During Running. Takanori Nishiura; Keitaro Seki; Yasushi Enomoto; Daisuke Kogawa
		Required Coefficient Of Friction Analyses In Running. Andrea
13:54-13:56	16_P59	Brugnoli Vidal; Lucas A. Monezi; Karine J. Sarro; Alysson F. Mazoni; Heber T. Pinto; Ricardo M. L. Barros
		Changes In Mechanical Power And Running Economy In Distance
13:57-13:59	16_P60	Runners. Hirosuke Kadono
		The Effects Of Minimal Foot Support Boots On Lower Extremity
14:00-14:02	16_P61	Walking. Ariana LaFavre; Tom Wu; David Pearsall; Pamela Russell; Tyler Champagne

Friday, 16th		Power Poster 6 – Water Sports & Strength & Conditioning
	ID	Location: Lecture Hall 4 Chair: R. Jensen
13:30-13:32	16_P62	Differences In Trunk Angles Through Different Shooting Directions In Water Polo Penalty Shooting. Sukhoon Yoon; Chan-hyuck Jung; Ji-seon Ryu; Sangkyoon Park; Heesung Lim; Sangheon Park; Joonyeon Kim; Jiho Park
13:33-13:35	16_P63	Kinematic Analysis Of Diving Back Pike Somersault In Platform According To Players' Skill Level. Sukhoon Yoon; Jiho Park; Ji-seon Ryu; Sangkyoon Park; Heesung Lim; Sangheon Park; Joonyeon Kim; Chan-hyuck Jung
13:36-13:38	16_P64	Reflex Responses To Local Soleus Muscle Vibration. Axel J. Knicker; Haitham Abdulhafiz; Kirsten Albracht
13:39-13:41	16_P65	A Case Study Of The Start In Flat Water Kayaking Competitions. Matilde Espinosa Sanchez
13:42-13:44	16_P66	The Wedge Effects On Vertical Force-time Curve Instants And On Backstroke Start Performance. Diogo António Duarte Carvalho; Kelly de Jesus; Pedro Goncalves; Alexandre I. A. Medeiros; Ricardo J. Fernandes; Paulo Vilas-Boas; Karla de Jesus
13:45-13:47	16_P67	The Effect Of Bungee Tension On Power Profiling In Kayak Ergometry. Catherine Shin; Alexander P. Willmott; David R. Mullineaux; Paul Worsfold
13:48-13:50	16_P68	Roles Of The Extremities During Kick Start In Competitive Swimming. Kazumasa Ozeki; Hiroshi Suito; Shinji Sakurai; Tatuya Urata
13:51-13:53	16_P69	Effect Of Foot Rotation Angle On Trunk Rotational Strength And Physical Quantity To Rotate The Body. Fukashi Shinkaiya; Yuki Ito; Keizo Yamamoto
13:54-13:56	16_P70	The Effects Of Concurrent Biofeedback On Rowing Performance. Anthony Gorman; Alexander P. Willmott; David R. Mullineaux
13:57-13:59	16_P71	Relationship Between The Kinematics Of The Trunk And Lower Extremities And Ball Velocity During The Overhand Throw In Male Canoe Polo Players. Li-Chun Chang; Yi-Jen Chen
14:00-14:02	16_P72	Hip Joint Kinetics During The Barbell Hip Thrust. Ian Bezodis; Adam Brazil; Jac Palmer; Laurie Needham
14:03-14:05	16_P73	The Relationship Between Foot Movement And The Com Velocity In Elite Female Breststroke Swimmers. Yuji Matsuda; Keita Akashi; Yasuyuki Kubo
14:06-14:08	16_P74	Kinematic Analysis Of Kettlebell Swing In Different Surfaces - Comparision Between Stable And Unstable Surfaces. Rui Silva; Nuno Amaro; Daniel A. Marinho; Sandra Amado; Pedro Morouço

