

opening - 06/09/2023 02:00 p.m. (GHS) Chair: J. Paolo Vilas-Boas

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| Daniel | Daly | University Leuven | LEON LEWILLIE-LECTURE: AQUATIC THERAPY APPLICATIONS IN STANDARD POOLS (LEARN TO SWIM) |
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kinematics 1 - 06/09/2023 04:30 p.m. (GHS) Chair: Santiago Veiga

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| Stefan | Hochstein | Martin-Luther University Halle - Biomechanics | THEORETICAL WAVE DESCRIPTION IN UNDULATORY SWIMMING – A NEW MULTI-DIMENSIONAL APPROACH |
| Kenzo | Narita | National institute of Fitness and Sports in Kanoya | THE DIFFERENCE IN ACTIVE DRAG BETWEEN FRONT CRAWL AND BACKSTROKE: A KINEMATIC APPROACH |
| Yannis | Raineteau | Université Rennes 2 | THE RELATIONSHIPS BETWEEN DRY-LAND FORCE-VELOCITY PROFILES AND FRONT CRAWL LOAD-VELOCITY PROFILES IN ELITE SWIMMERS |
| Mário | Costa | Faculty of Sports, University of Porto | ASSOCIATION BETWEEN MALE SWIMMERS DRY-LAND STRENGTH AND BREASTSTROKE PULL-OUT KINEMATICS. |
| Ana | Conceição | Sport Science School of Rio Maior | KINEMATICAL AND MUSCULAR CHARACTERIZATION OF OPEN WATER SWIMMERS |

medicine - 06/09/2023 04:30 p.m. (HSS 1) Chair: Tomoi Fujimoto

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| Tatsumura | Masaki | Department of Orthopaedic Surgery and Sports Medicine, Tsukuba University Hospital Mito Clinical Education and Training Center | LUMBAR SPONDYLOLYSIS IN COMPETITIVE DIVING ATHLETES ~CASE SERIES~ |
| Dalton Müller | Pessôa Filho | São Paulo State University (UNESP) | AN INCREMENTAL RAMP TEST FOR DEFINING TRAINING ZONES IN FREE-SWIMMING – A PILOT STUDY |
| Muhammad | Azam | Government College University Lahore | AQUATIC EXERCISE AS MEDICINE TO TREAT WOMEN'S PREGNANCY-RELATED ISSUES: MAPPING GAPS AND MAJOR FINDINGS |
| Billy | So | Hong Kong Polytechnic University | INVESTIGATION OF ROTATOR CUFF PATHOLOGY AND SHOULDER PAIN AMONG ELITE SWIMMERS: A CROSS SECTIONAL STUDY |

technique 1 - 06/09/2023 04:30 p.m. (HSS 2) Chair: Henrique Neiva

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| Takahisa | Ide | Osaka University of Health and Sport Sciences/ Grand Canyon University | EFFECTS WORLD CLASS SWIMMERS USING DIFFERENT MUSCLES IN THE STRAIGHTNESS BACKSTROKE KICK MOVEMENT |
| Boro | Štrumbelj | University of Ljubljana, Faculty of sport | THE EFFECTS OF TWO DIFFERENT RECOVERY PROTOCOLS ON THE 100-METER FRONT CRAWL PERFORMANCE OF MALE SWIMMERS |
| Yuji | Ohgi | Keio University | A DEVELOPMENT OF SUPPORT TECHNOLOGY FOR VISUALLY IMPAIRED SWIMMERS TOWARDS TOKYO 2020 PARALYMPIC GAMES |
| Bodo E | Ungerechts | Universität Bielefeld | OF THE POSSIBLE SIGNIFICANCE OF DISSIPATION IN ANALYZING THE EFFICIENCY OF HAND-WATER INTERACTION – TOWARDS NEW SHORES |

keynote - 07/09/2023 08:30 a.m. (GHS) Chair: Maren Witt

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| Bernd Berkhahn | Alexander Törpel | German Swimming Federation | THE WAY TO GOLD IN MARATHON SWIMMING – INSIGHTS INTO THE TRAINING METHODOLOGY AND SPORTS SCIENCE STRATEGY THAT PUT FLORIAN WELLBROCK ON THE PODIUM IN TOKYO 2021 |
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medicine & technology - 07/09/2023 09:30 a.m. (GHS) Chair: Yasuo Sengoku

