

| WMHE 2026 - 19 <sup>th</sup> International Symposium on Water Management and Hydraulic Engineering<br>September 16-19, Hotel Admiral, Opatija, Croatia |                  |                                                                                                                                                                                |                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DAY 1<br>Wednesday<br>September, 16                                                                                                                    | 18:30<br>- 20:15 | Welcome Reception (Icebreaker Event) - <i>Hotel Admiral</i>                                                                                                                    |                                                                                                                                                                                                                |
| DAY 2                                                                                                                                                  | Time             | Room A                                                                                                                                                                         | Room B                                                                                                                                                                                                         |
| DAY 2<br>Thursday<br>September, 17                                                                                                                     | 8:00             | Registration - <i>Registration Desk, outside the conference halls</i>                                                                                                          |                                                                                                                                                                                                                |
|                                                                                                                                                        | 9:30             | Opening Ceremony                                                                                                                                                               |                                                                                                                                                                                                                |
|                                                                                                                                                        | 9:45             | WMHE Throughout the Years                                                                                                                                                      |                                                                                                                                                                                                                |
|                                                                                                                                                        | 10:00            | Keynote Lecture 1<br>NEJC BEZAK:<br>Mitigation of typical torrential hazards in the Kravac area in Slovenia                                                                    |                                                                                                                                                                                                                |
|                                                                                                                                                        | 10:40            | Coffee break                                                                                                                                                                   |                                                                                                                                                                                                                |
|                                                                                                                                                        | 11:10            | Keynote Lecture 2<br>MANOUSOS VALYRAKIS:<br>From Turbulent Events to Particle Response: A Dynamical Framework for Sediment Transport, Smart Sensing and Resilience             |                                                                                                                                                                                                                |
|                                                                                                                                                        | 11:50            | Keynote Lecture 3<br>SUZANA ILIĆ:<br>Coastal Adaptation: Connecting Science, Communities and Action                                                                            |                                                                                                                                                                                                                |
