

ISATECH'22 (International Symposium on Aircraft Technology, MRO and Operations) Program

Zoom Link: <https://zoom.us/j/92310199062>

ISATECH'22 Program - DAY 1
Central European Summer Time (UTC/GMT +2 hours) Currently in use

Belgrade/Serbia Time (GMT+2)		Belgrade Hall - Faculty of Mech. Eng. (Room 211), 14 September 2022 Zoom Link: https://zoom.us/j/92310199062
09:30 - 10:00	Welcoming Reception	Welcoming participants, Testing of Symposium Zoom link, Introduction & informal verbal conversation of participants etc.
10:00 - 11:00	Opening Session	Vladimir Popović , Dean, Faculty of Mechanical Engineering, University of Belgrade, Serbia Max F. Platzler , University of California Davis, USA T. Hikmet Karakoc , Founding Chair of SARES Symposiums, Eskisehir Technical University, Türkiye Željko Božić , Chair of ISATECH'23 - University of Zagreb, Croatia Alper Çabuk , Vice Rector, Eskisehir Technical University, Türkiye Aleksandar Grbović , Chair of ISATECH'22, Faculty of Mechanical Engineering, University of Belgrade, Serbia
11:00 - 12:00	Keynote Speaker Session I	Session Chair: Ivan Kostić <i>A Perspective on Oscillating Foil Propulsion</i> Max F. Platzler , University of California Davis, USA <i>Optical velocity measurement and fluid flow visualization techniques</i> Dorđe Čantrak , Faculty of Mechanical Engineering, University of Belgrade, Serbia
12:00-12:15 Short Break		
12:15 - 13:45	1st Technical Session, Room 514	Session Chair: Ognjen Peković <i>Automated Generation of an Integrated Information Model of a Propulsion System</i> Sergey Kolvačkov , Lufthansa Technik <i>Role of the Pressure Field Harmonic Oscillations in the Flutter and Flutter-Buffer Phenomena of High Aspect Ratio Swept Wings</i> Mario Rosario Chiarelli , Salvatore Bonomo <i>Outline the Possible Application of Artificial Intelligence in the Aircraft MRO Process Development</i> Sally Ichou , Árpád Veress, Dániel Rohács <i>Aviation carbon accounting for climate change mitigation: The Case of Turkey</i> Orhan Yucel , Alper Dalkiran, Seval Kardes Selimoglu, T. Hikmet Karakoc <i>Effects of Covid-19 on Aviation Sector in Turkey</i> Gonca Mine Kalaman , Ilkay Orhan <i>Removing Kerosene Tax Exemption from Aviation: The Future of Taxation Principles in Europe</i> Filiz Ekici, Öner Gümüş , Rabia Kolkukink
13:45-15:00 Lunch		
15:00 - 15:40	Invited Speaker Session I	Session Chair: Soledad Le Clainche Martínez <i>Management of Life-Limited Parts in Aircraft Engines</i> Branimir Stojiljković , Faculty of Transport and Traffic Engineering, University of Belgrade, Serbia <i>Education of Future Mechanical and Aeronautical Engineers</i> Dragan Komarov , The Academy of Applied Engineering Studies, Belgrade, Serbia
15:40 - 17:00	Panel Discussion I on "Applying Together for International Projects"	Moderator: Biröl Kılıç Siniša Bikić , Faculty of Technical Sciences, University of Novi Sad, Serbia Alina Adriana Minea , Gheorghe Asachi Technical University of IASI, Romania Aleksandar Sedmak , Faculty of Mechanical Engineering, University of Belgrade, Serbia Dragoslava Stojiljković , Faculty of Mechanical Engineering, University of Belgrade, Serbia
17:00 - 18:30	Keynote Speaker Session II	Session Chair: Dorđe Čantrak <i>New Approachs in Gas Turbine Cycle Simulation</i> Milan V. Petrović , Faculty of Mechanical Engineering, University of Belgrade, Serbia <i>Trends in New Nanoparticle Enhanced Fluids: Experimental and Computational Approaches</i> Alina Adriana Minea , Gheorghe Asachi Technical University of IASI, Romania <i>Noise of High-speed Jets: Recent progress and open questions</i> Sanjiva K. Lele , Stanford University, USA
18:30-20:00 Cocktail		