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| Reo | Asai | Tokyo Medical University Ibaraki Medical Center | POST-OPERATIVE FOLLOW-UP OF A SWIMMER WHO UNDERWENT MICRO ENDO-SCOPIC DISCECTOMY FOR LUMBAR DISC HERNIATION. |
| Sho | Onodera | Kawasaki University of Medical Welfare | CHANGES IN CARDIAC AUTONOMIC NERVOUS SYSTEM ACTIVITY IN PREGNANT WOMEN DURING SUPINE POSITION IN WATER IMMERSION |
| López | Belmonte | University of Granada | EFFECTS OF TRAINING CESSATION ON ANTHROPOMETRICS, BODY COMPOSITION, AND SOMATOTYPE IN SWIMMERS |
| Bodo E | Ungerechts | Bielefeld University | ABOUT EXPERIMENTS WITH SPIROERGOMETRY IN A SWIMMING FLUME AND CALCULATION OF POWER BALANCE FOR INTERDISCIPLINARY RESEARCH |
| Andreu | Roig | CAR High Performance Center (Barcelona) | LIVE SONIFICATION OF THE SWIMMING INTRACYCLIC VELOCITY |

water polo / open water - 07/09/2023 09:30 a.m. (HSS 1) Chair: Robert Colette

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| Stefan | Hochstein | Martin-Luther University Halle - Biomechanics | GOAL SHOT VELOCITIES IN ELITE WATER POLO UNDER COMPETITIVE MATCH CONDITIONS |
| Andreas | Hohmann | Bayreuth University, Germany | SPACE CONTROL AND GOAL SHOT EFFICIENCY IN ELITE WATER POLO |
| Tomomi | Fujimoto | Department of Health and Sports, Niigata University of Health and Welfare | THERMAL SENSATION AFTER OPEN WATER SWIMMING DEPENDS ON SKIN COOL SENSITIVITY RATHER THAN CORE TEMPERATURE |
| Baptiste | Bolon | Ecole des Ponts | DRAFTING OF 2 SWIMMERS IN OPEN-WATER |
| Phornpot | Chainok | Faculty of Sport Science, Burapha University, Thailand | TRACKING PERFORMANCE AND HEALTH RELATED PHYSICAL FITNESS OF AGE-GROUP OPEN WATER SWIMMERS DURING A TRAINING MACROCYCLE |

dvs - 07/09/2023 09:30 a.m. (HSS 2) Chair: Raúl Arellano, Boro Štrumbelj

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| Ilka Staub | Andreas Bieder | German Sport University Cologne | INFLUENCE OF COACH BEHAVIOUR ON MOTIVATION IN SWIMMING - A SYSTEM-ATIC INVESTIGATION |
| Raffaele | Scurati | Department of Biomedical Sciences for Health - Università degli Studi di Milano | IMPROVING FRONT CRAWL WITH CONTINUOUS SHORT-DELAYED VIDEO FEED-BACK |
| Sebastian | Keller | German Sport University Cologne, Department of Exercise Physiology | RELATIONSHIP BETWEEN METABOLIC AND MECHANICAL DETERMINANTS AND PERFORMANCE IN YOUNG FEMALE SQUAD SWIMMERS |
| Patrick | Wahl | Dept. of Exercise Physiology; German Sport University Cologne | SEMI-TETHERED LOAD-VELOCITY PROFILES – CORRELATIONS WITH METABOLIC AND DRYLAND STRENGTH PARAMETERS IN MALE AND FEMALE SQUAD SWIMMERS |
| Klemens | Degenhardt | IAT Leipzig | VALIDITY AND RELIABILITY OF THE MEASUREMENT OF OXYGEN UPTAKE USING THE POST-EXERCISE BREATHING METHOD IN SWIMMING – A SYSTEMATIC REVIEW |

medicine & technology - Postersession 07/09/2023 (GHS & PHN) Chair: Yuji Ohgi, Brice Guignard

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| Daiki | Koga | Tokyo Institute of Technology | COMPARISON OF HAND FLUID FORCE AND HAND KINEMATICS BY STROKE PHASE IN SPRINT FRONT CRAWL SWIMMING BETWEEN PERFORMANCE LEVEL |
| Pierre-Marie | Leprêtre | Université de Picardie Jules Verne | INTERCHANGEABILITY OF BACK EXTRAPOLATION AND EXERCISING OXYGEN UPTAKE MEASURE DURING FRONT CRAWL SWIMMING |
| Yuiko | Matsuura | Niigata University of Health and Welfare | POSTERIOR DELTOID SHOULDER TIGHTNESS: SHOULDER PAIN RISK FACTORS IN SWIMMERS |
| Alexander | Törpel | German Swimming Federation | VALIDATION OF THE OPTICAL HEART RATE SENSOR POLAR VERITY SENSE IN SWIMMING |

