



RAST'23

10TH INTERNATIONAL CONFERENCE ON RECENT
ADVANCES IN AIR AND SPACE TECHNOLOGIES

JUNE 7-9, 2023

CONFERENCE PROGRAM



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10TH INTERNATIONAL CONFERENCE ON
Recent Advances in
Air and Space Technologies
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WELCOME NOTE FROM CO-CHAIR

We proudly present the 10th International Conference on Recent Advances in Air and Space Technologies (RAST2023) in İstanbul, Türkiye. The conference is organized to exchange the latest research results and ideas in air and space technologies.

On the first day of the conference, on 7th June, Prof. Soon-Jo Chung from California Institute of Technology, USA will present “Spacecraft Swarms: Opportunities and Challenges Using Artificial Intelligence” as the first keynote speech. Subsequently, the second keynote speech entitled “Semi-Hard Landing on the Moon: A Challenge to Ultra-Small Lunar Exploration” will be delivered by Prof. Tatsuaki Hashimoto from Japan Aerospace Exploration Agency (JAXA), Japan.

On the second day, Mr. Serdar Hüseyin Yıldırım, the president of the Turkish Space Agency (TUA), will perform the opening speech before the keynote speeches of the day. The keynote speech entitled “Methodologies for Morphing Unmanned Aerial Systems Performance Improvement” will be set by Prof. Ruxandra Mihaela Botez from the University of Quebec, Canada. Assoc. Prof. Arif Karabeyoğlu from Koç University, Türkiye, will speak for the last keynote speech of the conference, entitled “Türkiye’s Aspirations in Space”.

RAST 2023 is honored by the sponsorship of IEEE. The technical quality of the conference and the standardization of the submissions could be set at a high level by the contribution of IEEE sponsorship. Besides, RAST 2023 appreciates the technical sponsorships of AIAA, AESS, GRSS, ISPRS and UNISEC Global with the sponsorships of Baykar Technology, Roketsan, Alp Aviation, BITES, HAVELSAN, ASELSAN, EHSİM, MIA Technology, TEI, and TÜRKSAT.

All submitted manuscripts were subject to a review process for the first sufficiency check before acceptance. At least two reviewers checked each manuscript for its scientific level. The papers presented at the conference will be submitted to IEEE eXplore for publication.

The conference takes place owing to the dedication of National Defence University Turkish Air Force Academy conference members. Also, the support of the scientific advisory committee and the reviewers significantly contributed to the conference's academic quality. They deserve sincere appreciation for their effort.

We hope everyone will enjoy the conference and the RAST family will be greater by joining the distinguished participants worldwide

Sincerely Yours,
June 7, 2023

Prof. Dr. Nurettin Acir
Co-Chair of RAST 2023



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10th International Conference on Recent Advances in Air and Space Technologies (RAST 2023) Conference Program			
Time	June 7, 2023 (Wednesday)		
09:00-10:00	REGISTRATION - Welcome Cocktail		
10:00-10:45	OPENING CEREMONY & SPEECHES (Atatürk Conference Hall)		
10:45-11:45	KEYNOTE SPEECH (Atatürk Conference Hall) Prof. Soon-jo Chung, PhD California Institute of Technology, USA Title: Spacecraft Swarms: Opportunities and Challenges Using Artificial Intelligence Prof. Tatsuki Hashimoto, PhD Japan Aerospace Exploration Agency, Japan Title: Semi-Hard Landing on the Moon: A Challenge to Ultra-Small Lunar Exploration		
11:45-12:00	GROUP PHOTO SHOOT		
12:00-13:30	LUNCH		
13:30-15:00	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2
	Sponsor Presentations	UAV and Swarm System Technologies Chair: Ranaaz Yenerli Paper IDs: 51, 57, 81, 143, 242	Special Session Attitude Determination and Control for Small Satellites I Chair: Qingzhi Haijuev Paper IDs: 40, 117, 146, 177
15:00-15:15	COFFEE BREAK		
15:15-16:45	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2
	Special Session Blockchain Research and Applications in Aerospace Chair: S. Alper Sert Paper IDs: 62, 66, 124, 134, 157	UAV and Swarm Control Systems Chair: Selim Sivrigözü Paper IDs: 56, 87, 101, 158, 247	Special Session Attitude Determination and Control for Small Satellites II Chair: Haili Ersan Söken Paper IDs: 192, 194, 209, 217
			Seminar Hall 3 Aerodynamic Investigations on Aerospace Structures Chair: Ibrahim Sıkan Akmandor Paper IDs: 43, 181, 193, 222, 260