|                                                                                                                                                        | 12:30            | Lunch Break                                                                                                                                                                    |                                                                                                                                                                                                                |
|                                                                                                                                                        | 14:00            | CLIMATE CHANGE AND FLOOD RISK<br>MANAGEMENT 1<br>(Bekić & Brleković)                                                                                                           | INTEGRATED WATER SUPPLY,<br>SEWERAGE, AND TREATMENT<br>SYSTEMS<br>(Posavčić & Bartloкова)                                                                                                                      |
|                                                                                                                                                        |                  | BRLEKOVIĆ, T.; TADIĆ, L.; JANIĆ, J.; MIJUŠKOVIĆ-SVETINHOVIĆ, T.:<br>Analysis of Temperature and Precipitation Parameters and Their Influence on Drought Occurrence in Osijek   | HALKIJEVIC, I.; CRNOJA, A.; LICHT, K.; POSAVČIĆ, H.:<br>Biotechnological Potential of Algae for Wastewater Treatment                                                                                           |
|                                                                                                                                                        |                  | BERBIĆ, J.; OCVRK E.:<br>Comparative Analysis of Station-based and Climate Model Data For Flow Modelling                                                                       | NAKIĆ, D.; LICHT, K.; POSAVČIĆ, H.; MALIKOVIĆ, D.; LEOVAC MAČERAK, A.; ŠRAJBEK, M.:<br>Advanced Wastewater Treatment Using Sewage Sludge-Derived Biochar as a Circular Adsorbent Material                      |
|                                                                                                                                                        |                  | GRŽIĆ, M. M.; OŽANIĆ, N.; KRVAVICA, N.:<br>Early Warning System Based In Pre-Simulated Scenarios for Compound Flooding: Application to the Rječina River, Rijeka               | POSAVČIĆ, H.; NAKIĆ, D.; LICHT, K.; PRKAČIN, A.:<br>Application Of Biochar For The Removal of The Pharmaceutical Zidovudine From Wastewater                                                                    |
|                                                                                                                                                        |                  | JURIK, L.; KALETOVA, T.; VALEK, A.; LENARTOWICZ, M.:<br>Historical Changes in Flow Rates in the Klatov Branch                                                                  | BARLOKOVA, D.; ILAVSKY, J.; PROSNANSKY, M.; KRESCANKO, M.:<br>The Use of Ultrafiltration in Water Treatment                                                                                                    |
|                                                                                                                                                        |                  | PETKOVIĆ, I.; OŽANIĆ, N.; KRVAVICA, N.:<br>Evaluating The SCS-CN Method In The Pazinčica River Catchment (Croatia): Measured Extremes Vs. Event-Based Hydrological Simulations | HORVAT, M.; GOLUB, N.:<br>Wastewater Treatment in Small Settlements Using the Tehnik Biorotor System                                                                                                           |
|                                                                                                                                                        |                  | KRVAVICA, N.; GRŽIĆ, M.M.; ŠILJEG, A.:<br>Compound Flood Hazard Assessment in the Zrmanja River Estuary Using Joint Probability Analysis                                       | VOUK, D.; FANJEK, K.; LICHT, K.; NAKIĆ, D.:<br>Hybrid Electrocoagulation-Adsorption Treatment of Ammunition Manufacturing Wastewater: Influence of Process Parameters on COD, Heavy Metals and Sulfate Removal |
|                                                                                                                                                        | 15:30            | Coffee Break                                                                                                                                                                   |                                                                                                                                                                                                                |
|                                                                                                                                                        | 16:00            | CLIMATE CHANGE AND FLOOD RISK<br>MANAGEMENT 2<br>(Potočki & Szydtowski)                                                                                                        | GROUNDWATER HYDRAULICS AND<br>WATER QUALITY<br>(Halkijević & Zima)                                                                                                                                             |