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| Jackson | Etter | OrthoArizona | SURGICAL MANAGEMENT OF SWIMMER'S SHOULDER DEMONSTRATED POOR CORRELATION WITH PREOPERATIVE MAGNETIC RESONANCE IMAGING FINDINGS |
| Susana | Soares | Faculty of Sports of Faculty of Porto | USING FATIGUE THRESHOLDS TO DETERMINE CHANGES IN SWIMMERS ANAEROBIC PERFORMANCE AFTER A TRAINING MACROCYCLE |
| ALFAC - 07/09/2023 01:00 p.m. (HSS 1) Chair: Veit Wank, Gerlinde Hemmling | | | |
| Léa | Mekkaoui | University of Lille, URePSSS lab | ALFAC (AQUATIC LITERACY FOR ALL CHILDREN) PROJECT: HOW TO PREVENT AND ENGAGE 6-12 YEAR OLDS CHILDREN IN EUROPE IN AQUATIC ENVIRONMENT |
| François | Potdevin | University of Lille | VALIDATION OF A TEST BATTERY TO ASSESS AQUATIC LITERACY OF CHILDREN AGED 6 TO 12 ACROSS EUROPE |
| Inga | Fokken | Deutsche Sporthochschule Köln | HOW DO TEACHERS EVALUATE A DIAGNOSTIC PROCEDURE FOR SWIMMING SKILL ANALYSIS? |
| Kristine | De Martelaer | Vrije Universiteit Brussel | ISOLATED SKILL TEST BATTERY FOR ACTUAL AQUATIC SKILLACQUISITION IN CHILDREN (6-12Y) WITHIN THE EUROPEAN ALFAC("AQUATIC LITERACY FOR ALL CHILDREN") PROJECT |
| kinematics 2 - 07/09/2023 01:00 a.m. (GHS) Chair: Alexandre Guimard, Jernej Kapus | | | |
| Aléxia | Fernandes | CIF12D and LABIOMEPE, Faculty of Sport, University of Porto, Portugal | FRONT CRAWL AND BACKSTROKE KINEMATICS IN FEMALE SWIMMERS AT SPRINT PACE |
| Marek | Rejman | The Wroclaw University of Health and Sport Sciences, Poland | CONSCIOUS INTENSIFICATION OF THE LEG UPWARD MOVEMENTS IN BUTTERFLY SWIMMING |
| Tomohiro | Gonjo | Heriot-Watt University | KICKING FREQUENCY PROFILE DURING A 50 M BUTTERFLY RACE |
| Sohei | Washino | National Institute of Advanced Industrial Science and Technology | RELATIONSHIP BETWEEN SWIMMING VELOCITY AND PROJECTED FRONTAL AREA DURING FRONT CRAWL |
| Didier | Chollet | Rouen Normandie University | THE IMPORTANCE OF BREASTSTROKE GLIDE TIMES |
| model & technology 1 - 07/09/2023 01:00 p.m. (HSS 2) Chair: Takaaki Tsunokawa | | | |
| Antoine | Bouvet | M2S Laboratory | IMU-BASED CLUSTERING OF INTRA AND INTER-CYCLIC VARIABILITY TO EXTRACT TECHNICAL ABILITIES DURING FRONT CRAWL SPRINT |
| Ana Sofia | Monteiro | Faculty of Sport of University of Porto | MODELLING THE OXYGEN UPTAKE OFF-KINETICS IN SWIMMING |
| Brice | Guignard | University of Rouen Normandie | AUTOMATIC BUTTERFLY KEY POINTS DETECTION FROM INERTIAL MEASUREMENT UNITS: A CASE STUDY |
| Teruo | Nomura | Kyoto Institute of Technology | INGENUITY OF ANALYSIS USING AI FOR PLATFORM DIVING |

keynote - 08/09/2023 08:30 a.m. (GHS) Chair: Carla McCabe, Nicholas Bideau

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| Jodi | Cossor | Caversham | WHAT IMPACT DOES AN INTERDISCIPLINARY TEAM HAVE ON SWIMMING PERFORMANCE? |
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model & technology 2 - 08/09/2023 09:30 a.m. (HSS 1) Chair: Hirofumi Shimojo

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| Milivoj | Dopsaj | University of Belgrade Faculty of Sport and Physical Education | AGE-PERFORMANCE PROFILING IN ELITE BREASTSTROKE SWIMMERS: CAREER QUANTITATIVE MODEL |
| Milivoj | Dopsaj | University of Belgrade Faculty of Sport and Physical Education | FREESTYLE SWIMMING SPRINT VELOCITY AND BODY ROLL ANGLE AT YOUNG SWIMMERS MEASURED BY IMU SENSORS |
| Sergei | Kolmogorov | Northern (Arctic) Federal University | BUILDING A BRIDGE BETWEEN SCIENCE AND PRACTICE IN SPORT SWIMMING: FROM BLACK BOX TO MULTI-FACTORIAL MODELS |
| Bruno | Mezêncio | Universidade de São Paulo | ANALYSIS OF THE VIABILITY OF THE BURST-AND-COAST STRATEGY IN SWIMMING BASED ON A SIMPLE MONTE CARLO SIMULATION |
| Andy | Stamm | Griffith University, Nathan AUS | INVESTIGATION OF KEY METRICS IN FREESTYLE SWIMMING AT DIFFERENT EFFORT LEVELS AND BREATHING SIDES |