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Time	June 8, 2023 (Thursday)				
	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3	Seminar Hall 5
09:00-10:30	Special Session Modelling, Simulation & Serious Games Chair: Mehmet Bayram Paper IDs: 16, 23, 141, 195, 255	UAV and Swarm System Security Chair: Öge Özdemir Paper IDs: 31, 69, 97, 239, 241	Analysis of Composite Aerospace Structures Chair: Hakkı Süleyman Turkmən Paper IDs: 55, 74, 115, 125, 240	Computational Fluid Dynamics Analysis Subjects Chair: Asaf Ali Mohamed Omar Paper IDs: 84, 110, 112, 139, 252	Heat Transfer Based Numerical and Experimental Studies Chair: Ali Arshad Paper IDs: 54, 64, 93, 185
10:30-10:45	COFFEE BREAK				
10:45-11:00	OPENING SPEECH (Vatan Conference Hall) Serdar Hüseyin Yıldırım President of Turkish Space Agency				
11:00-12:00	KEYNOTE SPEECHES (Vatan Conference Hall) Prof. Ruxandra Mihaela Botez, PhD University of Quebec, Canada Title: Methodologies for Morphing Unmanned Aerial Systems Performance Improvement Assoc. Prof. Arif Karabeyoğlu, PhD Koç University, Türkiye Title: Türkiye's Aspirations in Space				
12:00-13:30	LUNCH				
13:30-15:00	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3	Seminar Hall 5
	Special Session IMECE Satellite Turkish Space Endeavour - I Chair: Dagiir Karaman Paper IDs: 216, 225, 230, 237, 264	Artificial Intelligence in Aerospace Technologies - I Chair: Fatma Gönülç Paper IDs: 24, 60, 160, 214, 262	Dynamical Analysis in Aerospace Structures Chair: Serhat Yılmaz Paper IDs: 26, 39, 86, 108, 176, 253	Special Session GNSS and Control System Analysis in Aerospace Vehicles - I Chair: Halli Erkin Söken Paper IDs: 17, 47, 191, 248	Flight Mechanics and Propulsive Performance Chair: Hayri Acar Paper IDs: 21, 45, 82, 98, 198
15:00-15:15	COFFEE BREAK				
15:15-16:45	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3	Seminar Hall 5
	Special Session IMECE Satellite Turkish Space Endeavour - II Chair: Burak Yalçınoğlu Paper IDs: 265, 266, 267, 268, 285	Artificial Intelligence in Aerospace Technologies - II Chair: Can Erinoğlu Paper IDs: 80, 127, 173, 204, 218, 238	Mechanical Behaviors of Aerospace Structures Chair: Ahmet Salih Vigit Paper IDs: 30, 44, 88, 114, 162, 249	Special Session GNSS and Control System Analysis in Aerospace Vehicles- II Chair: İsmail Bayazit Paper IDs: 48, 95, 151, 244, 258	Deep Learning in Aerospace Technologies Chair: Mustafa Kara Paper IDs: 38, 67, 155, 190, 259

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June 9, 2023 (Friday)				
Time	Vatan Conference Hall	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
09:00 -10:30	Special Session Programmatic, Technical and Scientific Aspects of the First Turkish Lunar Mission - I Chair: Bursak Yağcıoğlu Paper IDs: 270, 272, 273, 275, 276, 278	Optical Systems and Applications - I Chair: Necip Gökhan Kısapoğlu Paper IDs: 36, 120, 234, 246	Space Environment Related Studies Chair: Nebiye Musaoglu Paper IDs: 70, 107, 111, 118	Spacecraft and Space Mission Architecture and Subsystems - I Chair: Tuncay Yunus Erkeç Paper IDs: 96, 106, 130, 235, 281
10:30-10:45	COFFEE BREAK			
10:45-12:00	Special Session Programmatic, Technical and Scientific Aspects of the First Turkish Lunar Mission - II Chair: Ali Baygeldi Paper IDs: 271, 279, 280, 282, 283, 287	Optical Systems and Applications - II Chair: Alim Rüstem Aslan Paper IDs: 128, 131, 132, 133	Remote Sensing and Photogrammetry - I Chair: Mehmet Önderir Paper IDs: 83, 104, 136, 138, 196	Spacecraft and Space Mission Architecture and Subsystems - II Chair: Husamedin Mukhtar Paper IDs: 19, 25, 72, 113, 182
12:00-14:00	LUNCH			
14:00-15:30	Special Session Guidance, Navigation and Control Technologies for Advanced Aerospace Systems - I Chair: Çingiz Hıjıyev Paper IDs: 18, 41, 85, 123, 125	Electronic Warfare Systems Design and Development Chair: H. F. Selim Bayraklı Paper IDs: 50, 68, 100, 135, 186	Remote Sensing and Photogrammetry - II Chair: Elif Sertel Paper IDs: 29, 34, 35, 46, 237	Satellite Systems Design and Experiments Chair: Esen Oland Paper IDs: 65, 147, 149, 206, 233, 254
15:30-15:45	COFFEE BREAK			
15:45-17:00	Special Session Guidance, Navigation and Control Technologies for Advanced Aerospace Systems - II Chair: Çingiz Hıjıyev Paper IDs: 126, 159, 228	Orbit, Trajectory and Asteroid Mining Approaches Chair: Demet Çıldır Güler Paper IDs: 58, 152, 156, 164, 226, 243	Remote Sensing and Photogrammetry - III Chair: Güran Büyüksalih Paper IDs: 42, 79, 197, 204, 234, 288	Decision-Making Applications on Space Technologies Chair: Fatma Kutlu Güneşoğlu Paper IDs: 52, 150, 161, 205, 207, 227
17:00-17:15	CLOSING CEREMONY			



