

PROGRAMME



Tuesday, 21st October

16:00 - 18:00 **Registration and distribution of the conference materials**

Wednesday, 22nd October

09:00 - 10:00 **Registration and distribution of the conference materials**

10:00 - 11:00 **Opening ceremony**

TOPIC 1: Air quality management

11:00 - 11:30 **INVITED LECTURE:** Marija Opačak Eror and Marijana Matek Sarić: AIR PROTECTION AND SUSTAINABLE TOURISM DEVELOPMENT: A REVIEW OF ECONOMIC METHODS

11:30 - 11:45 Lucia Bustin, Sebastian Harald Schmitt, Florian Dahlkoetter, Carsten Kykal, Oliver Felix Bischof, and Torsten Tritscher: CHARACTERIZATION OF INDIVIDUAL INSTRUMENTS FOR UFP MEASUREMENTS IN THE FRAMEWORK OF THE NEW EU AMBIENT AIR QUALITY DIRECTIVE

11:45 - 12:00 Ivana Grljak and Darijo Brzoja: BRIDGING THE GAP: EFFECTIVE AIR QUALITY COMMUNICATION IN THE AGE OF MISINFORMATION

Sponsor presentations

12:00 - 12:15 **SMART SENSE d.o.o.**

12:15 - 12:30 **KOBIS d.o.o. za proizvodnju, trgovinu i usluge**

Lunch break

12:30 - 13:30

TOPIC 3: Ambient air pollution monitoring

13:30 - 13:45 Darijo Brzoja, Mario Lovrić, Valentino Petrić, Bram Verbeek, Marko Kvakić, Vesna Gugec, Danica Kraljević, Velimir Milić, Valentina Jagić, and Stipica Šarčević: LEVERAGING MACHINE LEARNING FOR COST-EFFECTIVE AIR QUALITY MONITORING: THE LIFE CityTRAQ CASE

13:45 - 14:00 Ivana Jakovljević, Zdravka Sever Štrukil, and Gordana Pehnc: PAH CONCENTRATIONS AT AN URBAN TRAFFIC LOCATION IN CROATIA OVER FIVE YEARS

14:00 - 14:15 Željko Ćirović, **Danka B. Stojanović**, and Milena Jovašević-Stojanović: ANALYSIS OF DIURNAL AND SEASONAL VARIATION OF ULTRAFINE PARTICLE SIZE DISTRIBUTION IN THE CITY OF BELGRADE, SERBIA

14:15 - 14:30 Bruna Mariani, **Marin Vojković**, Jadranka Šepić, and Marina Kranjac: SEASONAL VARIABILITY OF AIR POLLUTANTS AND THEIR RELATIONSHIP WITH METEOROLOGICAL CONDITIONS IN SPLIT, CROATIA

☐ **TOPIC 4: Machine learning and air quality modelling**

14:30 - 14:45 Marko Kvakić, Angelo Riccio and Darijo Brzoja: IMPROVED REGIONAL AIR QUALITY FORECAST USING THE BAYESIAN SPATIO-TEMPORAL METHOD INLA-SPDE

14:45 - 15:00 Darko Mekterović, Marija Čargonja, Domagoj Mateljak, Boris Mifka, and Robert Pleše: CONDITIONAL PROBABILITY FUNCTION WITH UNCERTAINTY ESTIMATES IN AIR POLLUTION RESEARCH

15:00 - 15:15 Velimir Milić, Vesna Gugec, and Darijo Brzoja: ESTIMATION OF DUST, FOREST FIRE AND SEA SALT CONTRIBUTIONS TO SURFACE CONCENTRATIONS OF PM₁₀ IN CROATIA

☐ **Coffee break**

15:15 - 15:45

☐ **TOPIC 2: Air pollution sources and emissions**

15:45 - 16:00 Ivan Bešlić, Domagoj Mihajlović, and Vedran Vađić: THE IMPACT OF WEATHER CONDITIONS ON AIR QUALITY IN THE AREA OF THE JAKUŠEVEC LANDFILL

16:00 - 16:15 Suzana Sopčić, Ranka Godec, and Gordana Pehnc: LEVOGLUCOSAN LEVELS IN THE PM₁ FRACTION AT AN URBAN SITE IN ZAGREB, CROATIA: A FIVE-YEAR TREND

16:15 - 16:30 Valentina Jagić, Vesna Gugec, Stipica Šarčević, Velimir Milić, and Darijo Brzoja: AIR QUALITY AND ENVIRONMENTAL ASPECTS OF MUNICIPAL WASTE MANAGEMENT IN THE CITY OF ZAGREB, CROATIA **In Croatian**

