



International Symposium on Sustainable Aviation

ISSA 2024

Online/Hybrid

Oct. 30th - Nov. 1st | University of Belgrade
Belgrade, SERBIA



ISSA'24 Program - DAY 1

Belgrade Time Zone (GMT+1)		Ceremonial Hall 211 - 30 October 2024	
		Microsoft Teams Link	
09:30 - 10:00 - Hall 210 - Reception & Registration, Morning Coffee			
10:00 - 11:00	Opening Session	Opening Concert	
		Vladimir Popović , Honorary Chair of ISSA'24, Dean of University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia	
		Adnan Özcan , Honorary Chair of ISSA'24, Rector of Eskişehir Technical University, Eskişehir, Türkiye	
	Jelena Svorcan , Symposium Chair of ISSA'24, University of Belgrade, Belgrade, Serbia		
11:00 - 11:30	Opening Keynote Session	Max Platzer , Honorary President of SARES, University of California Davis, USA	
		Tahir Hikmet Karakoc , President of SARES, Eskişehir Technical University, Eskişehir, Türkiye	
11:30 - 12:30	1st Keynote Session	Session Chair: Ognjen Peković	
		Novel Design of an Optimized Morphing EDF Duct	
		Toni Ivanov , University of Belgrade, Faculty of Mechanical Engineering, Serbia	
		Capacity-Building Academic Activities for the First Scientific Serbian Nano Satellite MOSAIC	
	Milan Stojanović , Astronomical Observatory, Belgrade, Serbia		
12:30-13:30 Lunch Break			
13:30 - 15:00	1st Technical Session	Session Chair: Toni Ivanov	
		<i>The semielliptical modification of the symmetrical Dolphin 0006 airfoil</i>	
		Zorana Dančuo , Ivan Kostić, Olivera Kostić, Aleksandar Bengin, Goran Vorotović, Serbia	
		<i>Outlook for Air Taxits at the 2027 Expo in Belgrade</i>	
		Ognjen Peković , Pavle Petrović, Jelena Svorcan, Marija Baltić, Serbia	
		<i>Investigating the Ability of Turbulence Models to Predict Stall</i>	
		Jelena Svorcan , Toni Ivanov, Teodora Šukunda, Serbia	
		<i>Mould realization and technology development for different biocomposite specimens (mycelium-based materials): Case - three-point bending test</i>	
	Marija Baltić , Aleksandar Knežević, Miloš Vorkapić, Ivana Đokić, Dragoljub Tanović, Milica Ivanović, Serbia		
	<i>Preliminary Mission Specifications of MOSAIC Nano Satellite</i>		
	Igor Planjanin , Tan Tien et al, Serbia		
15:00 - 16:30	2nd Keynote Speaker Session	Session Chair: Jelena Svorcan	
		<i>Certification Challenges for New Generation Sustainable Aircraft</i>	
		Ravi Rajamani , DRR2 CONSULTING, LLC and IDCA, USA	
		<i>The Conceptual Design, Analysis and Optimization of a Hydrogen Combustion Powered Aircraft</i>	
	Ramesh Agarwal , Washington University in St. Louis, USA		
	<i>Avionics for Sustainable Aviation</i>		
	Umut Durak , German Aerospace Center (DLR) - Institute of Flight Systems, Germany		
16:30-17:00 Coffee Break			
17:00 - 18:30	Panel Discussion	<i>Sustainability and Industrial Practices in Aviation MRO</i>	
		Moderators: Tahir Hikmet Karakoc & Mirko Dinulović	
		Participants:	
		Mr Bojan Jovanović , SR Technics, Serbia Mr Srdan Kragojević , Prince Aviation, Serbia Ms Nevena Vesković , JAT Technics, Serbia Mr Okan Ozkan , mvTECHNIC, Türkiye	
18:30-19:00 Break			
From 19:00 Gala Dinner			