propulsion 1 - 08/09/2023 09:30 a.m. (HSS 2) Chair: Teruo Nomura, Raymond Cohen

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| Raphaël | Guignabel | Pprime Institute | PARAMETRIC STUDY OF PROPULSIVE FORCES IN FRONT CRAWL SWIMMING – ACCELERATION EFFECT AND FLOW BEHAVIOR |
| Dalton Müller | Pessôa Filho | São Paulo State University (UNESP) | MODELING ENERGETICS AND CRITICAL METABOLIC POWER IN TETHERED-SWIMMING |
| Thomas | Brunel | LHSV, Ecole des Ponts | VALIDATION OF A PROPULSION MODEL IN FRONT CRAWL SWIMMING |
| Kenta | Homoto | University of Tsukuba | DOES THE FLUTTER KICK EXERT PROPULSION IN FRONT CRAWL SWIMMING |
| Jesús Juan | Ruiz Navarro | University of Granada | RELATIONSHIP BETWEEN TETHERED SWIMMING AND UNDULATORY UNDERWATER SWIMMING PERFORMANCE |

training & competition 1 - 08/09/2023 09:30 a.m. (GHS) Chair: Jodi Cossor, Philippe Hellard

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| Andrei | Vorontsov | University of Bath, Bath | ALTITUDE TRAINING FOR PREPARATION OF ELITE SWIMMERS: A VIEW FROM THE POOL DECK. |
| Ioannis | Nikitakis | National and Kapodistrian University of Athens | APPLYING HEAVY AND EXTREME INTENSITY SWIMMING TRAINING IN THE SAME SESSION: EFFECT OF SET SEQUENCE ON PHYSIOLOGICAL RESPONSES AND PERFORMANCE |
| Ingeborg | Ljødal | Norwegian School of Sport Sciences | THE RELATIONSHIP BETWEEN SWIMMING PERFORMANCE AND ACHIEVEMENT GOAL ORIENTATION OF YOUNG SWIMMERS |
| Argyris | Toubekis | National and Kapodistrian University of Athens | ACUTE EFFECTS OF DRY LAND RESISTANCE TRAINING SESSIONS ON THE SUBSEQUENT SPRINT SWIMMING TRAINING BEFORE AND AFTER COVID-19 PANDEMIC |
| Joshua | Behr | Universität Bayreuth | THE INTERNATIONAL SWIMMING LEAGUE – AN ANALYSIS FROM A TRAINING SCIENCE PERSPECTIVE |

health & learn to swim Postersession 08/09/2023 (GHS & PHN) Chair: J. Paolo Vilas-Boas, Kipling Sharpe

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| Henrique | Neiva | University of Beira Interior/CIDESD | THE EFFECT OF DIFFERENT WATER AEROBICS INTENSITIES ON ANTHROPOMETRICS AND MUSCLE STRENGTH |
| Maila | Vogel | German Sport University Cologne | A COMPARISON OF SWIMMING SKILLS IN BRITISH AND GERMAN CHILDREN'S BOOKS |
| Bente Wäinösdatter | Laakso | Lillehammer Community | THE EFFECT OF PRIOR EXPERIENCE ON HOW CHILDREN PERCEIVE IMMERSION IN COLD WATER & GENDER DIFFERENCES IN THE PERCEPTION OF DISCOMFORT IN COLD WATER AMONG YOUTH |