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OPENING CEREMONY & SPEECHES

7 JUNE 2023 WEDNESDAY
10.00 – 12.00

Session : Opening Ceremony & Keynote Speech

Hall: Ataturk Conference Hall

Time	Program
10.00-10.45	Opening Speech
10.45-11.15	Prof. Soon-Jo Chung - California Institute of Technology, USA <i>Title: Spacecraft Swarms: Opportunities and Challenges Using Artificial Intelligence</i>
11.15-11.45	Prof. Tatsuaki Hashimoto - Japan Aerospace Exploration Agency, Japan <i>Title: Semi-Hard Landing on the Moon: A Challenge to Ultra-Small Lunar Exploration</i>
11.45-12.00	Group Photo Shoot



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7 JUNE 2023 WEDNESDAY
13:30 – 15:00

Session : Sponsorship Presentations

Hall: Vatan Conference Hall

Time	Program
13.30-15.00	Sponsor Presentations



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7 JUNE 2023 WEDNESDAY
13:30 – 15:00

Session : UAV and Swarm System Technologies

Chair : Ramazan Yeniçeri

Hall: Seminar Hall 1

No.	Title	Authors
1	From Concept to Flight: Developing a Hybrid Solar-Powered UAV Prototype for Malaysian Skies	Zulhimy Sahwee
2	Spin Hamiltonian Investigations on Atomic Spin Gyroscope Using EasySpin Toolbox	Hatice Hatipoğlu
3	Blockchain-Based Data Sharing within an Unmanned Aerial Vehicles Swarm	Dilara Kılınc, Harun Çelik
4	File System for Aircraft Maintenance Records Based on Blockchain and IPFS	Mustafa Kara
5	Landing with Confidence: The Role of Digital Twin in UAV Precision Landing	Jahir Uddin, Firoz Wadud, Rezwana Ashrafi, Golam Rabiul Alam, Khalilur Rhaman



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7 JUNE 2023 WEDNESDAY
13:30 – 15:00

Session : Special Session – Attitude Determination and Control for
Small Satellites – I

Chair : Chingiz Hajiyev

Hall: Seminar Hall 2

No.	Title	Authors
1	Multiple Fading Factors Based Adaptive SVD-aided UKF for Small Satellite Attitude Estimation	Chingiz Hajiyev, Demet Cilden Güler
2	Stabilization of Non-Cooperative Satellites in Low Earth Orbits Using Inter-Satellite Atmospheric Drag	Espen Oland, Raymond Kristiansen
3	Data-Driven Model Discovery and Control: Real-Time Implementation to Highly Maneuverable Aircraft Lateral-Directional Dynamics	Can Öznurlu, Berke Bayrı
4	Quaternion Interpolation Under the Angular Velocity Constraint	Şemsettin Numan, Murat Gökçe, Farid Gulmammadov, Ersin Söken



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7 JUNE 2023 WEDNESDAY
13:30 – 15:00

Session : UNISEC Global Technical Sponsor Session

Hall: Seminar Hall 3

No.	Title	Authors
1	Opening Remarks	Alim Rüstem Aslan
2	UNISEC Global - Past, Present, and Future	Rei Kawashima
3	Space-Based Possible Earthquake Prediction	Masashi Kamogawa
4	Introduction of New Launch Services from Wakayama, Japan	Takayuki Kawai



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7 JUNE 2023 WEDNESDAY
15:15 – 16:45

Session : Special Session – Blockchain Research and Applications in Aerospace

Chair : S. Alper Sert

Hall: Vatan Conference Hall

No.	Title	Authors
1	Blockchain-Based Safety and Efficiency Approach to Air Traffic Management	Alper Ören
2	UASChainSec: A Blockchain Based Framework for Secure 5G-Capable UAS Communication	Thabet Kacem
3	A Multi-Level Blockchain-Based Node Authentication Approach for UAV-Assisted Wireless Sensor Networks	Seyyit Alper Sert
4	A Role-Based Access Control Management Model on Blockchain for Restricted Facilities: An Airport Example	Ozan Zorlu, Adnan Özsoy, Seyyit Alper Sert
5	An Immutable Navigation Database on Blockchain	Ozan Zorlu, Adnan Özsoy



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7 JUNE 2023 WEDNESDAY
15:15 – 16:45

Session : UAV and Swarm Control Systems

Chair : Selim Sivrioğlu

Hall: Seminar Hall 1

No.	Title	Authors
1	2-DOF Robust H^∞ Controller Synthesis for Fin Actuation System	İsmail Cantürk
2	Stabilizing Adaptive Feedback Controller Design for a Helicopter Gun Turret System	Mustafa Tolga Yavuz, Çağlar Uyulan, İbrahim Özkol
3	Gaining Swarm Behavior Through Establishing a Control System and Communication Network on Unmanned Aerial Vehicles	Muhammed Miraç Özer, Murat Bakırcı
4	Formation Control of Unmanned Aerial Vehicles for Dynamically Changing Formations Facing Suddenly Emerging Environmental Features	Sinan Çimen, Aydan Müşerref Erkmen
5	Assessment of Atmospheric Radiation Effects on Aircraft Safety Analysis	Ayçin Gürdamar, Şeref Naci Engin