|                                                                                                                                                        |                  | VUIĆ, F.; BEKIĆ, D.; BEZAK, N.; POTOČKI, K.:<br>Comparison Of Univariate And Bivariate Approaches To Design Hydrograph Derivation In Croatian And Slovenian Catchments         | ZIMA, P.:<br>Correct Adoption of the Two-Dimensional Dispersion Tensor for Pollutant Propagation in Wide Rivers                                                                                                |
|                                                                                                                                                        |                  | ZELENAKOVA, M.; NAGY, P.; KUBIAK-WOJCICKA, K.:<br>Assessment of Hydrological Risks in Hornad River Basin                                                                       | ŘÍHA, J.; JULÍNEK, T.:<br>Urban Areas and Groundwater Flow Issues                                                                                                                                              |
|                                                                                                                                                        |                  | BEKIĆ, D.; LUŠ, D.:<br>Trends In River And Flash Flood Events And Associated Fatality Indicators In Europe Over The Past 50 Years                                              | ĐURIN, B.; ŠRAJBEK, M.; TRABE BARANAŠIĆ, T.; BAHMANPOURI, F.:<br>Application of the Entropy Theory in a Case of the Meander in a Complex Hydrogeological Media                                                 |
|                                                                                                                                                        |                  | ORFÁNUS, M.; SOLTÉSZ, A.; BILČIKOVÁ, N.:<br>Options for Flood Protection of the Záhorská Bystrica Urban Area                                                                   | ŠRAJBEK, M.; ĐURIN, B.; MIKIĆ, M.; NOVOTNI-HORČIČKA, N.:<br>Innovative Trend Analysis (ITA) of Groundwater Quality Parameters at the Bartolovec Wellfield (Croatia)                                            |
|                                                                                                                                                        |                  | GALATA, A. W.; RATKA, K.; SZYDŁOWSKI, M.:<br>The Role of Retention Reservoirs in Urban Flood Protection in the Kacza River Basin in Gdynia, Poland                             | TADIĆ, L.; JUERITČ, L.; BRLEKOVIĆ, T.; TAMAS, E. A.; KOCH, D.:<br>Transboundary Water Cooperation Between EU Member States and the Third Countries                                                             |
|                                                                                                                                                        |                  | ŠRENG, Ž.; ŠPERAC, M.; MARIČIĆ, S.; VOUK, D.; LAUŠ, F.:<br>Influence Of Design Hyetograph Construction Methods On Urban Runoff Simulation                                      |                                                                                                                                                                                                                |

| Day 3                            | Time  | Room A                                                                                                                                                                                                                    | Room B                                                                                                                                                                                  |
|----------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day 3<br>Friday<br>September, 18 | 8:30  | Registration - Registration Desk, outside the conference halls                                                                                                                                                            |                                                                                                                                                                                         |
|                                  | 9:00  | <b>Integrated Water Resources Management<br/>(Vouk &amp; Julínek)</b>                                                                                                                                                     | <b>Hydraulic Engineering for Improving Infrastructure Resilience<br/>(Berbić &amp; Skokan)</b>                                                                                          |
|                                  |       | MARTINIĆ, I.; ČANJEVAC, I.:<br>Hydrological Characteristics of the Medvednica Mountain Springs                                                                                                                            | DOBRANSKY, M.; ZELENAKOVA, M.; ABD ELHAMID, H.; GARAJ, M.:<br>Proposal of Fishpasses Based on Monitoring                                                                                |
|                                  |       | IZYDORSKI, J.:<br>Comparative Hydrological Analysis of Sudetic and Apennine Catchments: a Study of the Oder River Basin and the Rivers of the po Valley                                                                   | RUTZKÁ, A.; VIDOVÁ, A.; ČUBANOVÁ, L.:<br>Optimization of the Manning ’s Roughness Coefficient Value for 1-D Fish Pass Numerical Modeling                                                |