Friday, 16th		Oral Sessions 18: Adapted Sports 1
	ID	Location: Lecture Hall 1 Chair: H. Hobara, S. B. Clarke
14:50-15:03	16_O92	The Optimization Of Trunk Position For The 2016 Rio Paralympic Wheelchair Racing Finals. Amy Lewis; Elissa Phillips; Victoria Moore; Jason Bartram; Paul Grimshaw; Marc Portus; William Robertson
15:04-15:17	16_O93	Predicting The Sequence Of Mean Propulsion Forces During Indoor Wheelchair Sports: A Proof Of Concept. Félix Chénier; Rachid Aissaoui
15:18-15:31	16_O94	Dynamically Optimized Muscle Activity Patterns From A Novel Handle Based Propulsion Movement For A Wheelchair. Nithin Babu Rajendra Kurup; Markus Puchinger; Margit Gföhler
15:32-15:45	16_O95	Speed Profiles In Wheelchair Court Sports; Comparison Of Two Methods For Measuring Wheelchair Mobility Performance. Rienk van der Slikke; Barry Mason; Monique Berger; Vicky Goosey-Tolfrey
15:46-15:59	16_O96	Changes In The Kinematic And Kinetic Profile Of Handcycling Propulsion Due To Increasing Workloads. Oliver Jan Quittmann; Joshua Meskemper; Thomas Abel; Kirsten Albracht; Heiko K. Strüder

Friday, 16th		Oral Sessions 19: Sports Equipment and Technology 1 Location: Lecture Hall 2 Chair: B. Krabbe, K. Fischer
14:50-15:03	16_O97	Comparative Study Of Shoe-surface Interaction In Trail Running - Subjective And Objective Evaluation. Bahador Keshvari; Veit Senner; Dominic Kraft; Steven Alevras
15:04-15:17	16_O98	Effects Of Two Different Compression Stockings In Venous Return Before And After Running. Inmaculada Aparicio; Francisco J. Oficial; Iván Julián; María Blanes; Pedro Pérez-Soriano
15:18-15:31	16_O99	Minimizing Shoe-surface Friction At Initial Contact: A Novel Approach To Prevent Lateral Ankle Sprains. Filip G. Lysdal; Ádám Frank; Michal Dziewiecki; Uwe G. Kersting
15:32-15:45	16_O100	Effects Of Medial Wedge Insoles When Walking On Different Surfaces. Cristina I. Vinescu; Uwe G. Kersting
15:46-15:59	16_O101	The Influence Of Shaft Stiffness On Ankle Joint Kinematics And Kinetics During Walking In Hiking Boots. Frederik G. Larsen; Nicolai Støttrup; Daniel Andriëssen; Sarah Weiler; Uwe G. Kersting

Friday, 16th		Oral Sessions 20: Team Sports 2
	ID	Location: Lecture Hall 4 Chair: J. Alderson, M. Walsh
14:50-15:03	16_O102	The Influence Of Cricket Pitch Length On Ball Release By Junior Bowlers. Michael J Harwood; Mark A. King; M.R. (Fred) Yeadon
15:04-15:17	16_O103	A Simulation Analysis On Effects Of The Upper Body Motion On Bat-head Speed In Baseball Batting. Kazumichi Ae; Sekiya Koike; Norihisa Fujii; Michiyoshi Ae
15:18-15:31	16_O104	Correlations Between Trunk And Bat Kinematics For Baseball Players Calculated Using Both Individual And Group Statistics. Peter J Sinclair; Matthew Hollings; Jonathan Freeston
15:32-15:45	16_O105	Comparison Of Kinematics In Repeated 30 M Sprints In Female Soccer Players. Roland van den Tillaar
15:46-15:59	16_O106	A Testing Battery On Balance And Performance Symmetry For Team Sports – An Example From Ice Hockey. Uwe G. Kersting; Anderson S.C. Oliveira; Jakob Hansen; Martin Thimm; Filip G. Lysdal; Kristian R. L. Mortensen; Jens P. Haase

Saturday, 17th

Oral Sessions 22: Jumping & Landing 2
ID Location: Lecture Hall 1 | Chair: M. Ae, G. Strutzenberger

8:30-8:43 17_O127 **Leg- And Joint Stiffness In Male Elite High Jump: The Influence Of Stiffness On Sports Performance.** Eike Boden; Björn Braunstein; Kai Heinrich; Maximilian Sanno; Benjamin Stäudle; Wolfgang Ritzdorf; Gert-Peter Brüggemann; Kirsten Albracht; Jan-Peter Goldmann

8:44-8:57 17_O128 **Greater Skeletal Contributions To Leg Stiffness In High- Compared To Low-arched Athletes During Running And Landing Movements.** Douglas W. Powell; Max R. Paquette; D. S. Blaise Williams III