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DAY ONE

DAY ONE

ISATECH'22 Program - DAY 2 Central European Summer Time (UTC/GMT +2 hours) Currently in use		
Belgrade/Serbia Time (GMT+2)	Belgrade Hall - Faculty of Mech. Eng. (Room 211), 15 September 2022 Zoom Link: https://zoom.us/j/92310199062	
08:45 - 09:00	Welcoming Reception	Welcoming participants, Testing of Symposium Zoom link, Introduction & informal verbal conversation of participants etc.
9:00 - 10:00	Keynote Speaker Session III	Session Chair: Mirko Dinulović Maintenance of Unmanned Aircraft Petar Mirosavljević , Faculty of Transport and Traffic Engineering, University of Belgrade, Serbia Innovations for a smarter and sustainable Aviation MRO Konstantinos Stamoulis , Amsterdam University of Applied Sciences, Netherlands
		Session Chair: Jelena Svorcan Wind Tunnel Operation and Testing in the 21st Century: The Case of VTI's Test Facilities Bijana Žilić , Military Technical Institute (VTI) in Belgrade, Serbia Extending the Orbital Lifetime of a CubeSat in Low Earth Orbit by Optimizing its Attitude Control Algorithm Dušan Marčeta , Faculty of Mathematics, University of Belgrade, Serbia Developing Heavy-Lift Drones for Last-Mile Resupply Stephen D. Prior , University of Southampton, UK
11:00-11:15 Short Break		
11:15 - 13:00	2nd Technical Session	Session Chair: Toni Ivanov An Unmanned Flying Wing as a Carrier of Small Launchers for Satellite Deployment in LEO Mario Rosario Chiarelli, Fabiano Bernardo Borrometi , Vittorio Cipolla, Vincenzo Binante Influence of Thickness Ratio on the Aerodynamic Characteristics of a Family of Hybrid Semielliptical Dolphin Airfoils Zorana Z. Dančuo , Ivan A. Kostić, Olivera P. Kostić, Aleksandar Č. Bengin, Goran S. Vorotović Implicit LES Using New Slope Limiters Nikola Mirkov , Ognjen Peković, Toni Ivanov, Aleksandar Kovačević, Aleksandar Simonović Proposal to Create an International Fire Aviation Service to Manage Global Wildfires to Dramatically Reduce the Global CO2 Emission Artur Mirzoyan Comparative Analysis of Flow Fields Around NACA 23012 Airfoil at Three Characteristic Angles-Of-Attack Jelena Svorcan , Brett Bornhoft, Konrad Goc Procedures in Testing the Mechanical Characteristics of Composite Structures and the Possibility of Application to Biodegradable Materials: An Overview Marija Baltić , Milica Ivanović, Dragoljub Tanović, Miloš Vorkapić, Ivana Mladenović Torsional Divergence analysis of Missile Fins Based on Galerkin's Method Mirko Dinulović , Aleksandar Grbović, Hamad Alarafati
		13:00-14:00 Lunch Break
14:00 - 15:00	Invited Speaker Session III	Session Chair: Ognjen Peković Artificial Intelligence for Predictive Maintenance in Gas Turbines Asteris Apostolidis , Amsterdam University of Applied Sciences, Netherlands Aspects of the Crashworthiness of Modern Civil Passenger Aircraft Design Andrija Ekmedžić , Konelek d.o.o., Belgrade, Serbia Integrated Thermal Management for Electric Vehicles Jelena Andrić , Volvo Technology AB, Sweden
15:00 - 16:45	4th Technical Session	Session Chair: Marija Baltić B-Spline Parameterization Based Flight Trajectory Optimization Rose A. C. Teixeira , K. Bousson Validation of the Laboratory Facility for the Nanofluids Forced Convection Research S. Laloš, M. Bukurov, M. Vraneš, S. Papović, D. Knežević, S. Bikić Flow Analysis Inside the Blade of Tip-Jet Cold Cycle Helicopter Nenad Kolarević, Nenad Latković, Nikola Davidović, Miloš Stanković, Dimitrije Mihajlović Measurement, Exploitation and Method Finalization of PIV Systems Pavle Petrović , Miloš Januzović, Nebojša Petrović, Goran Vorotović, Aleksandar Bengin Development of a Method for Testing Temperature Distribution during 3D Printing of Specimens with Application in Aerospace Industry Zorana Golubović , Milan Travnica, Nenad Mirović, Isak Trajković, Miloš Hladović Numerical Investigation of Impinging Synthetic Jets on the Flow Field and Heat Transfer at Low Orifice-To-Plate Distances Tamer Calisir, Eda Ergur Testing and Integration of a Hydrogen Fuel Cell in a Hybrid-Electric Propulsion Rig for UAVs João Farinha , Luís Miguel Silva, Jay Matlock, Frederico Afonso, Afzal Suleman
		16:45-17:00 Break
17:00 - 18:15	Panel Discussion II on "New Trends, Researches and Developments in MRO"	Moderator: Petar Mirosavljević Pera Dragičević , CADCAM Data, Serbia Srdan Kragejević , Prince Aviation, Serbia Okan Özkan , myTECHNIC Aircraft MRO Services, Türkiye Miloš Tatić , SR Technics, Serbia
		19:00 - Gala dinner

