

Conference Schedule		
	Wednesday 27.09.2023	
10:00-21:00	Registration and Check-in Location: First Floor Lobby of College of Education, Zhejiang University	
	Thursday 28.09.2023	
09:00-09:30	Opening Cermony Location: Conference Room 118, College of Education	
09:30-10:30	Keynote Speaker 1: Martin Lames: Machine Learning in Performance Analysis – Kings’ Roads and Blind Alleys Chair: Hui Zhang Location: Conference Room 118, College of Education	
10:30-10:45	Take a Photo (with All Participants)	
10:45-11:00	Coffee Break	
	Parallel Sessions 1	
11:00-12:30	Chair: Yingcai Wu	Chair: Juliana Exel
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education
11:00-11:15	Sensors and Testing Equipment:	Models and Predictions:
	Research on human-environment interactive acquisition technology based on intelligent multi-sensor fusion Authors: Jianxiang Wang, Zhanguo Nie and Yuxin Peng	Discovering Strategy using Evolutionary Computation: Applying a Genetic Algorithm to a Team Pursuit Cycling Track Cvcclina Race Authors: Donal Kelly and Colm O’Riordan
11:15-11:30	Sensors and Testing Equipment:	Models and Predictions:
	A Finite Element Model to Predict Shear Deformation in Running Shoe Midsoles During the Foot Strike Authors: Ben Lane, Lise Sissler, Benoit Abel, Kévin Dellion and Nicholas Tam	An analysis of macro-influencing factors of FIFA World Cup competition performance: based on the SPLISS theory perspective Authors: Mu Fan, Fei Liu, Jixin Fan and Hui Zhang
11:30-11:45	Sensors and Testing Equipment:	Models and Predictions:
	Ground Contact Time in Curve Running – a Sensor-Based Measurement Authors: Patrick Blauberger and Martin Lames	Within-match performance fluctuations - assessment and observed vs. expected extent in table tennis Authors: Ruizhi Liu and Martin Lames
11:45-12:00	Sensors and Testing Equipment:	Models and Predictions:
	A Flexible Gesture Recognition System Based On Graphene Aerogel and IMU Authors: Liang Zhong and Yuxin Peng	Factors Affecting NBA Player Draft Selection: An Analysis Based on a Generalized Linear Mixed Model Authors: Xiangshen Kong, Mu Fan and Hui Zhang
12:00-12:15	Physical Education and Health:	Models and Predictions:
	The impact of participation in learning assessment using ICT in physical education on community residents Authors: Koji Ishii and Naoki Suzuki	Using Multiple Linear Regression Models to Predict WNBA Basketball Players' Playing Time Authors: Chuqi Chen, Run Cao and Yixiong Cui
12:15-12:30		Models and Predictions:
		Spatial distribution and influencing factors of Chinese sports parks based on MGWR model Authors: Tao Ren, Yuanxin Chen and Maolin You
12:30-13:30	Lunch Break	
13:30-14:30	Keynote Speaker 2: Hyongjun Choi & Mei Teng Woo: Innovative Approaches to the Use of Practical Sports Analysis Tools in Education and AI Research Chair: Daniel Link Location: Conference Room 118, College of Education	
	Parallel Sessions 2	
14:30-16:00	Chair: Jun Liu	Chair: Hayri Ertan
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education
14:30-14:45	Machine Learning:	Data Analysis in Football:
	Using Machine Learning for identifying soccer in-possession match phases based on their tactical intention Authors: Yuesen Li and Daniel Link	Beyond xG: Statistical Analysis of Attacking Performance in World Cup 2022 Authors: Runqing Ma, Jonas Bischofberger, Juliana Exel and Arnold Baca
14:45-15:00	Machine Learning:	Data Analysis in Football:
	Research progress on sports injury warning models based on machine learning technology Mengli Wei, Yaping Zhong, Yiwen Zhou, Huixian Authors: Gui, Shaohua Yu, Tingting Yu, Yeming Guan and Guangying Wang	Real-time Prediction of Football Outcomes Based on Spatio-temporal Action Matrix Authors: Jianyang Hu and Shaoliang Zhang