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7 JUNE 2023 WEDNESDAY
15:15 – 16:45

Session : Special Session – Attitude Determination and Control for
Small Satellites – II

Chair : Halil Ersin Söken

Hall: Seminar Hall 2

No.	Title	Authors
1	External Magnetic Field Contributions to B-Dot Attitude Control of a Nanosatellite	Anıl Taha Balkır, Demet Çilden Güler
2	Onboard Gyro Calibration for Small Satellites Using Star Tracker Measurements	Özgür Akça, Kaan Ege Tırman, Halil Ersin Söken
3	Field of View and Accuracy Improvement of a Coarse Sun Sensor	Farid Gulmammadov, Bektaş Akyazı, Emre Kamışçı
4	Enhancing Disturbance Rejection in Minisatellite Attitude Control: A Comparative Study	Emre Sayın, İsmail Bayezit



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7 JUNE 2023 WEDNESDAY
15:15 – 16:45

Session : Aeroelastic and Aerodynamic Investigations on Aerospace Structures

Chair : İbrahim Sinan Akmandor

Hall: Seminar Hall 3

No.	Title	Authors
1	Application of SG6043mod Airfoil for the Enhanced Aerodynamic Characteristics of UAV Wing	Ali Arshad, Vadims Kovaļčuks, Iñigo Martínez López
2	Effect of Airfoil Thickness on Flow over the Cambered Airfoils	Sinem Keskin, Muhammer Ayvazoğlu, Mehmet Sincar, Eren Anıl Sezer, Halil Hakan Açikel, Mustafa Serdar Genç
3	An Analytical Investigation of Propeller Whirl Flutter	Abdülkadir Yıldız, Musa Küçükali, Seher Eken
4	Effect of Airfoil Thickness on Flow over the Symmetric Airfoils: Part I- Experimental Analysis	Rumeysa Şahin, Muammer Ayvazoğlu, Sinem Keskin, Mustafa Özden, Halil Hakan Açikel, Mustafa Serdar Genç
5	Flutter Analysis of a 3D Aeroelastic Wing by Aerodynamic Strip Theory	Osman Dağlı, Bilgehan Şeref, Serhat Yılmaz



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8 JUNE 2023 THURSDAY
09:00 – 10:30

Session : Special Session – Modelling, Simulation & Serious Games

Chair : Mehmet Bayram

Hall: Vatan Conference Hall

No.	Title	Authors
1	Simulation of Autonomous Grading of Lunar Surface	Önder Halis Bettemir
2	1D Simulation of a Single Engined VLA Class Aircraft's Fuel System	Enes B. Şenel, Emre Böncü, Yunus Suat, Erhan İlhan Konukseven
3	Numerical Simulation of Hypervelocity Space Debris Impact	Belkıs Erzincanlı, Ali Eken, Seher Eken
4	Modeling and Simulation of Pre-Apogee Trajectories for Low Altitude Rockets	Ahmet Nuri Yılmaz, Melahat Cihan
5	Simulation of Counter-UAV Tactics Against Drone Swarms: A Serious Game Approach	Gökhan Karadeniz, Ahmet Özcan, Mehmet Bayram, Gökhan İnce



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8 JUNE 2023 THURSDAY
09:00 – 10:30

Session : UAV and Swarm System Security

Chair : Özge Özdemir

Hall: Seminar Hall 1

No.	Title	Authors
1	Securing the Skies: Exploring Privacy and Security Challenges in Internet of Drones	Anıl Sezgin, Aytuğ Boyacı
2	A New Anomaly-Based Intrusion Detection System for MIL-STD-1553	Yunus Emre Çiloğlu, Şerif Bahtiyar
3	Efficient Motion Control Strategy for Drone Swarms	Burak Tüfekçi, Cihan Tunç, Ram Dantu
4	Post-Disaster Area Monitoring with Swarm UAV System for Effective Search and Rescue	Murat Bakırcı, Muhammed Miraç Özer
5	A Multi-Drone System for Formation Flight and Solo Attack	Ramazan Yeniçeri, Emre Koyuncu, Serkan Şenel, Mehmet Zeki Paşaoğlu, Ahmet Talha Çetin, İpek Ösken, Onur Sevimli, Gürkan Çetin, Barış Yalçın, Mert İrez, Taha Taner İnal, Mehmet Altan Toksöz



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8 JUNE 2023 THURSDAY
09:00 – 10:30