ISATECH'22 Program - DAY 2 Central European Summer Time (UTC/GMT +2 hours) Currently in use		
Belgrade/Serbia Time (GMT+2)	Eskişehir Hall (Live Presentation at Faculty of Mech. Eng., Room 514) 15 September 2022 Zoom Link: https://zoom.us/j/93535069361	
11:15 - 13:00	3rd Technical Session	Session Chair: Ognjen Peković Energy and Environmental Evaluation on LPG Transition for Piston Engine of the Plane Mehmet Ziya Sogut CO ₂ Dilution Effect of Methane Combustion at Premixed Model Gas Turbine Combustor Buğrahan Alabaş Effects of the Partial Use of Diesel fuel with Kerosene on the Exergetic Sustainability Performance of an UAV Jet Engine In case of Emergency Cem Tahsin Yücer , Yavuz Nacaklı Aviation MRO Operators Assessment by SHELL Model Omar Akram Alharasees , Dániel Rohács, Utku Kale Analysis of Ground Services for Air Carriers: System Dynamics Approach Yiğit Nelik , Okan Tuna The Effect of T6 Heat Treatment on AISI12 Alloy Fatih Bozkurt Swarm Control of a Group of Unmanned Aerial Vehicle Under Fixed Consensus Topology Kaan Can , Abdullah Başçi
15:00 - 16:45	5th Technical Session	Session Chair: Utku Kale Markov Chain Model Development for forecasting the Lisbon TMA Capacity Cátia Azevedo Simão , Kouamana Bousson Analysis of Sustainability Activities in Airlines Nazlı Ebru Akdeniz , Gamze Orhan Design of Submerged Air-Intake for UAV Application Kishan Rakesh Tanna , Niyati Shah, Vinay Kumar Bommoju Comparison of Flow Characteristics of Wake Regions of Single and Lined up in a Row Torpedo-Like Geometries at Uniform Flow Conditions Ezgi Akbudak, Ertuğrul Şekeroğlu , Bülent Yanıktepe, Ömer Kenan, Muammer Özgören, Besir Sahin Assesment of Thermodynamics Performance for Prop Engine Based on Temperature Effect of Flight Altitude Mehmet Ziya Sogut , Muhsin Kiliç Energy and Retentate Recoveries/Recycling in Single and Sequential Reverse Osmosis Process for Sea Water Treatment Della Teresa Sponza, Rukiye Öztekin Fuel Optimal Aircraft Conflict Resolution under Various Wind Characteristics Kadir Dönmez , Ramazan Kursat Cecen