|                                  |       | HAJDUK ČERNEHA, B., VOUK, D., NAKIČ, D., BUJAK, D.:<br>A Case Study To Test The Feasibility Of Using Managed Aquifer Recharge In Karst Area                                                                               | ŠULEK, P.; ORFÁNUS, M.; ČERVEŇANSKÁ, M.:<br>Software Tool for Operational Control of the Gabčíkovo Hydropower Plant on the Danube: Linking Water Flow Simulations and Energy Management |
|                                  |       | JULÍNEK, T.; ŘÍHA, J.; SKOKAN, J.; KOTAŠKA,S.:<br>Strategic Reconnection Of Floodplains For Implementing The Eu 2030 Biodiversity Strategy In Levee Management                                                            | ŘÍHA, J.:<br>Safety Assessment of Hydraulic Structures Using Risk Analysis                                                                                                              |
|                                  |       | LOBOREC, J.; PLANTAK, L.; LESKOVAR, K.; BIONDIĆ, R.:<br>Cartographic Microzonation of Nitrate Vulnerability in the Varaždin Aquifer Through Integration of Field Measurements, Historical Time Series and Land Cover Data | SKOKAN, J.; DUCHAN, D.; DRÁB, A.:<br>Computer-Efficient Cfd Application: Adaptive Discretization For 3D Air-Water Bridge Flow With Scale-Resolving Simulation                           |
|                                  |       | PLANTAK, L.; LESKOVAR, K.; MEAŠKI, H.; BIONDIĆ, R.:<br>A Framework for Urban Climate Resilience: Regulation Elements for Groundwater Protection in the Varaždin Aquifer                                                   | BUJAK, D.; MENDEŠ, V.; ŠTEFAN, L., CAREVIĆ, D.:<br>Uncertainty Quantification of Wave Transmission of Pi-Type Floating Breakwaters                                                      |
|                                  | 10:30 | Coffee Break                                                                                                                                                                                                              |                                                                                                                                                                                         |
|                                  | 11:00 | <b>Hydroinformatics and Remote Sensing Technologies<br/>(Đurin &amp; Červeňanská)</b>                                                                                                                                     | <b>Green Technologies and Sustainable Water Management<br/>(Gilja &amp; Čubanová)</b>                                                                                                   |
|                                  |       | ČERVEŇANSKÁ, M.; PECHO, P.; CHROMČÁK, J.; PAPČO, J. TOTH, R.; RUTZKÁ, A.; PAVLOV D. BILČIKOVÁ, N.:<br>High-resolution UAV Laser Scanning of the Channel Morphology – Comparison with Traditional Surveying Techniques     | RANDELOVIĆ, A.; LJUBIČIĆ, R.; STANIĆ, F.; VASILIĆ, Ž.:<br>From Stormwater To Wellbeing: Nature-Based Solutions For Urban Water Management And Thermal Comfort – euPOLIS BGD             |
|                                  |       | GALEŠIĆ ĐIVIĆ, M.; ĐIVIĆ, V.; SARDELIĆ, M.; RUMENOVIC, R.:<br>Jadro as a Living Lab: Integrating Low-Cost Drifters with System-Based Assessment in Education and Monitoring                                               | ZELENAKOVA, M.; FIJKO, R.; KUHAL, A.; OVCIARKA, M.:<br>Water Retention Measures In The Turany Nad Ondavou Village                                                                       |
|                                  |       | HORVAT, B.; OŠTRIĆ, M.; RADIŠIĆ, M.; RUBINIĆ, J.:<br>Advancing the Temporal Dynamics Analysis of the Bulaž Spring Catchment Water Balance with Global Moderate Resolution Soil Moisture Datasets                          | HARASTI, A.; GILJA, G.; TATARIN, D.; TOŠIĆ, I.:<br>Revitalization of a Drava River Side Branch Using 2D Numerical Modelling                                                             |
|                                  |       | KUBIAK-WOJCICKA, K.; JAMORSKA, I.; NOWAK, M.; PILARSKA, A.:<br>Detection of Drought Events in the Drwęca River Basin Using Standardized Indices and Satellite Data                                                        | ŠOLTÉSZ, A.; BILČIKOVÁ, N.; PAVLOV, D.:<br>Nature-based Solution for Climate Change Adaptation - Case Study in Slovakia                                                                 |
|                                  |       | HOLJEVIĆ, T.; HOLJEVIĆ, D.:<br>Flood Risk Assessment and Hydraulic Capacity Analysis of the Ungauged Rokalovo Karst Catchment                                                                                             | BARIŠIĆ LASOVIĆ, A.; TADIĆ, I.; SABO, G.; BATAKOVIĆ, N.:<br>Integrating Hydrodynamic Habitat Modelling And Nature-Based Solutions For The Restoration Of The Noskovačka Bara Side Arm   |
|                                  |       | ŠTEFAN, L.; BUJAK, D.; MIUČEVIĆ, H.; CAREVIĆ, D.:<br>Evaluation of Reanalysis and Climate Products for Wind Forcing of a Mid-Adriatic Numerical Wave Model                                                                | BATICA, J.; SRETENOVIC, Ž., RAKONJAC, N.:<br>Nature-Base Solutions In The Water Sector In Serbia And The EU: From The Regulatory Alignment To Implementation Challenges                 |