8:58-9:11 17_O129 **Effects Of Patellar Tendon Strap On Electromyographic Activity Of Quadriceps Muscles During Drop Landing.** Burkay Utku; Arif Mithat Amca; Serdar Aritan

9:12-9:25 17_O130 **Effect Of The Kinesio-taping On Female Athletes During The Stop-jump Task Post-fatigue.** Chen-Fu Huang; Po-Han Chang

9:26-9:39 17_O131 **Muscle-tendon Adaptation Monitoring In Elite Athletes: Preliminary Results From A Longitudinal Investigation.** Gaspar Epro; Matthias König; Christopher McCrum; Michael Bädorf; Falk Schade; Kiros Karamanidis

Saturday, 17th

Oral Sessions 23: Track & Field 2

ID

Location: Lecture Hall 2 | Chair: P. Weyand, D. Bubeck

8:30-8:43

17_O122

The Influence Of Discus Mass On Performance-determining Variables. Jill Emmerzaal; Thomas Hoogerbrugge; Ina Janssen

8:44-8:57

17_O123

Kinematic And Technical Factors For Acceleration Of Whole Body In Rotational Shot Put Technique. Tadahiko Kato; Hirofumi Kintaka; Yoshihisa Urita; Akira Maeda

8:58-9:11

17_O124

Simplified Marker Sets For The Calculation Of Centre Of Mass Location During Bend Sprinting. Laura Judson; Sarah Churchill; Andrew Barnes; Joseph Stone; Jon Wheat

9:12-9:25

17_O125

Comparison Of Step Characteristic Interaction And Asymmetry Between Failed And Successful Attempts In Pole Vault. Apostolos Theodorou; Vassilios Panoutsakopoulos; Timothy Exell; Nebojša Vujkov

9:26-9:39

17_O126

Pole-athlete Interaction During The Pole Vault Approach Phase. Laurie Needham; Ian Bezodis; Timothy Exell; Gareth Irwin

Saturday, 17th Oral Sessions 24: Cycling
ID Location: Lecture Hall 3 | Chair: H. Schwameder, H. von Lieres und Wilka

8:30-8:43 17_O112 **Kinematic Analysis Of Bicycle Pedalling Using 2D And 3D Motion Capture Systems.** Juan García-López; Pedro Abal del Blanco

8:44-8:57 17_O115 **Handle Reaction Forces In Handcycling On An Ergometer.** Josef Viellehner; Johannes Funken; Felix A. J. Wolbert; Markus Peters; Wolfgang Potthast

8:58-9:11 17_O114 **Pedal Forces During The Bmx And Track Sprint Cycling Start.** Ina Janssen; Jesper Cornelissen

9:12-9:25 17_O113 **Musculoskeletal Modelling Of Handcycling Motion On An Ergometer: Influence Of Crank Position On Training Purposes.** Felix Alphonsus Johannes Wolbert; Markus Peters; Josef Viellehner; Johannes Funken; Wolfgang Potthast

9:26-9:39 17_O116 **New 3D Method To Estimate The Cycling Frontal Area During Pedalling.** Ventura Ferrer-Roca; Daniel Alvarez; Nicholas Vretos; Argyrys Chatzifolis

Saturday, 17th

Oral Sessions 25: Sensor Technology 2
ID Location: Lecture Hall 4 | Chair: T. Arndt, Y. Enomoto

8:30-8:43 17_O117 **Neural Network Prediction Of Barbell Kinematics From Joint Kinetics In Weightlifting.** Kristof Kipp

8:44-8:57 17_O118 **Concurrent Validity Of Lower Limb Kinematics Between Markerless And Marker-based Motion Capture Systems In Gait And Running.** Alejandro Molina-Molina; Elia Mercado-Palomino; Gabriel Delgado-García; Antonio Millán-Sánchez; Aurelio Ureña Espa; Víctor Manuel Soto-Hermoso

8:58-9:11 17_O119 **Energetic Cost Of Running Stability Evaluated With Wireless Trunk Accelerometry.** Kurt Schutte; Saint Sackey; Rachel Venter; Benedicte Vanwansee

9:12-9:25 17_O121 **The Influence Of Motion Tasks On The Accuracy Of Kinematic Motion Patterns Of An Imu-based Measurement System.** Marion Mundt; Anna Wisser; Sina David; Thomas Dupré; Valentin Quack; Franz Bamer; Markus Tingart; Wolfgang Potthast; Bernd Markert