ISATECH'22 Program - DAY 3
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Belgrade/Serbia Time (GMT+2)		Belgrade Hall - Faculty of Mech. Eng. (Room 211), 16 September 2022 Zoom Link: https://zoom.us/j/92310199062
08:45 - 09:00	Welcoming Reception	Welcoming participants, Testing of Symposium Zoom link, Introduction & informal verbal conversation of participants etc.
9:00 - 10:00	Keynote & Invited Speaker Session IV	Session Chair: Aleksandar Grbović <i>On the Effect of Residual Stresses on Fatigue Crack Propagation in Thin-Walled Structures</i> Željko Božić , University of Zagreb, Croatia
		<i>Method for Forming Autorotations in Mechanical System with Two Degrees of Freedom in Application to Double-Rotor Vertical Axis Wind Turbines</i> Liubov Klimina , Lomonosov Moscow State University, Russia
10:00 - 11:45	6th Technical Session	Session Chair: Marija Baltić <i>Accounting for the Effects of Experimental Setting in Propeller Flow Computation</i> Jelena Svorcan , Kan Wang, Aleksandar Kovačević
		<i>Energy Separation in a Free Asymmetric 3D Flow</i> Zeljka Suracek , Gordje Novković, Milan Lečić, Vuk Adžić, Časlav Mironović
		<i>High-Altitude Wind Resource Potential for AWE in Portugal</i> André Filipe Da Cunha Pereira , João Manuel Melo De Sousa
		<i>Aeroelastic Stability Analysis of 3D Printed Tapered PLA Plates</i> Mirko Dimulović , Aleksandar Bengin, Goran Vorotović, Marta Trninić, Milos Januzović
		<i>Conceptual Design, Development, Test and System Identification of a Novel Tri-Rotor Configuration for a VTOL Fixed Wing Aircraft</i> António Lopes Arco , José Vale, Sean Bazzocchi and Afzal Suleman
		<i>Development and Construction of a Radio-Controlled Aircraft with Distributed Electric Propulsion: Pegasus Sky-0</i> Abbas Mazidi <i>Optimization based development process for small sized UAS</i> Dávid Szirczák
11:45-12:00 Break		
12:00 - 13:20	Industrial Special Session	Session Chair: Alper Dalkıran <i>TOPINS - Software solution for Aircraft Transparencies Optical Quality Inspection</i> Aleksandar Mandić , CTO, CPS - CAD Professional Systems d.o.o., Serbia
		<i>Next Generation MRO: A quick look of the future of MRO Services</i> Okan Özkan , myTECHNIC Aircraft MRO Services, Türkiye
		<i>Propulsion System Solutions</i> Lazar Igrutinović , Marketing Manager, EDEPRO d.o.o., Serbia
		<i>Aviation MRO Services</i> Miloš Tatić , Manager of Engine Engineering, SR Technics Services d.o.o., Serbia
13:20-14:30 Lunch Break		
14:30 - 16:15	8th Technical Session	Session Chair: Utku Kale <i>Numerical Analysis of Narrow-Body Fuselage Upper Panel Re-design</i> Daniela Đukić , Aleksandar Grbović, Mirko Dimulović, Gordana Kastratović, Nenad Vidanović
		<i>H-infinity Control of Orbital Trajectories with Stochastic Models</i> Luís Gabriel Andrade <i>Methodology for Testing Damaged Composite Helicopter Rotor Blades</i> Goran Vorotović, Aleksandar Bengin, Časlav Mitrović, Mirko Dimulović, Nebojša Petrović, Boško Rašuo, Miloš Januzović
		<i>Neural Control of Space Trajectories with Pseudolinear Models</i> Pedro Manuel Coelho Belizário <i>Preliminary Full Configuration Drag Estimation of Fixed Wing UAV Using Analytical Aerodynamics</i> Milica Milić , Jelena Svorcan
		<i>Nanoceramics as Reinforcement for Polymer Matrices and Composite Materials for Aircraft Structures</i> Danica Bajić , Milica Marjanović, Srđa Perković, Bojana Fidanovski
		<i>Flexural Strength Analysis of Tiles Made by 3D Printing</i> Isaak Trjasković , Aleksandra Jekanić, Uroš Džur, Marko Đurđević, Goran Mladinović, Tijana Lukić, Jovana Lazović
		<i>Wind Tunnel Measurement of Pitch-Damping Derivative using Forced Oscillation Technique</i> Marija Samardžić , Military Technical Institute, Belgrade, Serbia
16:00 - 17:15	Invited Speaker Session IV	<i>Artificial Intelligence, Computational Fluid Dynamics and Sustainability</i> Ricardo Vinuesa , KTH Royal Institute of Technology, Sweden
		<i>Implementation of RE in the 6R Strategy in Considering the Sustainable Development of Parts for the Aviation Industry using Additive Technologies.</i> Miloš Vorkapić , Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Serbia
		17:15 - 19:00 Closing Remarks & Cocktail