16:30 - 16:45 Ivana Roksa and Monika Babačić: REDUCTION OF SOLID PARTICLE EMISSIONS FROM BE-TO SISAK BY INSTALLATION OF AN ELECTROSTATIC PRECIPITATOR **In Croatian**

16:45 - 17:00 Monika Babačić and Ivana Roksa: CERTIFICATION OF BE-TO SISAK UNDER THE SURE SCHEME FOR PROVING THE USE OF SUSTAINABLE FOREST BIOMASS **In Croatian**

Thursday, 23rd October

☐ **EFCA session "Methane Time"**

09:00 - 09:20 INVITED LECTURE: Andrzej Jagusiewicz: TARGETING METHANE

09:20 - 09:45 INVITED LECTURE: Iva Prgomet Ernst, Tatjana Obučina and Nino Malešić: METHANE EMISSIONS AND NATIONAL INVENTORY REPORTING

09:45 - 10:10 INVITED LECTURE: Goran Kiš: METHANE EMISSIONS FROM LIVESTOCK: SOURCES, IMPACT, AND MITIGATION STRATEGIES

10:10 - 10:35 INVITED LECTURE: Jacek Skiba: PREVENTING METHANE EMISSIONS FROM UNDERGROUND COAL MINES

10:35 - 11:00 INVITED LECTURE: Martin Poulsen: VENTILATION AIR METHANE TREATMENT FOR UNDERGROUND COAL MINES

☐ **Sponsor presentations**

11:00 - 11:15 Altium International d.o.o.

Coffee break

11:15 - 11:45

TOPIC 7: Indoor air quality, energy efficiency and healthy buildings - hybrid mode

11:45 - 12:15 **INVITED LECTURE:** Ivan Notardonato, Mario Lovrić, Alessandro Battaglia, Piergiorgio Cipriano, and **Pasquale Avino:** VOLATILE ORGANIC COMPOUNDS AND ALDEHYDIC COMPOUNDS: INDOOR/OUTDOOR COMPARISON ACROSS DIFFERENT LIVING ENVIRONMENTS **online**

12:15 - 12:30 **Tajana Horvat**, Ivana Jakovljević, and Gordana Pehnac: TOLUENE AS A COMMON VOLATILE ORGANIC COMPOUND IN HOMES: THE ZAGREB CITY AREA DURING TWO SEASONS

12:30 - 12:45 **Marija Jelena Lovrić Štefiček**, Silvije Davila, Gordana Pehnac, Goran Gajski, Ivan Bešlić, Luka Kazensky, Ivana Banić, and Mirjana Turkalj: A COMPARATIVE STATISTICAL ASSESSMENT OF PM₁ MASS CONCENTRATION VARIATION IN RESIDENTIAL ENVIRONMENTS IN ZAGREB, CROATIA

12:45 - 13:00 **Silva Žužul**, Marija Jelena Lovrić Štefiček, Gordana Pehnac, and Ivan Bešlić: MICROPLASTICS IN THE INDOOR AIR OF ZAGREB HOUSEHOLDS

13:00 - 13:15 **Iva Šunić**, Dubravka Havaš Auguštin, Jelena Šarac, Kristina Michl, Rasmus Riemer Jakobsen, and Mario Lovrić: MICROBIAL COMPOSITION OF HOUSEHOLD DUST IN CROATIAN HOMES: FINDINGS FROM EDIAQI PROJECT **online**

Lunch break

13:15 - 14:00

TOPIC 7: Indoor air quality, energy efficiency and healthy buildings - hybrid mode

14:00 - 14:15 **Daniela Dejaco** and **Heimo Gursch:** DATA QUALITY AND INDOOR AIR QUALITY TOOLS FOR CROSS-EUROPEAN COMPARISON

14:15 - 14:30 **Valentino Petrić**, Dejan Strbad, Nikolina Račić, Francesco Mureddu, and Mario Lovrić: HYBRID DIGITAL TWIN FRAMEWORK FOR REAL-TIME INDOOR AIR QUALITY MONITORING AND FILTRATION OPTIMIZATION **online**