Saturday, 17th

Oral Sessions 26: Teaching and Coaching Biomechanics
ID Location: Lecture Hall 2 | Chair: D. Knudson, S. Barnes

- 11:00-11:13 17_O132 **Analysis Of Simulated Annealing Based Optimization Of Human Movement For Performance Enhancement.** Dhruv Gupta; Jody L. Jensen; Lawrence Abraham
- 11:14-11:27 17_O133 **A Three-dimensional Kinematics On Contribution Of Effective Lower Body Segment Rotations In Producing Foot Velocity.** Shusei Sugi; Hiroyuki Nunome; Yuji Tamura; Takahito Iga
- 11:28-11:41 17_O134 **Improving Performance In Juvenile Ski Jumping: Optimization Of Ski Angles In The Flight Phase.** Johannes Petrat; Veronica Bessone
- 11:42-11:55 17_O135 **Profiles Of Excellence In Sports Biomechanics Research.** Duane Knudson
- 11:56-12:09 17_O136 **The Role Of Humeral Elevation Of The Non-throwing Arm On Maximum Ball Velocity In Unconstrained Overarm Throw.** Allan Fu; Richard Smith; Steve Cobby; Ross Sanders
- 12:10-12:23 17_O137 **Coach And Biomechanist Knowledge Of Sprint Running Technique.** Amy Waters; Elissa Phillips; Derek Panchuk; Andrew Dawson

Saturday, 17th

Oral Sessions 27: Adapted Sports 2

ID Location: Lecture Hall 4 | Chair: D. Rosenbaum, H. Krahl

- 11:00-11:13 17_O138 **Running In Lower Limb Amputees: Advantages And Limitations Of New Sports Prosthetic Components.** Thomas Schmalz; Jan Sottong
- 11:14-11:27 17_O139 **Free Moment Application By Athletes With And Without Amputations In Linear And Curved Sprinting.** Steffen Willwacher; Johannes Funken; Kai Heinrich; Tobias Alt; Ralf Müller; Wolfgang Potthast
- 11:28-11:41 17_O140 **Wheelchair Mobility Performance Only Supports The Use Of Two Classes In Wheelchair Basketball.** Rienk van der Slikke; Monique Berger; Daan Bregman; Annemarie de Witte; Dirk-Jan Veeger
- 11:42-11:55 17_O141 **Kinetics And Kinematics Of The Block Phase Of Elite Para Swimming Starts.** Ine Van Caekenberghe; Carl Payton
- 11:56-12:09 17_O142 **The Use Of The Gradual Yielding Mechanism During Downhill Walking In Transfemoral Amputee Gait – A Case Study.** Nathalie Alexander; Gerda Strutzenberger; Hermann Schwameder
- 12:10-12:23 17_O143 **How To Deal With Rotation In Para-taekwondo.** Kinoshita Madoka; Norihisa Fujii