DAY ONE

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ISSA'24 Program - DAY 2

Belgrade Time Zone (GMT+1)		Ceremonial Hall 211 - 31 October 2024	
		Microsoft Teams Link	
09:30 - 10:00 - Hall 210 - Registration			
10:00 - 11:00	3rd Keynote Session	Session Chair: Mirko Dinulović	<i>Further aspects in the development of a proton exchange membrane fuel cell light aircraft</i>
		John Olsen , University of New South Wales, Australia	<i>Electric and Hybrid Electric Aircraft Conceptual Design Studies with Environmental Considerations</i>
11:00 - 13:00	2nd Technical Session	Session Chair: Ognjen Peković	<i>Digital Twins in Aviation</i>
		Dragan Kreculj , Đorđe Dihovični, Nada Ratković Kovačević, Goran Nestorović, Petar Jakovljević, Serbia	<i>Determination of a Reliability Model for an Engine Low-Pressure Pump</i>
		Stojko Biočanin , Milica Timotijević, Serbia	<i>Experimental Analysis of the Deformation and Failure of a Composite Drone Arm</i>
		Mihailo Petrović, Nikola Raičević , Miloš Petrašinović, Aleksandar Grbović, Danilo Petrašinović, Serbia	<i>Estimation of Hover Endurance for an Electric Multicopter with Experimental Validation of Results</i>
		Miloš Petrašinović , Nikola Raičević, Mihailo Petrović, Aleksandar Grbović, Danilo Petrašinović, Serbia	<i>Design and investigation of an amphibious unmanned aerial vehicle for autonomous firefighting operations</i>
		Mehmet Gürsoylu , David Szirczak, David Szilagyi, Hungary	<i>Evaluation of 3D Path Planning and Obstacle Detection Studies in Autonomous Unmanned Aerial Vehicles: A Critical Review</i>
		Abdullah Kartal , Ahmet Gürkan Yüksek, Türkiye	<i>An Investigation On Green Airport Concept In Respect To Country: A Brief Review</i>
		Onur Yasar , Enver Yalcin, Tahir Hikmet Karakoc, Türkiye	<i>Safety of e-VTOL aircraft operations in the context of maintenance and engineering approach</i>
		Imanov Tapdig , Gelirli Nalan, Cyprus	
		13:00-14:00 Lunch Break	
14:00 - 15:00	4th Keynote Session	Session Chair: Toni Ivanov	<i>Probabilistic-Adaptive Kalman Filtering for Fault-Tolerant Estimation of UAV States</i>
		Chingiz Hajiyev , Istanbul Technical University, Faculty of Aeronautics and Astronautics, Türkiye	<i>Prospects for the production of sustainable aviation gasoline</i>
15:00 - 16:30	Panel Discussion	Sergii Boichenko , National Technical University of Ukraine, Ukraine	<i>Green Urban Air Mobility</i>
		Moderators: Ognjen Peković	Participants: Ms Lidija Tomić , Civil Aviation Directorate of the Republic of Serbia, Serbia Mr Andrija Ekmedžić , Konelek Aero, Serbia Aleksandar Petrović , Utva, Serbia Prof. Ramesh Agarwal , Washington University, USA
16:30-17:00 Coffee Break			
17:00 - 19:00	3rd Technical Session	Session Chair: Jelena Svorcan	<i>Fast response aerodynamic multihole probe - mechanism for calibration and possibilities for measurements</i>
		Milan Bulajić , Đorđe Čantrak, Dejan Ilić, Serbia	<i>Analysis of the possibility of measuring the velocity field inside the axial fan impeller using the PIV</i>
		Lazar Lečić , Đorđe Čantrak, Serbia	<i>Numerical simulation of five-hole probe used for small UAV</i>
		Ilija Nenadić , Jelena Svorcan, Ivan Kostić, Dijana Damjanović, Serbia	<i>Prioritizing Feedstocks for Sustainable Aviation Fuel Production: An AHP-Based Approach</i>
		Murat Ayar , Türkiye	<i>Propulsion systems of Cubesat</i>
		Tahir Hikmet Karakoc, Ali Haydar Ercan, İlkinur Nuriyev , Türkiye	<i>Clear Skies: The Role of UAVs in Sustainable Aviation</i>
		Onur Ozsoy , Ilkay Orhan, Türkiye	<i>Design Criteria for Landing and Takeoff Areas of Autonomous eVTOL Vehicles</i>
		Kurşat Alp Yigit , Türkiye	<i>Towards realistic urban environment-based UAV simulations</i>

DAY TWO

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Memory of
Ming Chang, RIP

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UNIVERSITY OF
BELGRADE
Faculty of Mechanical
Engineering