|                                  | 12:30 | Lunch Break                                                                                                                                                                                                               |                                                                                                                                                                                         |
|                                  | 14:00 | <b>Green Technologies and Sustainable Water Management &amp; Integrated Water Supply, Sewerage, and Treatment Systems<br/>(Nakić &amp; Galešić Đivić)</b>                                                                 | <b>Numerical Modelling in Hydraulics &amp; Geotechnical Engineering – Design, Safety, Monitoring and Climate Resilience<br/>(Carević &amp; Krvavica)</b>                                |
|                                  |       | CRNOJA, A.; ŠRAJBEK, M.; ĐURIN, B.; NAKIĆ, D.:<br>The Impact Of Waste Car Tires On The Aquatic Environment And The Potential Of Recycling Into New Construction Products                                                  | LESKOVAR, K.; BEKIĆ, D.; PLANTAK, L.; MEAŠKI, H.:<br>Hydrological Model Calibration Using Swat-Cup                                                                                      |
|                                  |       | FICSOR, J.:<br>Establishment And Operation Of Small-Scale, Nature-Based Water Retention Solutions For Adaptation To Climate Change                                                                                        | MAHAVEER; ZIMA, P.:<br>Design Optimization Of Separator                                                                                                                                 |
|                                  |       | ŽIČ, E.; VOLF, G.; HORVAT, B.:<br>Comparative Hydraulic Analysis And Optimisation Of The Water Supply System In A Residential And Tourist Area                                                                            | LESKOVAR, K.; BEKIĆ, D.; MEAŠKI, H.; BIONDIĆ, R.:<br>Modelling of Snowmelt using Swat in the Case of the Upper Drava Catchments                                                         |
|                                  |       | ŽIČ, E.; VOLF, G.; HORVAT, B.:<br>Hydraulic Analysis And Optimisation Of An Annular Water Supply System In An Urban Area                                                                                                  | ŠKVARKA, J.:<br>Calibration of Seepage Models of Earthfill Dams Using Borehole Tracer Measurements                                                                                      |
|                                  |       | STANIĆ, F.; RANDELOVIĆ, A.; JACIMOVIĆ, N.:<br>Porous Asphalt As A Flood Resilience Solution: Coupled Surface-Subsurface Water Flow Modelling In Porous Asphalts                                                           | BODLAK, M.:<br>Three-Dimensional Numerical Modeling Of Geometrically Complex Underground Excavations Based On Terrestrial Laser Scanning Data                                           |
|                                  |       | VLAHOVIĆ, D.; HANŽEK, N.; CELINŠČAK, M.; CVETNIĆ, M.; STANKOVIĆ, I.:<br>Using Multi-Year Phytoplankton Data To Prioritise Freshwater Lakes For Targeted Cyanotoxin Monitoring                                             | NIKOLOVSKA ATANASOVSKA, J.; JOSIFOVSKI, J.:<br>Biotechnical Approaches For Hydro Mechanical Behavior And Long-Term Slope Stability                                                      |
|                                  | 15:30 | Coffee Break                                                                                                                                                                                                              |                                                                                                                                                                                         |

| DAY 3                              | Time          | Poster Session                                                                                                                                                                            |                                                                                                                                                                                                                                            |
|------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DAY 3<br>Friday<br>September, 18   | 16:00         | CONRADT, H.; HATTERMANN, F.F.:<br>Flood Hazard Changes Across the Danube River Basin Under Climate Change                                                                                 | ŠRAJBEK, M.; ĐURIN, B.; CRNOJA, A.; NOVOTNI-HORČIČKA, N.; NAKIĆ, D.:<br>Geostatistical Modelling of Spatial Distribution of Groundwater Quality Parameters at the Bartolovac Wetfield (Croatia)                                            |
|                                    |               | ŠRENG, Ž.; GRUBIŠIĆ, M.; BERBIĆ, J.; BRLEKOVIĆ, T.:<br>Impact Of Primary Precipitation Data Processing On Dimensionless Hyetographs                                                       | MENDEL, A.; TADIĆ, L.:<br>Water Quality Analysis in the Orljava River Basin Area                                                                                                                                                           |