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| Boro | Štrumbelj | University of Ljubljana, Faculty of sport | THE GENERAL CHARACTERISTICS OF SWIMMING EDUCATION PROGRAMS IN EUROPE - LEN LEARN TO SWIM SUB-COMMISSION REPORT |
| Ryoske | Inagaki | Gifu Shotoku Gakuen University | THE EFFECT OF RIVER-BASED LESSONS ON MIDDLE SCHOOL STUDENTS' AWARENESS OF DROWNING PREVENTION |
| Bente Wäinös-datter | Laakso | Lillehammer Community | PERFORMANCE ON A 200 METER COMBINED TEST: SWIM SUIT COMPARED TO FULL CLOTHING |
| Bente Wäinös-datter | Laakso | Lillehammer Community | THE PERCEPTION OF DISCOMFORT BEFORE AND AFTER COLD WATER IMMERSION AMONG SCHOOL CHILDREN |
| Ebbe | Horneman | Maihaugen Folk Museum | TESTING A TRADITIONAL PROGRESSION FOR BEGINNING SWIMMING AGAINST A PROGRESSION CHOSEN BY 5 & 6 YEAR OLD LEARNERS |
| Ebbe | Horneman | Maihaugen Folk Museum | CAN FUNCTIONAL BUOYANCY AND FLOATING ANGLE PREDICT SUCCESS IN LEARNING BEGINNING SWIMMING SKILLS AMONG YOUNG MEN? |
| Takeshi | Matsui | Otemon Gakuin University | EFFECTS OF LONG-TERM WATER EXERCISE TRAINING ON SKELETAL MUSCLE MASS IN THE OLDER ADULTS: INCLUDING THE EFFECT OF A PERIOD OF COVID-19 SELF-RESTRAINT AFTER THE TRAINING PERIOD |
| olympic/paralympic sports Postersession 08/09/2023 (GHS & PHN) Chair: Daniel Daly | | | |
| Reira | Hara | College of sports science, Nihon University | SEX DIFFERENCES IN PACING STRATEGIES DURING OPEN WATER SWIMMING. |
| Tiago | Almeida | São Paulo State University | VO2 KINETICS AT SEVERE INTENSITY DOMAIN: A PILOT STUDY COMPARING THE PHYSIOLOGICAL RESPONSE TO FREE AND TETHERED SWIMMING |
| Michael | McKenna | sportscotland institute of sport | RELATIONSHIP BETWEEN SWIMMING START, TURN AND FINISH ON FINAL RACE TIME IN 200M EVENTS |
| Pierre-Marie | Leprêtre | Université de Picardie Jules Verne | IMPACT OF IMPOSED STROKE RATE ON REPEATED SPRINT SWIMMING ABILITY AND PERCEPTUAL COGNITIVE LOAD: EFFECT OF EXPERTISE AND DEFICIENCY |
| Yuki | Funai | Kumamoto Gakuen University | TRAINING INTENSITY AND STROKE VARIABLES DURING INTERVAL TRAINING AT CRITICAL SWIMMING VELOCITY IN NATIONAL-LEVEL SWIMMERS |
| Phornpot | Chainok | Faculty of Sport Science, Burapha University, Thailand | DETERMINANT FACTORS OF 5 KM AGE-GROUP OPEN WATER SWIMMING PERFORMANCE |
| Argyris | Toubekis | National and Kapodistrian University of Athens | PHYSIOLOGICAL RESPONSES DURING UNDERWATER AND SURFACE REPEATED SPRINT FINNSWIMMING |
| Ricardo | Peterson Silveira | Université Rennes 2 | QUANTIFYING THE EXTERNAL LOADS IMPOSED BY A COMMERCIALY AVAILABLE SET OF SWIMMING PARACHUTES |
| Andrea | Perazzetti | University of Belgrade, Faculty of Sport and Physical Education | MODEL FOR ASSESSMENT FRONT CRAWL SPRINT SWIMMING POTENTIAL AT YOUTH WATER POLO PLAYERS: INTERNATIONAL STANDARDISATION APPROACH |
| Jernej | Kapus | University of Ljubljana, Faculty of Sport | EVALUATION OF MISTAKES IN BREASTSTROKE SWIMMING |
| Marcus Vinícius | Sampaio Peres | Universidade Federal do Rio de Janeiro | EFFECT OF STANDARDIZATION OF OBSERVATION AND EVALUATION CRITERIA OF THE FRONT CRAWL ARM STROKE TECHNIQUE ON INTERAND INTRA-RATER RELIABILITY |