Saturday, 17th		Power Poster 7- Sprint, Adapted Sports
	ID	Location: Lecture Hall 1 Chair: J. Krug
		Long Jump Mechanics – Olympic Versus Paralympic Champion.
12:35-12:37	17_P75	Johannes Funken; Steffen Willwacher; Kai Heinrich; Ralf Müller; Hiroaki Hobara; Alena M. Grabowski; Gert-Peter Brüggemann; Wolfgang
		Leg Stiffness Asymmetry During Countermovement Jump. Artur
12:38-12:40	17_P76	Struzik; Jerzy Zawadzki
		Effect Of Seating Cushions On Pressure Distribution In Wheelchair
12:41-12:43	17_P77	Racing. Amy Lewis; Elissa Phillips; Paul Grimshaw; Marc Portus; William Robertson
		Development And Testing Of A Novel Human-powered Watercraft
12:44-12:46	17_P78	For People With Lower-body Disabilities. Thomas Fuglsang; Massimo Spoladore; Michele Dalla Piazza; Luca Paolo Ardigò
		The Kinetics Of A Wheelchair Sprinter Racing The 100m Final At
12:47-12:49	17_P79	The 2016 Paralympic Games. Tiago M Barbosa; Eduarda Coelho
		Joint Moments Of Unilateral Transfemoral Amputees Using Running-
12:50-12:52	17_P80	specific Prosthesis During Sprinting. Yuta Namiki; Yoko Sano; Atsushi Makimoto; Satoru Hashizume; Akihiko Murai; Yoshiyuki Kobayashi; Hiroshi Takemura; Hiroaki Hobara
		Specific-overload Characteristics Of Horizontal Jump Exercises In
12:53-12:55	17_P81	Comparison To The Block Start. Adam Brazil; Timothy Exell; Cassie Wilson; Steffen Willwacher; Gareth Irwin
		Kinetic Determinants Of Athletics Sprint Start Performance. Aki
12:56-12:58	17_P82	Salo; Steffi Colyer; Piers Chen; Anna Davies; Matias Morgan; Sophie
		Training Effect Of Running Over Flat Markers To Increase Stride
12:59-13:01	17_P83	Length - A Case Study. Soma Saito; Keizo Takahashi; Shun Kamei
		Adaptations To Sprinting And Jumping After Training With A
13:02-13:04	17_P84	Resistance Harness In Track Athletes. Mindie Clark; Randall L. Jensen; Sarah B. Clarke; Ryan L. Meidinger
		Effect Of Altitude On 100-m Sprint Times: An Analysis Of Race
13:05-13:07	17_P85	Times From The Finals At Major Championships. Nick Linthorne
		Kinematic Analysis Of Resist-and-release Sprint Running. Oleg
13:08-13:10	17_P86	Nemtsev; Natalia Nemtseva
		Contributions To Braking Impulse During Initial Acceleration,
13:11-13:12	17_P87	Transition And Maximal Velocity In Sprinting. Hans von Lieres und Wilkau; Gareth Irwin; Neil Bezodis; Scott Simpson; Ian Bezodis

Saturday, 17th		Power Poster 8 – Muscle & Tissue Mechanics, Neuromuscular Biomechanics
	ID	Location: Lecture Hall 2 Chair: F. Colloud
12:35-12:37	17_P102	Releasing One Hand During Therapeutic Climbing Exercises Affects The Activation Of Arm And Shoulder Muscles In Healthy Individuals. Gerda Strutzenberger; Daniela Leitl; Martin Pühringer; Hermann Schwameder
12:38-12:40	17_P103	The Use Of A Pre-activation Exercise For The Hamstrings To Optimise The Amount Of Muscle Activity Present Within A Nordic Hamstring Curl. Joseph O'Halloran; Gemma Milligan; Joshua Old; Antonio Sawaya; Jack Bowen
12:41-12:43	17_P104	Effect Of Heel Heights On Lower Extremity Muscle Activation For Back-squat Performance. Christopher Johnston; Chase Hunt-Murray; ChengTu Hsieh
12:44-12:46	17_P105	Ergonomics And “usability” Applied On The Training Of Muscular Force Qualities. Kostas Gianikellis; Andreas Skiadopoulos; Berta Caro
12:47-12:49	17_P106	Evaluation Of Passively Induced Shoulder Stretch Reflex Using An Isokinetic Dynamometer In Men. Lars Heinke; Axel Knicker; Kirsten Albracht
12:50-12:52	17_P107	Effects Of The Speedmaker Device On Muscle Activity And Vertical Jump Performance. Randall L. Jensen; Ryan L. Meidinger; Daniel P. Szuba
12:53-12:55	17_P108	The Relationships Between The Functional Movement Screen And The Postural Stability In Collegiate Athletes. Alex J.Y. Lee; Lung-Ching Liang; Yen-Ting Wang; W.H Lin
12:56-12:58	17_P109	Electromyographic Analysis Of Balance Exercises In Single-leg Stance Using Different Instability Modalities Of The Forefoot And Rearfoot. Martin Alfuth; Markus Gomoll
12:59-13:01	17_P110	Relationship Between Muscle Volume And Strength Asymmetry In Elite Athletes: Investigation Of The Quadriceps Femoris And Hamstring Muscles. Robert Bollinger; Dieter Bubeck; Ioannis Sialis; Daniela Kramer; Eric Lehmann; Wilfried Alt
13:02-13:04	17_P111	Multi-muscle Synergies During Lifting And Lowering Tasks: An Uncontrolled Manifold Analysis. Andreas Skiadopoulos; Kostas Gianikellis; Berta Caro Puértolas
13:05-13:07	17_P114	A Case Study On The Muscular Adaptations To Accelerate While Running Overground Vs Running On An Accelerating Treadmill. Ine Van Caekenberghe; Dirk De Clercq