15:00-15:15	Machine Learning:	Data Analysis in Football:
	Short-term event prediction within matches in soccer using machine learning	Exploring English Premier League Clubs Performance and Home-Away Differences Based on Passing Network Analysis

	Authors: Steffen Lang, Thomas Wimmer, Alexander Isenko and Daniel Link	Authors: Chenyuyan Yang and Otto Kolbinger
15:15-15:30	Machine Learning: Machine Learning based Automatic Effective Round Segmentation Method for Table Tennis Authors: Bo Yu, Minzhen Hu, Hao Yu, Jun Liu, Zechen Jin, Yang Yu and Qi Wang	Data Analysis in Football: Football space and control in Chinese Football Super League Authors: Jinying Jiang, Shouxin Zong, Huanmin Ge and Yixiong Cui
15:30-15:45	Machine Learning: Sports Performance Prediction Based on Metaverse and Deep Learning with Attention Mechanism Authors: Xinqi Feng	Data Analysis in Football: Research on the running performance of players with different playing styles in the Chinese Super League Authors: Ruihong Cheng, Huanmin Ge and Yixiong Cui
15:45-16:00	Machine Learning: Using SHAP to analyse the influence of football-related knowledge, attitude, and practice on health among students based on RF-TPE Authors: Honglin Song, Yutao Li, Zhenhang Zhang, Jiaxu Ma and Tianbiao Liu	Data Analysis in Football: Analyzing Key Success Factors in Balanced Games of the 2022 FIFA World Cup through FIFA Indicators Authors: Xi-Ao Li and Bo Han
16:00-16:30	Coffee Break	
16:30-18:00	Parallel Sessions 3	
	Chair: Martin Lames	Chair: Naoki Suzuki
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education
16:30-16:45	Digital Technology and Virtual Reality: Integration of digital tools in training and sports education Authors: Arnold Baca, Amin Chetouani, Elias Wallnöfer, Philipp Kornfeind and Juliana Exel	Data Analysis in Racket Sports: Using SHAP to diagnose the elite male table tennis matches based on hybrid LSTM-BPNN algorithm with hybrid analysis theory Authors: Honglin Song, Yutao Li and Tianbiao Liu
16:45-17:00	Digital Technology and Virtual Reality: A Study on the Formation of Parents' Attitudes Toward ICT Utilized Physical Education for the Next Generation Authors: Tatsuya Nakano and Koji Ishii	Data Analysis in Racket Sports: Exploring the Structure of the Stroke Effectiveness Model for Elite Table Tennis Players Authors: Qing Yang, Mu-zi Li, Zheng Zhou and Hui Zhang
17:00-17:15	Digital Technology in PE and Virtual Reality: Low-Cost Virtual Reality: A Promising Tool for Positive Mood States and Enjoyable Exercise in Healthy Individuals Authors: Juliana Exel, Michael Weissensteiner and Arnold Baca	Data Analysis in Racket Sports: Competitive Balance of Chinese Table Tennis Super League—Based on Simpson’s Evenness Index Authors: Zhi-hao Chen, Qing Yang* and Mu-zi L
17:15-17:30	Digital Technology in PE and Virtual Reality: Game-theoretic Analysis of Tactic Usage in Elite Female Table Tennis Players Authors: Xiangtong Chu and Hui Zhang	Data Analysis in Racket Sports: Clustering Winner Stroke Routes in Singles Matches of Professional Tennis Players Authors: Jing Liu, Shouxin Zong and Yixiong Cui
17:30-17:45	Digital Technology in PE and Virtual Reality: Net-kill Opportunity Created by Smash in Badminton Doubles Authors: Lejun Shen, Yunlei Zhao, Yongming Chen, Ting Li, Ning Tang, Lu Ding and Jinwen Deng	Data Analysis in Racket Sports: Pure strategy Nash equilibrium number and PRR index for serving in tennis matches Authors: Rouli Ye and Wenming Liu
