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**

11:00-12:30	**Parallel Sessions 1**	
	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:** Research on human-environment interactive acquisition technology based on intelligent multi-sensor fusion Authors: Jianxiang Wang, Zhanguo Nie and Yuxin Peng	**Models and Predictions:** Discovering Strategy using Evolutionary Computation: Applying a Genetic Algorithm to a Team Pursuit Cycling Track Cycling Race Authors: Donal Kelly and Colm O'Riordan
11:15-11:30	**Sensors and Testing Equipment:** 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	**Models and Predictions:** 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:** Ground Contact Time in Curve Running – a Sensor-Based Measurement Authors: Patrick Blauberger and Martin Lames	**Models and Predictions:** 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:** A Flexible Gesture Recognition System Based On Graphene Aerogel and IMU Authors: Liang Zhong and Yuxin Peng	**Models and Predictions:** 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:** The impact of participation in learning assessment using ICT in physical education on community residents Authors: Koji Ishii and Naoki Suzuki	**Models and Predictions:** 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	

14:30-16:00	**Parallel Sessions 2**	
	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:** Using Machine Learning for identifying soccer in-possession match phases based on their tactical intention Authors: Yuesen Li and Daniel Link	**Data Analysis in Football:** 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:** Research progress on sports injury warning models based on machine learning technology Authors: Mengli Wei, Yaping Zhong, Yiwen Zhou, Huixian Gui, Shaohua Yu, Tingting Yu, Yeming Guan and Guangying Wang	**Data Analysis in Football:** Real-time Prediction of Football Outcomes Based on Spatio-temporal Action Matrix Authors: Jianyang Hu and Shaoliang Zhang
	Machine Learning:	**Data Analysis in Football:**

15:00-15:15	Short-term event prediction within matches in soccer using machine learning Authors: Steffen Lang, Thomas Wimmer, Alexander Isenko and Daniel Link	Exploring English Premier League Clubs Performance and Home-Away Differences Based on Passing Network Analysis 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 **Location:** Conference Room 118, College of Education	**Parallel Sessions 3** **Chair:** Naoki Suzuki **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 Wellsensteiner 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	**Parallel Sessions 4** **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? Authors: John Komar, Quah Jian Tan, Corliss Zhi Yi Choo and Jia Yi Chow	**Performance Analysis in Sports:** The gap between China's CBA league and high-level leagues: Evidence from performance indicators Authors: Muzi Li, Yang Lu and Qing Yang
11:15-11:30	**Computer Vision:** Video Summarization for Event-Centric Videos Authors: Qingwen Li, Jianni Chen, Qiqin Xie and Xiao Han	**Performance Analysis in Sports:** Analysis of Sabermetrics in KBO league from 2020 to 2022 Authors: Soongyu Kwon, Woojin Lee and Hyongjun Choi
11:30-11:45	**Computer Vision:** Research on computer vision-based trajectory extraction algorithm for tennis players Authors: Sheng Wang, Hyongjun Choi and Hanzhe Feng	**Performance Analysis in Sports:** Analysis of "Short, Flat and Slow" Serving Strategy and Tactical Effectiveness Authors: Shangbin Li, Peiyu Zhao, Di Feng and Tao Jiang
11:45-12:00	**Computer Vision:** Sports video classification method based on improved deep learning Authors: Wenming Liu and Youjian Zhang	**Performance Analysis in Sports:** Analysis of progressive pass quality during 2022 Qatar Football World Cup Authors: Rong Ma and Yixiong Cui
12:00-12:15	**Computer Vision:** Expert's gaze-based prediction model for assessing the quality of figure skating jumps Authors: Seiji Hirosawa, Takayoshi Yamashita and Yoshimitsu Aoki	**Performance Analysis in Sports:** Analysis of Shot Opportunities in Relation to Possession Variables in Elite Football Match Authors: Jiale Wu and Yixiong Cui
12:15-12:30	**Computer Vision:** Performance Analysis in Taekwondo using OpenPose Authors: Takashi Fukushima, Klaus Haggenmueller and Martin Lames	**Poster: Exercise Physiology** Time-frequency domain characterization of %1RM in free deep squat training based on velocity information 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 **Chiar:** Moon Seok Chung **Location:** Conference Room 118	**Workshop(13:00-14:30):** Women in IACSS: Empowering the Future **Chiar:** Juliana Exel **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:** Exploratory Spatial Pattern Recognition of Hits on Archery Target Authors: Hayri Ertan	**Exercise Physiology:** Kinematic synergy in lower limb joints during walking: Effects of gait speed on toe vertical position control Authors: Xuan Liu, Jitong Liang, Lei Li and Ye Liu
14:45-15:00	**Data Mining and Pattern Recognition:** Automatic formation recognition in handball using template matching Authors: Manuel Bassek, Daniel Memmert and Robert Rein	**Exercise Physiology:** Effects of Marathon Running on lower extremity Kinematics and Muscle Activities during running task Authors: Wenjin Wang, Shaobai Wang, Wolfgang Potthast
15:00-15:15	**Data Mining and Pattern Recognition:** Hoop Transformer: Read the game like a NBA Coach Authors: Xing Wang, Zitian Tang, Jianchong Shao, Shaoliang Zhang, Sam Robertson and Miguel-ángel Gómez-Ruano	**Exercise Physiology:** Verbal and Conscious Processing Reflected in EEG as a Measure of Attentional Focus During Finger Movements Authors: Danyang Li and Liwei Zhang
15:15-15:30	**Data Mining and Pattern Recognition:** Tactic Mining based on Natural Language Query in Racket Sports Authors: Jiang Wu, Zheng Zhou, Jiachen Wang, Hui Zhang, Yingcai Wu	**Exercise Physiology:** Improving the energy economy of human running with powered and unpowered ankle exoskeleton assistance Authors: Wenjuan Jiang, Ye Liu and Ao Jiang
15:30-15:45	**Data Mining and Pattern Recognition:** Chinese Named Entity Recognition in Football based on Albert-BiLSTM Model Authors: Qi An, Bingyu Pan and Yixiong Cui	**Exercise Physiology:** (In-)stability in the brain network as a means to quantify motor creativity Authors: Yi-Shin Lee, Alicia Goodwill and John Komar
15:45-16:00	**Data Mining and Pattern Recognition:** 'My pace running' Endurance running practice using wearable devices	**Exercise Physiology:** 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 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 **Chiar:** 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-IACSS Young Sciencist Award Introducation of next Conference	