Saturday, 17th		Power Poster 9 – Jumping & Landing, Injury Prevention & Combat
	ID	Location: Lecture Hall 4 Chair: E. Preatoni
12:35-12:37	17_P90	Elbow Loading During The Backwards Handspring: The Influence Of Hand Position. Laurie Needham; Sophie Burton; Roman Farana; Gareth Irwin
12:38-12:40	17_P91	Analysis Of Lower Limb Bilateral Force Asymmetries By Different Vertical Jump Techniques. Sílvia Ribeiro Santos Araújo; Fabíola Bertú Medeiros; Edgardo Alvares de Abreu; Nathália Oliveira Gonçalves; Hans-Joachim Karl Menzel
12:41-12:43	17_P92	Static Balance In Individuals With Post-concussion Syndrome. Joshua McGeown; Paolo Sanzo; Carlos Zerpa; Simon Lees; Sarah Niccoli
12:44-12:46	17_P93	The Interrelationship Of Joint Stiffness In Drop Jump Under Different Conditions: A Single-subject Design. Kanami Sugimoto; Yasushi Enomoto; Keitaro Seki
12:47-12:49	17_P94	Kinematic Comparison Of The Seoi-nage Technique Between Elite And College Judo Athletes. Takanori Ishii; Michiyoshi Ae; Sentaro Koshida; Norihisa Fujii
12:50-12:52	17_P95	Biomechanical Effects Of Shear Thickening Polymer (stp)-based Hip Protectors. Taeyong Lee
12:53-12:55	17_P96	The Effect Of Upper Limb Post-activation Potentiation On Increases In Vertical Jump Height Due To An Arm Swing. Gerwyn Hughes; Michelle Dalmeida; James Johnstone
12:56-12:58	17_P97	Estimation Of Center Of Mass Velocity By Right Posterior Spine Iliac Landmark During Countermovement Jump. Hans-Joachim Karl Menzel; André G. P. de Andrade; Fabíola Bertú Medeiros; Túlio Banja; Erich Müller; Herbert Wagner
12:59-13:01	17_P98	Descriptive Analysis Of The Hip And Knee Joint Loading During Reverse Roundhouse Kick (hook) Karate Kick Performed In Training And Competition Modes. Riyadh Alsaeed; Matthew Pain
13:02-13:04	17_P99	Run-up Speed Parameters For Elementary School Long Jumpers. Yutaka Shimizu; Michiyoshi Ae
13:05-13:07	17_P100	The Effects Of Kinesio Taping On Rate Of Force Development In Squat Jump And Counter Movement Jump. Chien-Ta Shen; Po-Teng Huang; Jia-Hao Chang
13:08-13:10	17_P101	Changes In The Biomechanics Of A Reactive Cutting Manoeuvre In An Athletic Groin Pain Cohort Following A Successful Rehabilitation Intervention. Katherine Daniels; Andrew Franklyn-Miller; Chris Richter; Enda King; Shane Gore; Kieran Moran; Eanna Falvey
13:11-13:12	17_P116	Objective Measurements Of Daily Activity Patterns Of ‘sportive’ Knee Osteoarthritis (koa) Patients. Dieter Rosenbaum; Maik Sliepen; Bernd Grimm

Sunday, 18th

Oral Sessions 28: Sports Equipment and Technology 2
ID Location: Lecture Hall 1 | Chair: C. Huang, R. Sanders

8:30-8:43 18_O159 **The Contribution Of Joint Torque To The Acceleration Of The Clubhead During The Downswing Phase In Golf: A Case Study.** Atsushi Okamoto

8:44-8:57 18_O160 **The Effect Of Angle Of Impact, Neck Stiffness, And Impact Location On Measures Of Shear Forces During Helmet Testing.** Carlos Eduardo Zerpa; Stephen Carlson; Paolo Sanzo; Eryk Przysucha; Thomas Hoshizaki; Derek Kivi

8:58-9:11 18_O161 **Kinetic Mechanisms Of The Pelvis Rotation About Its Longitudinal Axis During The Golf Swing.** Tokio Takagi; Munenori Murata; Toshiharu Yokozawa

9:12-9:25 18_O162 **Directional Compression And Muscle Activity In A Retired World Cup Alpine Skier.** Linnea Zavala; Cory Snyder; James Becker; John Seifert

