



**10<sup>th</sup> International Ergonomics Conference  
ERGONOMICS 2024**

December 5-6, 2024, Zagreb, Croatia

**Final Conference Program**

<b>Thursday, December 5<sup>th</sup>, 2024</b>	
<b>Location: Congress Hall Sinergy, Hotel International, Miramarska 24</b>	
8:00 – 9:00	Good morning coffee
8:00 – 13:00	Registration of authors and participants
9:00 – 9:45	<b>Opening ceremony</b>
9:45 – 10:45	<b>Invited lectures</b> (Chair: Jasna Leder Horina)
	9:45 – 10:05, Prof. Andrew Thatcher, president of IEA: CLIMATE ERGONOMICS: PREPARING FOR THE NEXT 50 YEARS
	10:05 – 10:25, Bernard Michez, Eur Erg, president of FEES: WHAT HFE RETURN OF EXPERIENCE TELLS TO INDUSTRY 5.0
	10:25 – 10:45, Professor Emeritus Eric Wang, president of CAES and former president of IEA: ERGONOMICS ISSUES IN AI SYSTEMS
10:45 – 11:15	Coffee break
11:15 – 12:15	<b>Lectures in session A</b> (Chair: Kristian Jambrošić) <ul style="list-style-type: none"> <li>- P82 Anca Draghici, Maria Elena Boatca, Alin Gaureanu: Managing Remote Workers' Well-Being. A Risk-Based Practical Approach</li> <li>- P45 Henrijs Kalkis, Zenija Roja, Biruta Sloka: Ergonomic Indicators of Physical Strain for Industrial Woodworking Enterprise Employees in Relation to WRMSDs</li> <li>- P87 Maja Trstenjak, Tihomir Opetuk, Goran Đukić, Hrvoje Cajner: Use of Artificial Intelligence (AI) in the workplace ergonomics of Industry 5.0</li> <li>- P55 Svetlana Kocerova, Henrijs Kalkis, Zenija Roja: Optimizing Office Environment: The Role of Human Factors and Hybrid Work Environments for Effective Design</li> </ul>
12:15 – 14:00	Lunch break
14:00 – 15:00	<b>Lectures in session B</b> (Chair: Danijela Domljan) <ul style="list-style-type: none"> <li>- P36 Uwe Reischl, Conrad Colby, Budimir Mijovic, Ravindra S.: Quantitative Assessment of Facemask Peripheral Leakage</li> <li>- P53 Romualds Razuks, Songita Dzeina Khana, Henrijs Kalkis, Zenija Roja, Elizabete Mikala: The Covid-19 Crisis and Medical Students' Resistance to Return to the Conventional Education System</li> <li>- P71 Josip Bota, Lorena Veronika Lončarek: Increasing observers' interest and comprehension by using expressive typography</li> <li>- P72 Lamia Bouzgarrou, Naoufel Bhourri, Ch. Harrathi, Nesrine Bhourri, Cyrine Mdimgh: Activity Analysis and Performance Optimization in A Screen-Printing Workshop</li> </ul>
15:00 – 15:30	Coffee break
15:30 – 16:15	<b>Lectures in session C</b> (Chair: Emilija Zdraveva ) <ul style="list-style-type: none"> <li>- P64 Nurul Izzah Abd Rahman, Muhammad Nazirul Iszat Ismail: Cognitive Ergonomic-Driven Technology: A Pathway to Improve Mental Workload, Body Posture, and Work Performance of Ageing Workers in Office Setting</li> </ul>