Session : Analysis of Composite Aerospace Structures

Chair : Halit Süleyman Türkmen

Hall: Seminar Hall 2

No.	Title	Authors
1	Creep Modeling of 3D Printed Carbon Black Reinforced Polyetherimide Composites	Merve Karabal, Alptekin Yıldız
2	Direct Foaming Approach for Reinforcing Re-entrant Auxetic Structures for Superior Compressive Properties and Energy Absorption	Barış Yılmaz, Elif Akar, Eyüphan Küçükkalfa, Kaan Yıldız
3	Structural Optimization of Composite Panels Using Genetic Algorithm	Tevfik Can Başsüllü, Halit Süleyman Türkmen
4	High-Velocity Impact Responses of Composite Sandwich Panels with Honeycomb Core by Using Experimental and Numerical Methods	Mustafa Bilgin, Fatih Usta, Halit Süleyman Türkmen, Uğur Yolum
5	The Effects of Thickness and Stacking Sequence on Crippling Phenomenon for Laminated Composite Structures	Emine Gülşah Yıldırım, Rahmi Ünal



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8 JUNE 2023 THURSDAY
09:00 – 10:30

Session : Computational Fluid Dynamics Analysis Subjects

Chair : Asraf Ali Mohamed Omar

Hall: Seminar Hall 3

No.	Title	Authors
1	RAE M2129 S-Shaped Air Intake CFD Analysis Using OpenFOAM	Osman Veyssel Özdemir, Human Amiri, Umut Can Küçük
2	Numerical Simulation of the Flapping Eagle, Owl and S1223 Airfoils	Ashraf A. Omar, Adel Kurban, Mohamed Jetlawi
3	Numerical Investigations of Low Reynolds Number Aerodynamics of Bio-Inspired 3D Wings	Smail Boughou, Ashraf A. Omar, Radouan Boukharfane, Omer A. Elsayed
4	Passive Flow Control of a Generic Rocket at Transonic Speeds Using a Ventillation Wall	Soufyane Hazel, Mohammed Amin Boukenkoul
5	Computational Investigation of Turbulent Shock Wave Boundary Layer Interaction via Secondary Recirculation Induced Wall Jet	Alaatin Yolaçtı, Kenan Kaya, Oktay Özcan



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8 JUNE 2023 THURSDAY
09:00 – 10:30

Session : Heat Transfer Based Numerical and Experimental Studies

Chair : Ali Arshad

Hall: Seminar Hall 5

No.	Title	Authors
1	Numerical and Experimental Investigations on Radiative Heat Flux Characteristics of an Infrared Quartz Lamp	Toygan Er, Atakan Karabatak, Hasan Gürgüç, Osman Furkan Muratoğlu
2	A Numerical Investigation of Total Temperature Probes Measurement Performance	Erdem Meriç, Fırat Oğuz Edis
3	Novel Gas Turbine Waste Heat Recovery Air Cycle Electrical Generator	İbrahim Sinan Akmandor, Eren Yıldırım
4	Numerical Investigation of Hybrid Rocket Nozzle Heat Transfer and Test Validation	Şule Öztürk, İbrahim Özkol, M. Arif Karabeyoğlu



10TH INTERNATIONAL CONFERENCE ON
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8 JUNE 2023 THURSDAY
10.45 – 12.00

Session : Keynote Speech

Hall: Vatan Conference Hall

Time	Program
10.45-11.00	Opening Speech Serdar Hüseyin Yıldırım - President of Turkish Space Agency
11.00-11.30	Prof. Ruxandra Mihaela Botez - University of Quebec, Canada <i>Title: Methodologies for Morphing Unmanned Aerial Systems Performance Improvement</i>
11.30-12.00	Assoc. Prof. Arif Karabeyoğlu - Koç University, Türkiye <i>Title: Türkiye's Aspirations in Space</i>



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8 JUNE 2023 THURSDAY
13:30 - 15:00

Session : Special Session – IMECE Satellite: Turkish Space Endeavour - I

Chair : Özgür Kahraman

Hall: Vatan Conference Hall

No.	Title	Authors
1	TUBITAK Uzay Spaceborne GNSS Receiver System for LEO Applications	Burak Yağlıoğlu, Kazım Doruk Yelbaşı, Hasan Bellikli, Abdullah Aslan, Orçun Kiriş, Halid Mustaçoğlu
2	On-Board Orientation Control of a Steerable Antenna for Ground Station Tracking on LEO Satellites	Mustafa Yavuz Öztürk, Çağatay Yavuzylmaz
3	Electrical Power Subsystem of IMECE Satellite	Mehmet Karahan, Ozan Can İyier, Ülkü Miray Gündoğdu, Doğan Yıldırım, Cihat Arslan, Erdem Kazak
4	Wideband Circularly Polarized Antenna for Multiband GNSS Receiver on IMECE	Orçun Kiriş
5	IMECE Satellite Attitude and Orbit Control Subsystem - AOCS Overview	Özgür Kahraman, Abdülkadir Köker, Biter Boğa İnaltekin, Berk Yurttagül, Burak Yağlıoğlu, Çağatay Yavuzylmaz, Enes Dağ, Eren Can Kovan, Halil Ersin Söken, Kezban Üçüncü Emri, Mehmet Burak Ekinci, Mehmet Rauf Geden, Murat Gökçe, Mustafa Yavuz Öztürk, Şemsettin Numan Sözen, Yusuf Acar



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8 JUNE 2023 THURSDAY
13:30 - 15:00