9:26-9:39 18_O163 **The Effects Of Compression Tights On Dynamic Knee Motion During A Drop Vertical Jump In Female College Athletes.** Jacopo A. Zamporri; Arnel Aguinaldo

9:40-9:53 18_O111 **Do Shoe Collar Height Influence The Kinematics And Kinetics Of Ankle Joint In Sagittal Plane Movement.** Yang Yang; Xi Wang; Weijie Fu

Sunday, 18th

Oral Sessions 29: Tennis / Racket Sports 2

ID Location: Lecture Hall 2 | Chair: B. Elliot, C. Wilson

8:30-8:43

18_O144

Influence Of The Racket On The Smash Motion In Badminton. Taiki Kawano; Shoichiro Takehara; So Kasamatsu; Kanato Suzuki

8:44-8:57

18_O145

Relationships Between Hitting Technique And Ball Carry Distance In Cricket. Chris Peplow; Stuart McErlain-Naylor; Andy Harland; Mark A. King

8:58-9:11

18_O146

Effect Of Toe Wedges On The Biomechanics Of The Forward Lunge In Badminton. Mikkel S. Gammelgaard; Frederik H. Ahlers; Wing-Kai Lam/LiNing; John Rasmussen; Uwe G. Kersting

9:12-9:25

18_O147

Uncontrolled Manifold Analysis Of Joint Angle Variability During Table Tennis Forehand. Yoichi Iino; Shinsuke Yoshioka; Senshi Fukashiro

9:26-9:39

18_O148

A Comparison Of Lower Limb Kinematics Between Superior And Intermediate Players In Table Tennis Forehand Loop. Yan Zhang; Jan Awrejcewicz; Marcio Goethel; Ievgen Levadnyi; Yaodong Gu

Sunday, 18th

Oral Sessions 30: Sprint

ID Location: Lecture Hall 4 | Chair: D. Harrison, I. Bezodis

8:30-8:43 18_O149 **The Relationship Between Hamstring Flexibility And Maximal Strains Of Hamstring Muscle-tendon Units In Sprinting: Indication To Hamstring Strain Injury.** Bing Yu; Hui Liu; Xianglin Wan; William E Garrett

8:44-8:57 18_O150 **Synchronous Measurement Of The Normal Ground Reaction Force On Shoe Spikes And Forceplate.** Muhammad Zakir Hossain; Julian Grill; Wolfgang Grill; Brian MacIntosh

8:58-9:11 18_O151 **Force Generation In Sprint Running Is Related To Muscle Properties In Male Sprinters.** Andrea Monte; Paola Zamparo

9:12-9:25 18_O152 **Ground Reaction Forces During Competitive Track Events: A Motion Based Assessment Method.** Andrew Udofa; Laurence Ryan; Kenneth Clark; Peter Weyand

9:26-9:39 18_O153 **Acute Effects Of The Speedmaker Resistive Sprint Device: Electromyography And Kinematics.** Ryan L. Meidinger; Randall L. Jensen; Sarah B. Clarke; Mindie Clark

Sunday, 18th		Oral Sessions 31: Running
	ID	Location: Lecture Hall 1 Chair: T. Exell, R. van Emmerik
10:10-10:23	18_O164	The Relationship Of Anthropometry And Body Composition With Running Economy. Sam Allen; Matthew I. Black; Steph E. Forrester; Joseph C. Handsaker; Jonathan P. Folland
10:24-10:37	18_O165	A Novel Method For Initial Contact Detection In Treadmill Running Using Side Rail Reflective Marker. Michaela Hassmann; Alena Stadlbauer; Philipp Kornfeind; Savvas Stafilidis
10:38-10:51	18_O166	Detection Of Biomechanical Adaptation In Treadmill Running. Julia Lindorfer; Josef Kröll; Hermann Schwameder
10:52-11:05	18_O167	Running Pattern Differences In Gender And Running Level. Javier Rueda Ojeda; David Chorro; Gonzalo Torres; Archit Navandar; Enrique Navarro
11:06-11:19	18_O168	Interpretation Of Vector Coding Variability Measures: Within-day Repeatability And Between-subject Variation In Treadmill Running. Holly Stock; Cassie Wilson; Chris McLeod; Richard van Emmerik; Ezio Preatoni
11:20-11:33	18_O169	Effect Of Biomechanical Factors On Energy Cost During Running At Varying Inclines. Keitaro Seki; Kanami Sugimoto; Heikki Kyröläinen; Yasushi Enomoto