14:30 - 14:45 **Jose Feroso**, Alicia Aguado, Sandra Rodríguez-Sufuentes, Rubèn González-Colom, Josep Roca, Alba Gómez-López, Benigno Sánchez, Alberto Rodríguez López, María Figols, Manel Sanz, and Felipe López: HOSPITAL IAQ ASSESSMENT USING A HYBRID MONITORING STRATEGY: CONTINUOUS LOW-COST SENSING AND TARGETED SAMPLING AT HOSPITAL CLÍNIC DE BARCELONA. K-HEALTHinAIR PROJECT. **online**

14:45 - 15:00 **Stavroula Katsikari**, Vassiliki Vassilatou, Konstantinos Granakis, Raquel Pimenta, Ketlyn Oliveira, Susana Marta Almeida, Drew Henderson, Robert Ferguson, Heidi Salonen, Konstantinos Eleftheriadis, and Evangelia Diapouli: CHARACTERIZATION OF ULTRAFINE PARTICLE NUMBER CONCENTRATION AND SIZE DISTRIBUTION IN MICROENVIRONMENTS CRITICAL TO CHILDREN'S EXPOSURE ACROSS DIFFERENT EUROPEAN COUNTRIES **online**

15:00 - 15:15 **Pedro Pena**, Renata Cervantes, and Carla Viegas: PRELIMINARY ASSESSMENT OF MICROBIAL CONTAMINATION FROM WINTER SAMPLING CAMPAIGN IN PORTUGUESE ELEMENTARY SCHOOL **online**

15:15 - 15:30 **Grigoris Protopsaltis**, Chris Mountzouris, John Gialelis: REINFORCEMENT LEARNING-BASED AIR PURIFICATION CONTROL FOR ENHANCED INDOOR AIR QUALITY **online**

Coffee break

15:30 - 15:45

□ **Poster session**

15:30 - 17:00

EnvironPollutHealth

(Environment Pollution and Human Health: Physico-Chemical Analysis, Toxicity, and Machine Learning Models) - **project presentation**

TOPIC 1: Air quality management

1. **Nataša Belšak Šel**, Matjaž Mlinarič, and Uroš Lešnik: ASSESSMENT OF AIR QUALITY IN RURAL AREA OF PTUJ MUNICIPALITY, SLOVENIA, FROM 2020 TO 2024

2. **Marko Marič**, Danijel Grgec, Želimira Cvetković, and Jasna Bošnir: ECOLOGICAL MAP OF THE CITY OF ZAGREB

TOPIC 2: Air pollution sources and emissions

3. **Nikolina Račić**, Mario Lovrić, Gordana Peh nec, Ivana Jakovljević, Zdravka Sever Štrukil, Silva Žužul, and Jasmina Rinkovec: USING EXPLAINABLE MACHINE LEARNING TO UNDERSTAND WHAT AFFECTS PAHs AND HEAVY METALS IN PM₁₀ PARTICLES

4. Petar Uremović, Zoran Kovačević, **Petar Maruna**, and Luka Lučić: MEASURING CHARACTERISTIC ODOURS, DISTINCTIONS, AND APPLICATION OF HRN EN 13725 AND HRN EN 16841 STANDARDS

TOPIC 3: Ambient air pollution monitoring

5. **Dario Dabić**, Goran Purić, and Ksenija Kuna TRENDS IN DAILY MEAN CONCENTRATIONS OF PM_{2.5} AND PM₁₀ AT THE PUNTIJARKA MONITORING STATION (2022–2025)

6. **Renata Kovačević**, Bojan Radović, Viša Tasić, Tatjana Apostolovski Trujić, Tamara Urošević, Duška Kleut, and Milena Jovašević-Stojanović: LEVELS OF AIRBORNE METALS IN URBAN AIR DRIVEN BY DIFFERENT ANTHROPOGENIC SOURCES: BOR AND BELGRADE

7. **Uroš Lešnik** and Jan Radanović: RESULTS OF AIR QUALITY MEASUREMENTS IN THE MEASUREMENT NETWORK OF MARIBOR, SLOVENIA, AND NEIGHBORING MUNICIPALITIES

8. **Ivona Mikić**, Valentina Gluščić, Ivan Bešlić, and Gordana Peh nec: INSIGHT INTO SEASONAL VARIATIONS OF WATER-SOLUBLE INORGANIC IONS IN PM_{2.5} AT A RURAL BACKGROUND SITE

9. **Zdravka Sever Štrukil**, Ivana Jakovljević, Gordana Peh nec, and Ivan Bešlić: POLYCYCLIC AROMATIC HYDROCARBONS IN AIR OF SPLIT AND PLITVICE LAKES