| physiology - 08/09/2023 01:00 p.m. (GHS) Chair: Hideki Takagi, Argyris Toubekis | | | |
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| Catarina C. | Santos | University of Beira Interior, CIDESD | PERFORMANCE PROGRESSION AND VARIABILITY OF MEN'S 200 M INDIVIDUAL MEDLEY AT THE 2022 FINA WORLD CHAMPIONSHIPS |
| Yasunori | Watanabe | Sendai University | DOES COVERING THE NECK WITH THE HANDS REDUCE BODY HEAT LOSS IN PEOPLE IMMERSSED IN COLD WATER? |
| Mingyu | Shang | Beijing sport university | STUDY OF HEAD AND HIP STANCE CHARACTERISTICS OF SWIMMERS |
| Alexandre | Guimard | Université Sorbonne Paris Nord, Laboratoire Hypoxie et Poumon | EFFECT OF UNDERWATER SWIMMING ON PHYSIOLOGICAL AND PERCEPTUAL PARAMETERS IN ELITE SWIMMERS IN NORMOXIA AND ALTITUDE HYPOXIA CONDITIONS |
| Robin | Pla | French Swimming Federation | PHYSIOLOGICAL DETERMINANTS OF OPEN-WATER SWIMMERS |
| Sebastian | Weber | INSCYD GmbH | INFLUENCE OF THE METABOLIC PROFILE OF A SWIMMER ON THE ENERGETIC CONTRIBUTIONS AND POSSIBLE TRAINING STIMULUS DURING INTERVAL TRAINING – AN IN SILICO ANALYSIS. |
| technique 2 - 08/09/2023 01:00 p.m. (HSS1) Chair: Henrique Neiva | | | |
| Bjørn Harald | Ølstad | Norwegian School of Sport Sciences | VARIANCE IN FRONT CRAWL LOAD-VELOCITY TESTING USING FIXED OR INDIVIDUAL LOADS |
| Andrea | Perazzetti | University of Belgrade, Faculty of Sport and Physical Education | CRAWL OR TRUDGEN? A FACTORIAL STRUCTURE OF THE TWO MOST IMPORTANT SWIMMING STYLES IN YOUTH WATER POLO PLAYERS |
| Ludovic | Seifert | University of Rouen Normandie, CETAPS UR3832 | DOES COORDINATION ASYMMETRY RELATE TO UNILATERAL BREATHING AND/OR IMPAIRMENT SIDE IN FRONT CRAWL PARALYMPIC SWIMMERS ? |
| Jukka | Shemeikka | Olympic Training Center Rovaniemi | A MULTI-LIMB COORDINATION APPROACH TO FRONT CRAWL |
| Ricardo | Peterson Silveira | Université Rennes 2 | THE INTERPLAY BETWEEN ACTIVE DRAG, ARM STROKE EFFICIENCY AND PROPULSIVE POWER AS DETERMINANTS OF FRONT CRAWL SPRINT PERFORMANCE |
| keynote - 08/09/2023 03:00 p.m. (GHS) Chair: Hirofumi Shimojo, Andreas Hohmann | | | |
| Ricardo | Fernandes | Universidade do Porto | PHYSIOLOGICAL BASED TRAINING ZONES |