Session : Artificial Intelligence in Aerospace Technologies – I

Chair : Fatma Gümüş

Hall: Seminar Hall 1

No.	Title	Authors
1	Machine Learning-Based Fault Diagnosis Approach for Geosynchronous Satellite Power Systems	Can Eyüpoğlu
2	Prediction of the Spacecraft Position Relatively to the Focal Line of the Solar Gravitational Lens by Neural Network	Kirill Korneev, Denis Perepukhov, Maksim Shirobokov
3	Prototype of a Martian rover programmed by Mamdani Inference Method with Fuzzy Logic	Okan Aktuğ, Ozan Ünsalan
4	Artificial Neural Network Based Initial Orbit Determination for Angle-Only Data	Ömer Utku Örengül, Kürşat Yenidogan, Tahsin Çağrı Şişman
5	Artificial Intelligence in Air and Space Technologies: A Scientometric Analysis	Emrah Köksalınış, Gülşah Hançerlioğulları Köksalınış



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8 JUNE 2023 THURSDAY
13:30 - 15:00

Session : Dynamical Analysis in Aerospace Structures

Chair : Serhat Yılmaz

Hall: Seminar Hall 2

No.	Title	Authors
1	A Landing Dynamics Analysis Model For STOVL Aircraft	Selim Sivrioğlu
2	The Characterization of Impact Dynamics in Aerospace Structures – The Case of Deformable Impactors	Andreas Christoforou, Ahmet Salih Yiğit
3	The Free Vibration Characteristics of Canadair NF-5 Aircraft Canopy	Oğuzhan Daş, Habip Battal, Emre Kurt, Mutlu Yılmaz
4	Experimental and Numerical Vibration Analysis of GLARE Beams	Mehmet Ziya Polat, Ferhat Kadioğlu, Hamza Mohamad EL Etri
5	The Solution of Helicopter Ground Resonance Instability	Oğuzhan Keser, Halit Süleyman Türkmen
6	Free Vibration Analysis of Accelerated Helicopter Rotor Blade	Hüseyin Ural, Özge Özdemir



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8 JUNE 2023 THURSDAY
13:30 - 15:00

Session : Special Session on GNSS and Control System Analysis in Aerospace Vehicles – I

Chair : Halil Ersin Söken

Hall: Seminar Hall 3

No.	Title	Authors
1	Sensitivity Analysis to Estimate the Positional Accuracy of a Small Size Unmanned Aerial Vehicle	Önder Halis Bettemir
2	Unsupervised Clustering of GNSS Receiver Measurements for Satellite Selection	Caner Savaş
3	Analysis of GDOP Based on GEO Satellite	Seda (Karadeniz) Kartal, Yasin Burak Kaya, Esra Özbağ, Yağnur Yılmaz, Fatma Nergiz, Tayfun Dar
4	A Lyapunov-Based Nonlinear Discrete-Time Controller Design for Attitude Tracking Control of Quadrotor Unmanned Aerial Vehicles	Fatih Adıgüzel



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8 JUNE 2023 THURSDAY
13:30 - 15:00

Session : Flight Mechanics and Propulsive Performance

Chair : Hayri Acar

Hall: Seminar Hall 5

No.	Title	Authors
1	Agile Methods on Flight Tests	Berkay Pamuk
2	Design and Analytical Analyses of eVTOL UAV Performance Calculator for Power and Energy	Sayem Zafar, Majed Alhammadi, Nouf AlMesafri, Gustavo D.F. dos Santos
3	New Generation Electric Tail Rotor Performance Analyses	Onur Acar, Osman Ergüven Vatandaş, Özge Özdemir
4	Certification Compliant Performance Analysis and Requirements Management of an Electrically Powered General Aviation Aircraft	Luca Hein, Purav Panchal, Stephan Myschik
5	The Effect of Injector Geometry on Performance of a Lab-Scale Hybrid Rocket Motor	Eren Berkay Paşaoğlu, Ahmet Çiçek, Melahat Cihan



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8 JUNE 2023 THURSDAY
15:15 - 16:45

Session : Special Session – IMECE Satellite: Turkish Space Endeavour – II

Chair : Burak Yağlıoğlu

Hall: Vatan Conference Hall

No.	Title	Authors
1	IMECE Satellite Systems Engineering Activities	Özgür Kahraman, Müberra Sungur, Aslıhan Sedef Kutay
2	X-Band Antenna with Electro-mechanical Steering Mechanism for IMECE Satellite	Ercan Kiraz, Volkan Akan, Süleyman Çetinkaya, Ali Rıza İçtihadî, Barış Çolak
3	Vibro-Acoustic Analysis of IMECE and Its Comparison via Reverberant Chamber Test Results	Seyfullah Aktaşoğlu, Muzaffer Çetin
4	First Reaction Wheel Qualified in Türkiye	Barış Çolak, Ali Özdemir, Şaban Ötenkaya, Burak Selamlar, Mustafa Emre Öncüler, Süleyman Çetinkaya
5	Electric Propulsion System Including Hall-Effect Thruster for IMECE Satellite	Yusuf Yurttaş, Barış Çal, Seda Kayra Güllü, İksen Burat, Sergii Neugodnikov, Demet Uluşen