	<ul style="list-style-type: none"> <li>- P22 Marwan Babiker, Eda Merisalu, Ženija Roja, Henrijis Kalkis: Prospective effects of artificial intelligence on burnout syndrome: Reducing risks and enhancing psychological well-being on healthcare</li> <li>- P69 Marko Horvat, Zoran Veršić, Kristian Jambrošić: The New Technical Regulation on Acoustics in Buildings in Croatia</li> </ul>
18:30– 20:00	<b>Zagreb City Walking Tour, Meeting point: King Tomislav Statue, King Tomislav Square</b>
<b>Friday, December 6<sup>th</sup>, 2024</b>	
<b>Location: Congress Hall Sinergy, Hotel International, Miramarska 24</b>	
9:00 – 10:00	Good morning coffee
9:00 – 13:00	Registration of authors and participants
10:00 – 10:20	<b>Invited lecture</b> (Chair: Diana Milčić) Asst. Prof. Dario Babić: <b>EYE-TRACKING IN ROAD SAFETY RESEARCH</b>
10:20 – 11:05	<b>Lectures in session D</b> (Chair: Diana Milčić) <ul style="list-style-type: none"> <li>- P17 Ilaria Chiriani, Alessandro Naddeo: Reconfiguring the interior of a Tesla Model 3 for autonomous driving purposes</li> <li>- P19 Lukas Fuchs, Netmi Narasinghe, Thomas Maier: Influence of Age and Palm Surface Area on Secondary Task Performance in a Driving Simulator</li> <li>- P85 Sebastijan Hleb, Sandro Tokić, Davor Sumpor, Mario Ćosić: Examining Human Factors in Traffic Accidents: Focus on Driver Fatigue</li> </ul>
11:05 – 11:35	Coffee break
11:35 – 12:20	<b>Lectures in session E</b> (Chair: Davor Sumpor) <ul style="list-style-type: none"> <li>- P81 Anca Draghici, Nicoleta Paula Neag, Maria Elena Boatca, Marian Mocan: Augmented Reality Used in Safety Traffic Management</li> <li>- P83 Adrian Wagner, Hrvoje Haramina, Fran Hitschfeld: Usage of drones for route surveillance in shunting operations</li> <li>- P60 Johanna Renny Octavia, Clara Theresia, Dian Putrawangsa: Towards Sustainable Ergonomics for Sustainable Business: Case of Indonesia’s SMEs</li> </ul>
12:20 –13:30	Lunch break
13:30 – 15:15	<b>Pre-recorded lectures in session F</b> (Chair: Anca Draghici) <ul style="list-style-type: none"> <li>- P66 Lesly Mariee Colan-Campos, Fiorella Cinthya Sacaca-Quispe, Richard Raitt Rodríguez-Rojas, Carlos Manuel Escobar- Galindo, José Enrique Villalobos-Tupia: Cognitive analysis of pedestrian flow regulation in uni-versity security guards: a low cost prototype for registration</li> <li>- P20 Oleksii Reva, Serhii Borsuk, Volodymyr Kamyshyn: Development of Fuzzy Method of Air Traffic Control Students’ Attitude Toward Risk of Flight Level Norms Violation Determination</li> <li>- P16 Oleksii Reva, Vasyl Cherniavskyy, Pavlo Mamenko, Kostiantyn Kyrychenko: Forecasting the Impact of Indiscipline among Cadets-Sailors on Maritime Safety and Proactive Ways of its Correction</li> <li>- P29 Darina Dupláková, Ján Duplák, Dejan Kojić, Patrik Sloboda: Analysis of Lighting Conditions in Students' Laboratory Using Simulation</li> <li>- P24 Tuong Quyen Vu, Cristina Salvador: New Space Transformation Layout: Primary Students’ Interaction in a Developing Country's Classroom Environment</li> <li>- P62 Jeremy Laurence M. Bañez, Hazel A. Caparas, Reynaldo G. Salamat: Development of Student Workplace through Harmonizing Design for Ergonomics and Portability Using TRIZ Methodology</li> </ul>

	<ul style="list-style-type: none"> <li>- P40 Kazushige Oshita, Yujiro Ishihara, Kohei Seike, Ryota Myotsuzono: Association of evening chronotype with prevalence of normal-weight obesity among female university students</li> <li>- P34 Esteban Carrera, Pablo Davila, Yaniel Torres; Applying Game Theory for Work System Design: A Preliminary Mathematical Model Proposal</li> <li>- P51 Odugbemi Odumosu, Olasunkanmi Ismaila, Sidikat Kuye, Olusegun Folorunso: The Development of An Auto-Shut-Off Sleep-Inducing Bed</li> <li>- P67 Camila Casanova-Vise, Carlos Manuel Escobar-Galindo; Ergonomics in Linemen Activities: A Proposal for the Redesign of a Telescopic Pole</li> <li>- P65 Gloria Lilibeth Molina-Quihue, Mayra Milagros Quintanilla-Romero, Carlos Manuel Escobar-Galindo, José Enrique Villalobos-Tupia, Richard Raitt Rodriguez-Rojas: Systemic analysis of musculoskeletal disorders in mechanics during brake shoe replacement on interprovincial buses</li> <li>- P30 Olfa Jlassi, Asma Kheder, Noura Bel Haj, Ines Rassas, Chebbi Soumaya, Taoufik Khalfallah, Aouatef Mahfoudh: Impact of a Positive Work Environment on Musculoskeletal Complaints by Artisanal Weavers in Tunisia</li> <li>- P14 Abdelkrim Benkhaled, Ali Hafed: The Level of Noise in Blacksmithing Workshops in Oum El Bouaghi Province, Algeria</li> <li>- P35 Wilder Marin, Yaniel Torres: Assessing workload in urban solid waste collection: A case study from Medellín, Colombia</li> </ul>
15:15 – 15:45	<p><b>Coffee break and poster session</b></p> <ul style="list-style-type: none"> <li>- P13 Marin Bačić, Zdravko Pandur, Marijan Šušnjar, Matija Landekić: Exposure to Hand-Arm Vibration (HAV) in Forestry: An Empirical Review</li> <li>- P16 Oleksii Reva, Vasyl Cherniavskiy, Pavlo Mamenko, Kostiantyn Kyrychenko: Forecasting the Impact of Indiscipline among Cadets-Sailors on Maritime Safety and Proactive Ways of its Correction</li> <li>- P18 Dajana Bartulović: Implementation of Artificial Intelligence in Aviation Ergonomics: An Overview</li> <li>- P28 Boris Iliev, Miško Ralev, Tanja Jurčević Lulić, Krešimir Šolić, Danijela Domljan: Differences in head height of the kindergarten children</li> <li>- P39 Emilija Zdraveva: Porosity Assessment of Melt Electrospun PLA</li> <li>- P49 Jasna Blašković Zavada, Marko Slavulj, Mario Ćosić, Jasna Leder Horina: Spatial and Traffic Planning from the Aspect of Mobility and Adjustment of the Environment for People with Reduced Mobility</li> <li>- P57 Martina Lovrenić-Jugović, Joseph Marton, Jasna Leder Horina, Tanja Jurčević Lulić: Assessment and comparison of working postures of electricians in electricity distribution using the REBA method</li> <li>- P79 Evgeniy Lavrov: Ergonomic challenges and methodology for taking into account the human factor in cyber-physical systems</li> <li>- P80 Evgeniy Lavrov, Olga Siryk: Human factor in e-learning. Challenges and methodology for ergonomic support</li> </ul>
15:45 – 17:30	<p><b>Pre-recorded lectures in session G</b> (Chair: Tanja Jurčević Lulić)</p> <ul style="list-style-type: none"> <li>- P27 Lenart Marovt, Danica Dolničar, Klementina Možina: Influence of typography and colour on recognition of information</li> <li>- P70 Laura Krišković, Renata Mekovec, Marija Kuštelega; Keeping up with the aging population: Adapting user interfaces for the elderly</li> <li>- P73 Dorotea Kovačević, Petra Buljat, Maja Brozović: Safety Pictogram on the Packaging Displayed in the Advertisement and Its Effect on Visual Perception</li> <li>- P74 Dorotea Kovačević, Maja Brozović, Klementina Možina: Using a comprehensibility judgement test to assess the effectiveness of new graphical symbols</li> <li>- P78 Cherif Ahmad Tidiane Aidara, Serigne Diagne, Amadou Coulibaly, Balla Moussa Biaye; Ergonomics: Evaluation of additional work generated by agricultural handle tools</li> </ul>