10. **Vedran Vađić**, Predrag Hercog, and Bojan Abramović: AIR QUALITY MONITORING AT WASTE MANAGEMENT CENTRE BILJANE DONJE

TOPIC 4: Machine learning and air quality modelling

11. **Vesna Gugec**, Stipica Šarčević, Valentina Jagić, Velimir Milić, and Darijo Brzoja: PROJECTION OF THE IMPACT OF AIR POLLUTION FROM THERMAL TREATMENT OF WASTE USING THE ADMS 6 DISPERSION MODEL

12. **Snježana Herceg-Romanić**, Silvije Davila, Ivan Bešlić, Gordana Peh nec, Gordana Jovanović, Mirjana Perišić, and Andreja Stojić: REVEALING THE IMPACT OF TEMPERATURE ON URBAN BENZENE USING EXPLAINABLE AI METHODOLOGIES

13. **Gordana Jovanović**, Snježana Herceg-Romanić, Silvije Davila, Ivan Bešlić, Gordana Peh nec, Timea Bezdan, Mirjana Perišić, and Andreja Stojić: ADVANCED AI APPROACHES FOR UNDERSTANDING BENZENE POLLUTION IN URBAN ATMOSPHERE

14. **Stipica Šarčević**, Velimir Milić, Vedrana Džaja Grgičin, Marina Skender, Darijo Brzoja, Vesna Gugec, Valentina Jagić, and Marko Kvakić: LOTOS-EUROS CHEMICAL TRANSPORT MODEL-BASED ASSESSMENT OF THE SPATIAL REPRESENTATIVENESS IN THE CROATIAN AIR QUALITY MONITORING NETWORK

TOPIC 5: Developing and testing measuring methods

15. **Darijo Brzoja**, Bram Verbeek, Marko Kvakić, Vesna Gugec, Danica Kraljević, Velimir Milić, Valentina Jagić, and Stipica Šarčević: EVALUATING LOW-COST AIR QUALITY SENSORS IN URBAN ENVIRONMENTS: INSIGHTS FROM THE LIFE CityTRAQ PROJECT

16. **Ranka Godec**, Helena Prskalo, Marija Jelena Lovrić Štefiček, Krešimir Šega, and Gordana Pehnc: COMPARING BLACK CARBON AND ELEMENTAL CARBON MASS CONCENTRATIONS: METHODOLOGICAL SIMILARITIES AND DIFFERENCES

17. **Branko Petrinc**, Tomislav Meštrović, Luka Pavelić, and Dinko Babić DEVELOPMENT AND IMPLEMENTATION OF HYBRID GAMMA-RAY SPECTROMETRY METHODS FOR ENHANCING THE CAPACITY OF ENVIRONMENTAL RADIOLOGICAL MONITORING AROUND NUCLEAR POWER PLANTS

TOPIC 6: Health impacts of air pollution

18. Katja Kološa, Tim Ravnjak, Eva Kanalec, Sonja Žabkar, Luka Kazensky, Goran Gajski, and **Bojana Žegura**: GENOTOXIC POTENTIAL OF BENZO[a]PYRENE (B[a]P) AND DIBENZO[a,h]ANTHRACENE (D[a,h]A) IN HUMAN HEPATOCELLULAR SPHEROID MODEL

19. Matjaž Novak, Martina Štampar, Alja Štern, Michael J. Burgum, Gillian E. Conway, Goran Gajski, Shareen H. Doak, and **Bojana Žegura**: ASSESSMENT OF GENOTOXIC AND INFLAMMATORY RESPONSES TO BENZO[b]FLUORANTHENE AND BENZO[g,h,i]PERYLENE IN A CO-CULTURE LUNG MODEL AT THE PSEUDO-AIR-LIQUID INTERFACE

TOPIC 7: Indoor air quality, energy efficiency and healthy buildings

20. **Ivan Pavičić**: DETECTION OF ASBESTOS IN THE SHIP'S INTERIOR

TOPIC 8: Climate and environmental impacts of air pollution

21. **Želimira Cvetković**, Ivana Ćosić, Ksenija Kuna, Danijel Grgec, Marko Marić, Jadranka Škevin-Sović, and Jasna Bošnir: THE INFLUENCE OF INORGANIC COMPOUNDS IN PRECIPITATION ON TOTAL DEPOSITED MATTER – A CASE STUDY FROM ZAGREB, CROATIA

22. **Gordana Sinčić Modrić**, Tamara Cirković, Goran Crvelin: TOTAL DEPOSITED MATTER AS AN INDICATOR OF AIR QUALITY: MONITORING RESULTS IN THE CITY OF RIJEKA, CROATIA, IN 2024