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8 JUNE 2023 THURSDAY
15:15 - 16:45

Session : Artificial Intelligence in Aerospace Technologies – II

Chair : Can Eyüpoğlu

Hall: Seminar Hall 1

No.	Title	Authors
1	Calculating the Vegetation to Building Ratio in an Urban Environment Using Remote Sensing Images and an Artificial Neural Network: A Case Study from Sofia, Bulgaria	Ivan Stoev, Elitza D Uzunova
2	Comprehensive Overview of a Process-Oriented Build Tool for Airborne Safety-Critical Software Development	Purav Panchal, Konstantin Dmitriev, Stephan Myschik, Florian Holzapfel
3	A Survey of Prominent Image Processing Research on Needle-type Instrument Reading on Aircraft	Fatma Gümüş, Can Eyüpoğlu
4	Prevention of Aviation Accidents with Prediction of Cognitive States	Fatma Gümüş, Rabia Saylam
5	An Artificial Neural Network Approach to Predict Strain Gauge Results of Unidirectional Laminated Composites' Tensile Test	Anıl Burak Karalar, Tahir Soyugüzel, Demet Balkan



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8 JUNE 2023 THURSDAY
15:15 - 16:45

Session : Mechanical Behaviors of Aerospace Structures

Chair : Ahmet Salih Yiğit

Hall: Seminar Hall 2

No.	Title	Authors
1	Numerical Study on the Structural Behaviour of a Solid Propellant Rocket Motor Bolted Flange Joint under Internal Pressurization	Ahker Güneş Dilber, Tuğrul Aksoy, Özgür Ünver, Mehmet O. Görtan
2	Virtual Investigation on the Response of GLARE to Low Velocity Impact	Tolunay Dağ, Nur Yıdırım, Gökhan Şentürk, Metin Durmazoğlu, Serap Yıldırım, Mesut Uyaner
3	An Inverse Synthesis Method for the Determination of Effective Mechanical Properties for Additively Manufactured Aperiodic Structures with Finite Thickness	Eren Acar, Uğur Şimşek, Barış Gökçay, Güllü Kızıldaş Şendur
4	Mechanical Behaviour of Adhesively Bonded Single Strap Joints under Three-Point Bending Loading	Hamza Mohamad El Etri, Ferhat Kadioğlu, Mehmet Ziya Polat
5	Investigation of the Behavior of an Aircraft Wing Exposed to Lightning Strike with an Analytical-Based Model	Aysun Soysal, İbrahim Özkol, Erol Uzal
6	Thermal Buckling Analysis of Rectangular Plate Structures by Differential Quadrature Method	Mustafa Tolga Yavuz, İbrahim Özkol, Aytaç Arıkoğlu



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8 JUNE 2023 THURSDAY
15:15 - 16:45

Session : Special Session – GNSS and Control System Analysis in Aerospace Vehicles – II

Chair : İsmail Bayezıt

Hall: Seminar Hall 3

No.	Title	Authors
1	Structured H-Infinity and Modal Control Approaches on a Flexible Micro Satellite – A Comparison Analysis	Yavuz Andaç
2	Model Predictive Control of a Flexible Spacecraft with Constraints on Torques	Ahmet Burak Koç, Mert Olça, Can Ulaş Doğruer
3	Future Trends and Challenges of Autonomous and Robotic Systems in Air and Space Technologies	Mürsel Doğrul, Haydar Yalçın
4	Flight Control System Design for Fixed Wing Aircraft	Ayşenur Bodur, Levent Uçun
5	Perturbation Effect to Orbit Motion of Satellite for Positioning System	Seda (Karadeniz) Kartal, Yasin Burak Kaya, Esra Özbağ, Yağnur Yılmaz, Ahmet Zoir Abdurahman, Tayfun Dar



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8 JUNE 2023 THURSDAY
15:15 - 16:45

Session : Deep Learning in Aerospace Technologies

Chair : Mustafa Kara

Hall: Seminar Hall 5

No.	Title	Authors
1	Decision Probability Based Immune Plasma Algorithm for Path Planning Problem of Unmanned Aerial Vehicles	Tevfik Erkin, Selçuk Aslan
2	Recognizing and Tracking Person of Interest: A Real-Time Efficient Deep Learning Based Method for Quadcopters	Hidayet Ersin Dursun, Enes Can Güven, Batuhan Avcı, Tufan Kumbasar
3	Deep Reinforcement Learning for Trajectory Generation and Optimisation of UAVs	Mishma Akhtar, Adnan Maqsood, Mathias Verbeke
4	Comparative Study on Vibration Control Using Reinforcement Learning	Sandra Nafuna Wanyonyi, İpar Ferhat, Dilek Funda Kurtuluş
5	Missile Evasion Maneuver Generation with Model-Free Deep Reinforcement Learning	Muhammed Murat Özbek, Emre Koyuncu



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9 JUNE 2023 FRIDAY
09:00 – 10:30