ESKISEHIR
TECHNICAL UNIVERSITY
Research & Application
Center of Civil Aviation

Dávid Szilágyi et al, Hungary



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ISSA'24 Program - DAY 3

Belgrade Time Zone (GMT+1)		Ceremonial Hall 211 - 01 November 2024	
		Microsoft Teams Link	
09:30 - 10:00 - Hall 210 - Registration			
10:00 - 11:00	5th Keynote Session	Session Chair: Toni Ivanov	<i>LCA Applications and Benefits in Airport Premises</i>
		Alper Dalkıran , Suleyman Demirel University, School of Aviation, Türkiye	<i>Sustainable Aviation Applications: Examples from Turkish Airlines</i>
11:00 - 13:00	4th Technical Session	Session Chair: Nikola Davidović	<i>ADS -B system implementation in civil aviation: benefits and cyber security risks</i>
		Dejan Kožović , Marta Trninić, Mirko Dinulović, Dragan Đurđević, Serbia	<i>Contemporary Materials for Aircraft Structures</i>
		Dragan Kreculj , Aleksandra Mitrović, Nada Ratković Kovačević, Đorđe Dihovični, Miloš Vorkapić, Serbia	<i>An Overview of Sustainable Commercial Flight: Innovations in Jet Engines and SAFs Regulatory Framework</i>
		Mohammad Sakib Hasan, Milica Ivanović , Marija Baltić, Nemanja Jovanović, Serbia	<i>Numerical analysis of small-scale wind turbine blade airfoil for low wind velocity at different angle of attack</i>
		Dragoljub Tanović , Miloš Vorkapić, Marija Baltić, Ermina Čosović, Katarina Telemek, Serbia	<i>Entransy Analysis Of Pillow Plate Heat Exchangers For Conventional Aircrafts</i>
		Onur Yasar , Enver Yalcin, Tahir Hikmet Karakoc, Türkiye	<i>A Review on Passenger Aircraft HVAC Systems</i>
		Mehmet Baris Ozerdem , Türkiye	<i>Experimental Thermal Analysis of Cylindrical LFP Batteries</i>
		Fatma Nur Demir, Khusanzhon Abdurakhmonzoda , Ozge Yetik, Tahir Hikmet Karakoc, Türkiye	<i>Investigation of Linear Quadratic Integral Control for Micro Turbojet Engine with Turbofan Power Ratio as Thrust Parameter</i>
		Khaoula Derbel , Károly Beneda, Hungary	
		13:00-14:00 Lunch Break	
14:00 - 15:00	Industrial Session	Moderator: Hikmet Karakoc , Eskişehir Technical University	
		Ahmet Nezir Ertürk , Otonom Teknoloji, Türkiye, Türkiye	
		Hüseyin Devrim , TEKSİS İleri Teknolojiler, Türkiye	
Okan Özkan , myTECHNIC Aircraft MRO Services, Türkiye			
15:00 - 17:00	5th Technical Session	Session Chair: Jelena Svorcan	<i>Estimation of Crossbeam Fatigue Life</i>
		Mohamed Albusaeedi , Aleksandar Grbović, Gordana Kastratović, Nikola Raičević, Nenad Vidanović, Serbia	<i>Numerical fatigue life prediction of aircraft's engine part with crack-like defects</i>
		Hamed Almarzooqi , Aleksandar Grbović, Gordana Kastratović, Nenad Vidanović, Serbia	<i>Numerical Environment for Missile Aero-Thermo-Elastic Behaviour Modelling During Supersonic Flight Conditions</i>
		Hamad Alarfati , Aleksandar Grbović, Nenad Vidanović, Gordana Kastratović, Serbia	<i>Sustainable Maintenance Management in Aviation</i>
		Mehmet Ergec , Serkan Cankurt, Inan Eryilmaz, Türkiye	<i>Mathematical Modeling Approach for Flight Timetable Generation with Return Flights and Airport Slot Capacity</i>
		Melis Tan Tacoglu , Mustafa Arslan Ornek, Yigit, Türkiye	<i>The Effect of International Regulations and European Green Deal on Turkish Aviation Sector From a Legal Perspective</i>
		Halil Cecen , Türkiye	<i>Scenario Analysis for Predicting Noise Impact of Novel Aircraft</i>
		Kateryna Kazhan et al , Ukraine	<i>Defining Selection Criteria for Candidate Technicians in Aircraft Maintenance: A Structured Analysis</i>
		Murat Ayar , Cansu Çalış, Tahir Hikmet Karakoç, Türkiye	
		17:00 - 18:00 Closing Remarks & SARES Awards 2024 Ceremony	

DAY THREE

DAY THREE