☐ **Conference dinner**

20:00 - 24:00

Friday, 24th October

☐ **IUAPPA session - hybrid mode**

09:00 - 09:30 **INVITED LECTURE: Rajasekhar Balasubramanian**: MITIGATION OF BLACK CARBON EMISSIONS IN SOUTHEAST ASIA **online**

09:30 - 10:00 **INVITED LECTURE: Kim Oanh Nguyen**: BIOMASS OPEN BURNING IN SOUTHEAST ASIA: EMISSIONS AND MULTIPLE EFFECTS **online**

10:00 - 10:30 **INVITED LECTURE: Sohyun Jeon, Seoyeon Moon, Jihu Lee, and Young Sunwoo**: AN AIR POLLUTION POLICY DILEMMA - OZONE CONCENTRATION CHANGES UNDER AIR QUALITY POLICY IMPLEMENTATION BASED ON NATIONAL CLIMATE CHANGE PROJECTIONS IN KOREA

10:30 - 11:00 **INVITED LECTURE: John Murlis**: IMPLEMENTING AIR PROTECTION POLICY: AMBITION AND ACHIEVEMENT

11:00 - 11:30 **INVITED LECTURE: Selahattin Incecik**: POTENTIAL IMPACTS ON AIR POLLUTANTS AND FUTURE CLIMATE IN SOUTHEAST ASIA

Coffee break

11:30 - 12:00

TOPIC 5: Developing and testing measuring methods

12:00 - 12:15 **Silvije Davila**, Marija Jelena Lovrić Štefiček, and Ivan Bešlić: FIELD CALIBRATION OF SENSORS FOR PARTICULATE MATTER

12:15 - 12:30 **Predrag Hercog**, Mario Šantolić, Mirela Poljanac, and Vedran Vađić: SOME IMPORTANT DIFFERENCES BETWEEN OLD AND NEW CROATIAN STANDARDS FOR AMBIENT AIR QUALITY

12:30 - 12:45 **Mihriban Civan**, Demet Arslanbaş, Abdulmounem Alchekh Wis, Hilal Yılmaz, Ubaidullah Habibi, and **Serpil Yeniso**y: A MODIFIED DIGESTION-EXTRACTION PROTOCOL FOR MICRO(NANO)PLASTIC DETECTION IN ENVIRONMENTAL AND FOOD MATRICES

Lunch break

12:45 - 14:00

TOPIC 6: Health impacts of air pollution

14:00 - 14:15 **Gordana Peh nec**, Ivana Jakovljević, Zdravka Sever Štrukil, Silvije Davila, Marko Gerić, Katarina Matković, Mandica Sanković, Antun Šumanovac, and Goran Gajski: GENOTOXIC POTENTIAL OF PAHs BOUND TO PARTICULATE MATTER IN AMBIENT AIR AT DIFFERENT LOCATIONS IN CROATIA

14:15 - 14:30 **Jasmina Rinkovec**, Silva Žužul, Magdalena Vincetić, and Gordana Peh nec: HEALTH RISK ASSESSMENT OF HEAVY METALS EXPOSURE IN THE AMBIENT AIR OF ZAGREB, CROATIA

TOPIC 8: Climate and environmental impacts of air pollution

14:30 - 14:45 **Željka Zgorelec**, Gordana Peh nec, Aleksandra Perčin, Marija Galić, Iva Hrelja, and Jasmina Rinkovec: PLATINUM GROUP ELEMENTS IN THE URBAN ENVIRONMENT (SOIL, PLANTS AND AIR) OF ZAGREB, CROATIA

14:45 - 15:00 **Anita Vucić**, Predrag Ilić, Sonja Kralj, Danijela Peroš - Pucar, Katarina Bukša, Sanja Bajić, Silvana Račić Milišić, and Kasim Agović: AllerShield: STRENGTHENING CROSSBORDER SOLUTIONS FOR MANAGING ALLERGENIC PLANTS AND ENHANCING CLIMATE RESILIENCE

15:00 - 15:15 **Ana Alebić-Juretić**: IMPACTS OF CLIMATE CHANGE IN THE CITY OF RIJEKA, CROATIA

Coffee break

15:15 - 15:30

Round table in Croatian

15:30 - 16:30

Closing ceremony

16:30 - 17:00

Saturday, 25th OCTOBER

Excursion

08:30 - 15:30