| keynote - 09/09/2023 08:30 a.m. (GHS) Chair: Tomohiro Gonjo, Argyris Toubekis | | | |
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| Dagmar | Dahl | NORD Universitet | „IT WAS VERY COLD; BUT LOVELY“ - COLD WATER SWIMMING IN NATURE ALL YEAR ROUND IN NORTHERN EUROPE: MOTIVATIONS; BENEFITS & RISK ZONES |
| forces/flow - 09/09/2023 09:30 a.m. (HSS 1) Chair: Ricardo Fernandes, Bodo Ungerechts | | | |
| Catarina C. | Santos | University of Beira Interior, CIDESD | CHANGES IN FORCE AND SYMMETRY OF YOUNG SWIMMERS OVER A FULL COMPETITIVE SEASON AND TRAINING CESSATION |
| Diogo | Duarte Carvalho | Faculty of Sport of University of Porto | A NEW LOOK ON UPPER AND LOWER LIMBS CONTRIBUTION DURING MAXIMAL FRONT CRAWL SWIMMING |
| Keisuke | Yamakawa | Japan Women's College of Physical Education | RELATIONSHIP BETWEEN FLUID FORCE ACTING ON A FOOT AND MUSCLE ACTIVITY OF LOWER LIMB IN BREASTSTROKE KICKING |
| Hirofumi | Shimojo | Niigata University of Health and Welfare, Department of Health and Sports | WAKE FLOW VISUALIZATION AROUND SWIMMER'S FOOT AND THRUST FORCE ESTIMATION AT AN INDOOR SWIMMING POOL. |
| Philippe | Hellard | CREPS Bordeaux | RELATIONSHIPS BETWEEN HEART RATE VARIABILITY, METABOLOMIC RESPONSES, WELL-BEING DURING A SIX WEEK INTENSIVE TRAINING PERIOD. |
| propulsion 2 - 09/09/2023 09:30 a.m. (GHS) Chair: Kari Keskinen | | | |
| Takahiro | Tanaka | Ritsumeikan University | PROPULSION AND BRAKING MECHANISM OF UNDERWATER UNDULATORY SWIMMING: AN ANALYSIS OF THE FLUID FORCE OF EACH VORTEX OF THE FEET, TRUNK, AND UPPER LIMBS |
| Yusaku | Nakazono | University of Tsukuba | UNDERWATER UNDULATORY SWIMMING PROPULSION MECHANISM OF LEFT LOWER LIMB DEFICIENT SWIMMER USING PIV METHOD |
| Silvia | Fantozzi | University of Bologna | SYMMETRY OF PROPULSION EXERTED DURING TETHERED- AND FREE-SWIMMING |
| Matteo | Cortesi | Department for Life Quality Studies, University of Bologna | ACTIVE DRAG ESTIMATES BASED ON FULL AND SEMI-TETHERED SWIMMING TESTS |
| Vittorio | Coloretti | Alma Mater Studiorum, Università di Bologna | VALIDITY AND RELIABILITY OF THE WIRELESS PRESSURE SENSOR FOR AQUATIC ACTIVITIES AND ITS ECOLOGICAL USEFULNESS FOR SWIMMING PROPULSION ANALYSIS |
| start & relay - 09/09/2023 09:30 a.m. (HSS 2) Chair: Paulo Vilas-Boas | | | |
| Santiago | Veiga | Universidad Politécnica de Madrid | WHAT MAKES A RELAY START PERFORMANCE BETTER THAN THE INDIVIDUAL START? |
| Claudia | Braun | University of Kassel | HOW RELAY SWIMMERS ACHIEVE PERFORMANCE GAINS |
| Charlie | Prétot | Ecole des Ponts | OPTIMISATION OF THE START BASED ON INDIVIDUAL PROPERTIES OF THE SWIMMER |
| Francisco | Cuenca-Fernández | Universidad Pablo de Olavide, Seville, Spain. | DRYLAND RE WARM-UP ON KIDS' SWIM START PERFORMANCE |
| biomechanics - Postersession 09/09/2023 (GHS & PHN) Chair: Milivoj Dopsaj, Marek Rejman | | | |
| Gabriela | Da Cunha Brandão Reis | Federal University of Rio de Janeiro (UFRJ) | RELATIVE STROKE LENGTH MEASUREMENT IN THE TETHERED SWIMMING TEST |
| Hiroshi | Suito | Mie university | EFFECT OF THE STRONG LEG POSITIONING FOR THE KICK-START PERFORMANCE IN COMPETITIVE SWIMMING |
| Flávio | Castro | Universidade Federal do Rio Grande do Sul | FRONT CRAWL IN OPEN-WATER: ACTUAL DISTANCE SWUN, KINEMATICS, AND ARM STROKE EFFICIENCY |
| Flávio | Castro | Universidade Federal do Rio Grande do Sul | SWIMMING SPATIAL-TEMPORAL VARIABLES OBTAINED WITH MANUAL TIMEKEEPING AND VIDEO ANALYSIS: COMPARISON, CORRELATION, AND AGREEMENT |