|                                    |               | KALETOVA, K.:<br>Analysis of Gauging Stations with Zero Flow Occurrence in the Year in the Streams of Slovakia Between 1993 And 2022                                                      | MOSTEČAK, H.; VOUK, D.; NAKIĆ, D.; OŠKORUŠ, D.:<br>Methodology for Wholesale Water Pricing Between Public Water Utilities in Croatia: Legal Framework and Cost Allocation                                                                  |
|                                    |               | MILIČEVIĆ, H.; CAREVIĆ, D.; BUJAK, D.:<br>The Effect Of Submerged Sill On The Morphodynamic Response Of Artificial Pocket Gravel Beaches                                                  | BUJAK, D.; JEDRIŠ, I.; ŠTEFAN, L.; MILIČEVIĆ, H.:<br>Calibration of Analytical Models for Wave Prediction                                                                                                                                  |
|                                    |               | ROCA TORRES, O.; OŠKORUŠ, D.; MEAŠKI, H.; ZAVRTNIK, S.:<br>Possibilities of Water Resources Use From Drainage Canals Along Reservoirs on The Drava River, Croatia                         | SEKOVSKI, D.; MIUHAXHIRI, V.:<br>Integrated Monitoring, Modelling, Planning, and Institutional Capacity as Enablers of IWRM Implementation in The Western Balkans: The Case of Kosovo                                                      |
|                                    |               | OCVIRK, E.; NAGUČ, P.:<br>125 Years Of Regulation Of The Sava River In Zagreb - An Unfinished Story                                                                                       | BERBIĆ, J.; ŠRENG, Ž.; ŠPERAC, M.; KAPUSTIĆ, J.:<br>Cross-Scale Analysis Of Precipitation Data From High And Low Temporal Resolution Datasets                                                                                              |
|                                    |               | BALETIC, D.; POSAVČIĆ, H.; BUJAK, D.; MILICEVIC, H.:<br>Flow Simulation In Constructed Wetlands: Horizontal Vs. Vertical Substrates                                                       | LOVRIĆ, I.; KALINIĆ, F.; LONČAR, G.:<br>Quantifying Wind Contribution to Water Exchange in Marinas Using an Improved Analytical Formulation                                                                                                |
|                                    |               | LICHT, K.; HALKJUEVIĆ, I.; NAKIĆ, D.; POSAVČIĆ, H.:<br>Sono-Electrocoagulation for Simultaneous Selenium and Strontium Removal in a Multi-Stage Reactor                                   | PAUDITŠOVÁ, E.; BAIKOVIĆ, I.:<br>Ecological Flow in River Basin Management as a Key Tool for Smart Spatial Planning                                                                                                                        |
|                                    |               | HALKJUEVIĆ, I.; LICHT, K.; MILINOWIĆ, D.; VOUK, D.:<br>Comparative Evaluation Of Electrooxidation, Ultrasound, And Ozonation For The Inactivation Of Escherichia Coli And Total Coliforms | BEZAK, N.; RAŠKA, P.; MACHAČ, J.; LOUDA, J.; ZUPANC, V.; SLAVIKOVA, L.; ALVIO, M.B.:<br>Comprehensive Evaluation Of Different Flood Mitigation Strategies Combining Hydrological Effectiveness, Social Perspective And Economic Assessment |
|                                    |               | GILJA, G.; VUKADIN, M.A.; HARASTI, A.:<br>Hydraulic Design of Detached Groynes for Morphodynamic Development of Drava River                                                               | SUŠANI ČULE, I.; OŽANIĆ, N.; VOLF, G.:<br>Impact Of The Catchment Land Cover Changes On The Vrana Lake (Cres) Water Balance                                                                                                                |
|                                    | 17:30         | Networking & Free Time                                                                                                                                                                    |                                                                                                                                                                                                                                            |
|                                    | 20:00         | Conference Closing and Awards Presentation, followed by a Gala Dinner -<br><i>Hotel Admiral</i>                                                                                           |                                                                                                                                                                                                                                            |
|                                    | 08:45 - 17:15 | Technical Visit to Butoniga Lake, Including Tours of the Dam and Water Treatment Plant, Followed by Wine Tasting at the Traditional Istrian Tomaz Winery                                  |                                                                                                                                                                                                                                            |
| DAY 4<br>Saturday,<br>September 19 |               |                                                                                                                                                                                           |                                                                                                                                                                                                                                            |