17:45-18:00	Digital Technology in PE and Virtual Reality: Research on Chinese Government's Policies related to the Development of Digital sport Authors: Li Zhang, Ying Wang and Hao Qiu	Data Analysis in Racket Sports: The Effects of Distance from the Net at the Hitting Point and Hitting Height on the Outcome of High Level Badminton Men’s Singles Authors: Ya Luo and Lejun Shen
18:00-19:00	Dinner and free activities	
19:00-21:00	Dartfish Workshop Location: Conference Room 118, College of Education	
	Friday 29.09.2023	
09:30-10:30	Keynote Speaker 3: Naoki Suzuki: Unleashing the Power of Technology: Revolutionizing Sports Coaching and Teaching Chair: Martin Lames Location: Conference Room 118, College of Education	
10:30-11:00	Coffee Break	
11:00-12:30	Parallel Sessions 4	
	Chair: Yaping Zhong	Chair: Sam Robertson
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education
11:00-11:15	Computer Vision: Using computer vision for performance analysis in racket sports: how good is a computer to observe player’s activity?	Performance Analysis in Sports: The gap between China's CBA league and high-level leagues: Evidence from performance indicators

	Authors: John Komar, Quah Jian Tan, Corliss Zhi Yi Choo and Jia Yi Chow	Authors: Muzi Li, Yang Lu and Qing Yang
11:15-11:30	Computer Vision:	Performance Analysis in Sports:
	Video Summarization for Event-Centric Videos	Analysis of Sabermetrics in KBO league from 2020 to 2022
	Authors: Qingwen Li, Gianni Chen, Qiqin Xie and Xiao Han	Authors: Soongyu Kwon, Woojin Lee and Hyongjun Choi
11:30-11:45	Computer Vision:	Performance Analysis in Sports:
	Research on computer vision-based trajectory extraction algorithm for tennis players	Analysis of "Short, Flat and Slow" Serving Strategy and Tactical Effectiveness
	Authors: Sheng Wang, Hyongjun Choi and Hanzhe Feng	Authors: Shangbin Li, Peiyu Zhao, Di Feng and Tao Jiang
11:45-12:00	Computer Vision:	Performance Analysis in Sports:
	Sports video classification method based on improved deep learning	Analysis of progressive pass quality during 2022 Qatar Football World Cup
	Authors: Wenming Liu and Youjian Zhang	Authors: Rong Ma and Yixiong Cui
12:00-12:15	Computer Vision:	Performance Analysis in Sports:
	Expert’s gaze-based prediction model for assessing the quality of figure skating jumps	Analysis of Shot Opportunities in Relation to Possession Variables in Elite Football Match
	Authors: Seiji Hirose, Takayoshi Yamashita and Yoshimitsu Aoki	Authors: Jiale Wu and Yixiong Cui
12:15-12:30	Computer Vision:	Poster: Exercise Physiology
	Performance Analysis in Taekwondo using OpenPose	Time-frequency domain characterization of %1RM in free deep squat training based on velocity information
	Authors: Takashi Fukushima, Klaus Haggenmueller and Martin Lames	Authors: Jiaao Zou, Fei Wang, Dexing Qian, Kaiyu Zhang and Yinsheng Tian
12:30-13:30	Lunch Break	
13:30-14:30	Workshop: Introducing Dartfish: Video-Based Technology Solutions and Student Training	Workshop(13:00-14:30): Women in IACSS: Empowering the Future
	Chair: Moon Seok Chung	Chair: Juliana Exel
	Location: Conference Room 118	Location: Meeting Room 107
14:30-16:00	Parallel Sessions 5	
	Chair: Arnold Baca	Chair: Hyongjun Choi
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education
14:30-14:45	Data Mining and Pattern Recognition:	Exercise Physiology:
	Exploratory Spatial Pattern Recognition of Hits on Archery Target	Kinematic synergy in lower limb joints during walking: Effects of gait speed on toe vertical position control
	Authors: Hayri Ertan	Authors: Xuan Liu, Jitong Liang, Lei Li and Ye Liu
14:45-15:00	Data Mining and Pattern Recognition:	Exercise Physiology:
	Automatic formation recognition in handball using template matching	Effects of Marathon Running on lower extremity Kinematics and Muscle Activities during running task