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| Kohji | Wakayoshi | Osaka University of Economics, Faculty of Human Sciences | EFFECT OF UNDERWATER BALANCE ASSIST BUOYS ON THE SWIMMING PERFORMANCE OF BEGINNING SWIMMERS |
| Takaaki | Tsunokawa | University of Tsukuba | THE EFFECTS OF FLUTTER KICK ON ACTIVE DRAG DURING FRONT CRAWL SWIMMING |
| Daniel | Marinho | University of Beira Interior | COMPARISON OF BUTTERFLY MALE SWIMMERS' PROPULSION BY STATISTICAL PARAMETRIC MAPPING |
| Lucian | Betke | German Sport University Cologne | THE CHARACTERISTICS OF UNDERWATER DOLPHIN KICKING IN SWIMMING: A SYSTEMATIC REVIEW |
| Kazumasa | Ozeki | Osaka University of Health and Sport Sciences | KINEMATIC CHARACTERISTICS OF ATHLETES OBTAINING HIGH TAKE-OFF VELOCITY AT THE START PHASE |
| Shin | Sakai | Tokyo Women's College of Physical Education | THE KINETIC CHARACTERISTICS OF MALE AND FEMALE SWIMMERS KICK-START MOTION IN COMPETITIVE SWIMMING. |
| olympic/paralympic sports & biomechanics - Postersession 09/09/2023 (GHS & PHN) Chair: Bodo E Ungerechts, Veit Wank | | | |
| Aléxia | Fernandes | CIF12D and LABIOMEPE, Faculty of Sport, University of Porto, Portugal | HIP ROTATION ASYMMETRIES IN FRONT CRAWL AND BACKSTROKE |
| Hiroshi | Ichikawa | Nishikyushu University | HYDRODYNAMIC EFFECT OF HAND FLOW ON KICKING IN FRONT CRAWL SWIMMING |
| Ludovic | Seifert | University of Rouen Normandie, CETAPS UR3832 | PROFILING STROKING PARAMETERS MANAGEMENT IN FRONT CRAWL |
| Daiki | Koga | Tokyo Institute of Technology | COMPARISON OF HAND FLUID FORCE AND HAND KINEMATICS BY STROKE PHASE IN SPRINT FRONT CRAWL SWIMMING BETWEEN PERFORMANCE LEVEL |
| Motomu | Nakashima | Tokyo Institute of Technology | ATHLETE-SPECIFIC OPTIMIZING SIMULATION OF ARMSTROKE IN CRAWL SWIMMING CONSIDERING INDIVIDUAL SHOULDER JOINT TORQUE CHARACTERISTICS |
| Toyoda | Yugo | Tokyo Gakugei University | COMPARISON OF TETHERED SWIMMING POWER AND FORCE BETWEEN NATIONAL JAPANESE AND NON-NATIONAL JAPANESE WATER POLO PLAYERS |
| Neice | Bahia Carneiro | Federal University of Amazonas | CORRELATION OF FINA POINTS WITH ISOKINETIC TORQUE SYMMETRY INDEX OF THE SHOULDER JOINT IN SWIMMERS |
| Marko | Đurović | Faculty of Sport and Physical Education, University of Nis, Serbia | EFFECTS OF DIFFERENT WARM-UP PROTOCOLS ON SWIM START PERFORMANCE |
| Bjørn Harald new | Ølstad new | Norwegian School of Sport Sciences | ARE LOAD-VELOCITY PROFILE PARAMETERS IMPORTANT FOR 200 M FRONT CRAWL PERFORMANCE? |
| Takahisa | Die | Osaka University of Health and Sport Sciences/ Grand Canyon University | EFFECTS OF STRAIGHT KNEE BUTTERFLY KICK IN 50METER BUTTERFLY PERFORMANCE AND LACTATE ACID: THE CASE STUDY USING THE MEN'S FORMER WORLD RECORD HOLDER AND FORMER ASIAN RECORD HOLDER |
| Jaewoo | Kim | Tsukuba university | CASE REPORT OF THE ONE SEASON CHANGE IN SWIMMING ECONOMY EVALUATED AT HIGH INTENSITY DOMAIN, AEROBIC CAPACITY AND 200-M FREESTYLE PERFORMANCE |
| Billy | So | Hong Kong Polytechnic University | THE EFFECT OF CORE TRAINING IN FRONT CRAWL SWIM, FORCE AND CORE MUSCLE ACTIVITY: A PILOT STUDY |

| model & technology 3 - 09/09/2023 01:00 p.m. (GHS) Chair: Mathias Samson, Ioannis, Chalkiadakis | | | |
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| Matevž | Hribernik | University of Ljubljana, Faculty of Electrical Engineering | HAPTIC FEEDBACK SYSTEM FOR SWIMMING |
| Adrian | Campbell | SportScotland Institute of Sport | ACCURACY OF THE TRITONWEAR UNIT IN HIGH PERFORMANCE SWIMMERS |
| Simbana Escobar | David Napoleon | CETAPS | USING PARAMETRIC MAPPING TO ASSESS THE IMPACT OF STROKE RATE ON THE UPPER LIMB KINEMATICS IN SWIMMING |
| Raúl | Arellano | Aquatics Lab, Faculty of Sports Science, University of Granada | UNDERWATER UNDULATORY SWIMMING: LINKING KINEMATICS, WAVE ANALYSIS AND FLOW VISUALIZATION |
| training & competition 2 - 09/09/2023 01:00 p.m. (HHS 1) Chair: Stefan Hochstein | | | |
| Yasuo | Sengoku | Univ. of Tsukuba | EFFECT OF PRE-RACE CORE EXERCISE ON 50 M FRONT CRAWL PERFORMANCE -CASE STUDY FOCUSING ON INDIVIDUAL TRUNK MUSCULAR ACTIVITY- |
| Klara | Šiljeg | Faculty of Kinesiology, University of Zagreb, Croatia | TWO YEAR FOLLOW-UP STUDY: POST RACE LACTATE RECOVERY AS A MEASURE OF SPECIFIC ADAPTATION - INDIVIDUAL APPROACH STUDY |
| Tiago | Almeida | São Paulo State University | RELATIONSHIP BETWEEN TIME LIMIT AT MAXIMAL AEROBIC VELOCITY AND SWIMMING PERFORMANCE IN YOUNG SWIMMERS |
| Pedro | Santos | University of Coimbra | INDEX OF COORDINATION IN CROL TECHNIQUE AT USUAL DISTANCES IN TRAINING |
| Shan | Song | Shanghai Research Institute of Sports Science(shanghai Anti-Doping Agency) | A STUDY ON THE EFFECT OF ANAEROBIC THRESHOLD KICKING IN THE FLUME FOR JUVENILE SWIMMERS |
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