Sunday, 18th

Oral Sessions 32: Physical Activity
ID Location: Lecture Hall 2 | Chair: P. Sinclair, M. Lee

10:10-10:23 18_O176 **Effects Of Walking Versus Completing A Neurocognitive Task On Breathing Physiology In Healthy Individuals - A Pilot Study.** Patrick Siedlecki; Paolo Sanzo; Carlos Zerpa; Ian Newhouse

10:24-10:37 18_O177 **Relation Between Anthropometric Data And Performance Of Lower Limb In Squat Jump.** Mojtaba Ghasemi; Ali Mohammadi; Mohammad Hossein Ebrahimi; Mohammed Taghi Karimi; Mostafa Rostami

10:38-10:51 18_O179 **The Effect Of Prolonged Sitting Versus Use Of A Treadmill Desk On Postural Stability.** Laura Charalambous; Rachael Champion; Lindsey Smith; Colm McGirl; Daniel Bailey

10:52-11:05 18_O180 **Effect Of Ten Days High-intensity Training On Dna Damage.** Sascha Schlechtweg; Dieter Bubeck; Wilfried Alt; Achim Bub

11:06-11:19 18_O181 **Changes In Balance And Joint Position Sense During A 12-day High Altitude Trek.** Sarah B Clarke; Kevin Deighton; Caroline Newman; Gareth Nicholson; Liam Gallagher; Chris Boos; Adrian Mellor; David R Woods; John P O'Hara

Sunday, 18th		Oral Session 33: Computer Modelling and Simulation 2 Location: Lecture Hall 3 Chair: Y.-H. Kwon, S. Lorenzetti
10:10-10:23	18_O170	Effect Of Foot Rotation Angle On The Rotational Range Of Motion Of Trunk And Pelvis. Keizo Yamamoto; Yuki Ito; Fukashi Shinkaiya
10:24-10:37	18_O171	Wrapping Surfaces To Control Moment Arm Lengths During A Squat Task. Danilo S. Catelli; Mariska Wesseling; Erik Kowalski; Ilse Jonkers; Mario Lamontagne
10:38-10:51	18_O172	Using A Breakpoint To Determine The Optimal Cut-off Frequency. David R. Mullineaux
10:52-11:05	18_O173	Sphere Fitting Into Volumetric Representations Of Basketball Throws. Volkan D. Yaylioğlu; Serdar Arıtan
11:06-11:19	18_O174	Prediction Of Ground Reaction Forces And Moments Via Supervised Learning Is Independent Of Participant Sex, Height And Mass. William R. Johnson; Ajmal Mian; Cyril J Donnelly; David Lloyd; Jacqueline Alderson
11:20-11:33	18_O175	Quantifying Segmental Coordination During A Sport Specific Movement Using A Modified Vector Coding Technique: A Comparison Between Two Coordination Pattern Classifications. Robert Alan Needham; Jamie A Gosling; Roozbeh Naemi; Nachiappan Chockalingam

Sunday, 18th		Oral Session 34: Injury Prevention 3 Location: Lecture Hall 4 Chair: H. Krahl, A. Amado
	ID	
10:10-10:23	18_O155	Force Trace Characteristics In Anterior Cruciate Ligament Deficient And Uninjured Knees During A Maximal Isometric Task. Joseph M. Moore; Dipak Raj; Genevieve K.R. Williams; Christopher Bridle; David R. Mullineaux
10:24-10:37	18_O156	Initial Explorations Using The Knee Moment Vector Versus The Knee Abduction Moment To Identify Athletes At Risk Of Acl Injury. Mark Robinson; Raihana Sharir; Jos Vanrenterghem; Cyril J. Donnelly
10:38-10:51	18_O157	Assessment Of Thigh Muscles Mechanical Capacities Following Acl Reconstruction Using The Two-velocity Method. Dragan Mirkov; Olivera M. Knezevic; Slobodan Jaric
10:52-11:05	18_O158	Biomechanical Complexity: A Measure To Delineate Between Athletic Groin Pain Patients And Uninjured Controls. Shane Gore; Andrew Franklyn-Miller; Chris Richter; Eanna Falvey; Enda King; Kieran Moran
11:06-11:19	18_O107	The Comparison Of Knee Joint Kinematics Between Two Types Of Stop Jump. Josh Walker; Sarah B. Clarke; Randall L. Jensen