	Authors: Manuel Bassek, Daniel Memmert and Robert Rein	Authors: Wenjin Wang, Shaobai Wang, Wolfgang Potthast
15:00-15:15	Data Mining and Pattern Recognition:	Exercise Physiology:
	Hoop Transformer: Read the game like a NBA Coach	Verbal and Conscious Processing Reflected in EEG as a Measure of Attentional Focus During Finger Movements
	Authors: Xing Wang, Zitian Tang, Jianchong Shao, Shaoliang Zhang, Sam Robertson and Miguel-ángel Gómez-Ruano	Authors: Danyang Li and Liwei Zhang
15:15-15:30	Data Mining and Pattern Recognition:	Exercise Physiology:
	Tactic Mining based on Natural Language Query in Racket Sports	Improving the energy economy of human running with powered and unpowered ankle exoskeleton assistance
	Authors: Jiang Wu, Zheng Zhou, Jiachen Wang, Hui Zhang, Yinqcai Wu	Authors: Wenjuan Jiang, Ye Liu and Ao Jiang
15:30-15:45	Data Mining and Pattern Recognition:	Exercise Physiology:
	Chinese Named Entity Recognition in Football based on Albert-BiLSTM Model	(In-)stability in the brain network as a means to quantify motor creativity
	Authors: Qi An, Bingyu Pan and Yixiong Cui	Authors: Yi-Shin Lee, Alicia Goodwill and John Komar
15:45-16:00	Data Mining and Pattern Recognition:	Exercise Physiology:
	‘My pace running’ Endurance running practice using wearable devices	Spatiotemporal parameters and lower limb kinematics of gait in patients with femoroacetabular impingement syndrom
	Authors: Koji Murase, Yasuhiro Kawakita, Yasutaka Kawamoto and Takuma Hamagami	Authors: Hang Pan, Hanjun Li, Yulin Zhou, Xinxin Li, Hui Liu
16:00-16:30	Coffee Break	
16:30-18:00	Parallel Sessions 6	
	Chair: Mei Teng Woo	Chair: Daniel Link
	Location: Conference Room 118, College of Education	Location: Meeting Room 107, College of Education

16:30-16:45	Database and Big Data: Predictive inference versus statistical inference when analyzing large data sets Authors: Robert Rein	Physical Education and Health: Barriers and Facilitators to Application of Artificial Intelligence in Physical Education Class Authors: Di Feng
16:45-17:00	Database and Big Data: Data Audit ^{@NSPFS} Software for Chinese National Students Physical Fitness Standard Testing Data Authors: Feng Gao, Dong Dong and Juncheng Liu	Physical Education and Health: Exploring the Intelligent Teaching Model for Dance Sport based on the PST Framework Authors: Chenyang Li and Hyongjun Choi
17:00-17:15	Database and Big Data: Momentum and Gender in Elite Recurve Archery Authors: Yangqing Zhao, Xiangtong Chu and Hui Zhang	Physical Education and Health: A Review of the Application of Artificial Intelligence in National Traditional Sports Authors: Zheng Qi
17:15-17:30	Database and Big Data: Geographical Variation in Relationship between Economy Growth and Cardiorespiratory Fitness of Chinese Children and Adolescents over 30 Years:Evidence from Seven Successive National Surveys Authors: Xiaomei Gan and Kehong Yu	Physical Education and Health: Influencing Factors of College Students' physical Health under the Background of "Healthy China Action" - Based on Factor Analysis Authors: Shuang Zhao and Hyongjun Choi
17:30-18:30	The General Assembly of IACSS Location: Conference Room 118, College of Education	
18:30	Coference Dinner	
	Saturday 30.09.2023	
09:00-10:30	Workshop: Xiao Xie: Processing and analyzing sports videos with interactive visualizations Chair: Yingcai Wu Location: State Key Lab of CAD & CG, ZJU	
10:30-11:00	Coffee Break	
11:00-12:00	Keynote Speaker 5: Sam Robertson: Five big questions for AI & technology in high-performance sport Chair: Arnold Baca Location: Conference Room 118, College of Education	
12:00-13:00	Closing Ceremony Location: Conference Room 118, College of Education Dartfish-Jürgen Perl (IACSS) Award Introducation of next Conference	