DAY THREE

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ISATECH'22 Program - DAY 3
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Belgrade/Serbia Time (GMT+2)		Eskişehir Hall (Live Presentation at Faculty of Mech. Eng., Room 514) 16 September 2022 Zoom Link: https://zoom.us/j/93535069361		
10:00 - 11:45	7th Technical Session	Session Chair: Nikola Davidović <i>An Express Method of Determining the Condition of Fuel for the Prevention of Microbiological Damage to Aviation Military Equipment</i> Tryna Shkiliuk , Sergii Boichenko		
		<i>1D Modeling of an On-Board Inert Gas Generation System During Flight Conditions</i> Berat Gungor <i>Effects of Flight Level on Fuel Consumption and Emissions in the Cruise Phase: A Case Study</i> Murat Ayar , T. Hikmet Karakoç		
		<i>Structural and Flow Analysis of Launch Vehicle for Cubesats</i> Alper Şanlı , Tuncay Yunus Erkeç		
		<i>Electrical Conductivity Characteristics of Nano Particle Reinforced Polymers Produced by Additive Manufacturing</i> Osman Dalar , Alperen Dogru, Melise Karatay Kutman, Fazilet Zumrut Biber Muftuler, Coskun Harmansah		
		<i>Experimental Thermal Analysis of Prismatic Lithium Iron Phosphate (LiFePO4) Battery</i> Burak Tarhan , Elif Koruyucu, T. Hikmet Karakoç		
		<i>Design and analysis of a Mid-Range Business Jet to Reduce the Carbon Footprint</i> Pranav Gupta		
11:45-12:00 Break				
12:00 - 13:20	Student Session	Session Chair: Nikola Raičević Dušan Ivković : Aerodynamic optimization of winglets for Unmanned Aerial Vehicle (UAV) Dragoljub Tanović et al : Numerical investigation of the horizontal axis wind turbine with different pitch angle Orhan Aras : Design and Implementation of an Air Quality Monitoring UAV Milica Ivanović : Heat pipe application prospects for runway pavement ice and snow melting system David Cvetković, Božidar Simović, Aleksa Maljević, Petar Marčetić, Milan Rakić, Ivan Rakonjac : Design of an UAV "KOS" David Cvetković, Aleksa Stefanović, Lazar Nikolić, Dušan Lazić, Milan Rakić, Marko Skakun : Design of an UAV "Phoenix" Katarina Nakić, Dimitrije Zuber : Use of aircraft simulator for achieving better understanding of Civil Aviation Traffic		
		13:20-14:30 Lunch Break		
		14:30 - 16:30	9th Technical Session	Session Chair: Alper Dalkıran <i>Improve Aircraft Pilots' Training using Structural Failure Incidents: A Serious Game Approach</i> Ioanna K. Lekea , Dimitrios G. Stamatelos, Stefanos Giannopoulos
				<i>Assessment of Entropy Management for Piston Engines Considering Fuel Preference in the Flight Process</i> Mehmet Ziya Sogut <i>Development of a Model of the TCAS Autonomous Diagnostic System using Non-Contact Current Sensors</i> I. A. Isgandarov , T. R. Aliyev
				<i>A Computational Study of the Heat Transfer Coefficient for Lithium-Ion Battery Temperature</i> Uğur Morali <i>Evaluation of Architectural Structures in Electric Taxiing Systems</i> Onur Cömert , Işıl Yazar, Tahir Hikmet Karakoç
<i>Operational concept for eVTOLs in emergency response service</i> David Szilágyi <i>The Relationship Between International Environmental Regulation in the Field of Civil Aviation and Risk Environmental Protection</i> Artur Mirzoyan <i>MRO Supply Selection Criteria: An Application of AHP Method</i> Bekir Kaçar , Alper Dalkıran, İlay Orhan				

DAY THREE

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