	<ul style="list-style-type: none"> <li>- P26 Kimberly Nathalie Angeles Aspajo, Greta Silvana Tarazona Carrasco, Richard Raitt Rodriguez Rojas, Carlos Manuel Escobar Galindo, José Enrique Villalobos Tupia: Ergonomic analysis of chicken sales in a Peruvian popular market poultry shop</li> <li>- P63 Charmaine P. Yu, Gellian S. Solaña, Annie Rose L. Bohot, Joyce A. Molo, Darry Mhei L. Morales: Ergonomics Risk Factors Among Rice Farmers in the Philippines</li> <li>- P12 Peter Schmid, Max B. Schäfer, Nina M. Stadel, Peter P. Pott, Thomas Maier: Automation potential in the workflow of a scrub nurse</li> <li>- P11 Ferdinand Langer, Mario Milicic, Shian Fernandes, Tabea Böhringer, Thomas Maier: Experimental investigation of surface and padding of a forearm support of a surgical arm assistance system</li> <li>- P32 Irtyah Merchaoui, Samia Machghou, Ines Rassas, Marwa Ben Azaiez, Marouen Hayouni, Neila Chaari, Mohamed Adnene Hanchi: Optimizing architectural space for a better patient and healthcare staff flow traffic in a primary health care facility</li> <li>- P56 Massimiliano Masullo, Mario Alberto Capasso, Aniello Pascale, Francesco Sorrentino, Luigi Maffei: Clean/Dirty Pathways in Hospitals: Modeling and Effectiveness of the Use of a Virtual Reality X Mockup</li> <li>- P37 Constantinos S. Mammias, Adamantia S. Mamma: Cognitive Ergonomics of the Prehospital Damage Control Resuscitation upon AI and 5G Internet to Optimize Outcomes in Civilian Severe Trauma Surgery</li> <li>- P38 Constantinos S. Mammias and Adamantia S. Mamma: Integrated Cognitive Ergonomics of the Remote Evaluation of the Grafts with Robotics and Mobile PCR Analyzer in Solid Organ Transplantation</li> </ul>
20:00 – 23:00	<b>Closing and congress dinner, Novinarski dom, 1<sup>st</sup> floor, Perkovčeva street 2</b>

### Notes to presenters

#### **Oral presentation**

Each presenter has 10 minutes for the presentation and 5 minutes for discussion.

The discussion will follow immediately after each individual presentation.

Invited speakers have 20 minutes for the presentation.

It is necessary to bring a presentation on a USB drive and submit it to the technical team **at the beginning of the day** in which you are scheduled to present.

All kinds of oral presentations (on site and pre-recorded lecture) will be given in the order in which they are listed in the program.

#### **Poster presentation**

Authors are requested to be near their posters during the scheduled time of poster session.