Session : Special Session – Programmatic, Technical and Scientific Aspects of the First Turkish Lunar Mission – I

Chair : Burak Yağlıoğlu

Hall: Vatan Conference Hall

No.	Title	Authors
1	Moon Research Program of Türkiye	Ali Baygeldi, İlker Bayram, Burak Pehlivan, Beyza Ayvaci
2	The First Turkish Lunar Mission Part 1: Programmatic, Mission and System Aspects	Burak Yağlıoğlu, Biter Boğa İnaltekin, Mesut Gökten
3	The First Turkish Lunar Mission Part 2: Overview of Space Segment	Biter Boğa İnaltekin, Burak Yağlıoğlu, Mustafa Ceylan
4	Lunar Neutrals Telescope Onboard the First Turkish Lunar Mission	Manabu Shimoyama, Stefan Karlsson, Stas Barabash, Martin Wieser
5	Compact Crystal Calorimeter Coupled to SiPMs for Particle Flux and Energy Measurements in Space - IRADCAL	Ali Behçet Alpat, Giovanni Bartolini, Arca Bozkurt, Mustafa Doğukan Çeçil, Ahmet Talha Güleriyüz
6	Hybrid Propulsion System for the First Turkish Lunar Mission	Mehmet Can Ünlü, Mert Gürtan, Edanur Açıkgöz



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9 JUNE 2023 FRIDAY
09:00 – 10:30

Session : Optical Systems and Applications – I

Chair : Necip Gökhan Kasapoğlu

Hall: Seminar Hall 1

No.	Title	Authors
1	Development of a Reflector Optical Telescope Subsystem for Remote Sensing	Alper Şanlı, Tuncay Yunus Erkeç
2	End-to-End Modulation Transfer Function (MTF) Simulator for High-resolution Spaceborne Electro-Optic Imagers	Zeynep Nilüfer Öztürk, Ertuğrul Ceylan, Ceren Deniz, Mustafa Ekinci, Mehmet Burak Ekinci, Özgür Karcı
3	Attitude Guidance Effects on Image Quality for Spaceborne Electro-Optic Imagers with TDI	Mehmet Burak Ekinci, Yusuf Acar, Mustafa Ekinci



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9 JUNE 2023 FRIDAY
09:00 – 10:30

Session : Space Environment Related Studies

Chair : Nebiye Musaoğlu

Hall: Seminar Hall 2

No.	Title	Authors
1	Investigation of Earth's Bow Shock Characteristic Using Data Retrieved from THEMIS C Spacecraft	Muhammed Yasin Peker, Mehmet Emin Çetin
2	Spacecraft Surface Charging Prediction using CIMI and SPIS Coupled Model	Arif Armağan Gözütok, Zerefşan Kaymaz
3	Determination of Space Object Size in LEO Using Measurement of Brightness	Seda Aydın, Muhammed Selim Atar, Mehmet Ali Arabacı, Murat Gökçe, Taha Muharrem Lahaçlar
4	Space Radiation Estimation for The Turkish Lunar Mission	Burak Bektaşoğlu, Murat Hüdaverdi, Bilge Demirköz



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9 JUNE 2023 FRIDAY
09:00 – 10:30

Session : Spacecraft and Space Mission Architecture and Subsystems – I

Chair : Tuncay Yunus Erkeç

Hall: Seminar Hall 3

No.	Title	Authors
1	Design and Analysis of Inflatable Structures for Space Applications	Pedro Carneiro, Pedro Loureiro, Raul Moreno
2	A Low Cost, Efficient Electrical Power System Design for CubeSat	Shaymaa Abushawish, Aleena Lifiya, Hamd Khan, Mohammed Eshaq, Rida Gadhaifi, Amjad Gawanmeh, Husameldin Mukhtar, Wathiq Mansoor
3	Development and Application of a Parallel Two-Stage RLS-based Fault Detection for Nonlinear Thrust Vector Control Actuator on a Sounding Rocket	Mehmet Akif Ahrazoğlu
4	Turkey's First Space-Qualified Electric Propulsion System Developed at TUBITAK UZAY for GEO Communication Satellite Project	Yusuf Yurttaş, Barış Çal, Seda Kayra Güllü, İlksen Burat, Sergii Neugodnikov, Demet Uluşen, Banu Çiçek Aydın
5	Turkish First Indigenous 100V Satellite Power Subsystem	Faik Ercan Karagöz, Berk İnce, Yunus Şahin, Doğan Yıldırım, Emre Çetin, Mehmet Karahan, Barış Çolak, Cihat Nusret Uğurlu



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9 JUNE 2023 FRIDAY
10:45 – 12:00

Session : Special Session – Programmatic, Technical and Scientific Aspects of the First Turkish Lunar Mission - II

Chair : Ali Baygeldi

Hall: Vatan Conference Hall

No.	Title	Authors
1	An Overview of the Electrical Power Subsystem of the First Turkish Lunar Mission	Doğacan Yıldırım, Berk İnce, Yunus Şahin, Emre Çetin, Ozan Can İyier, Ülkü Miray Gündoğdu
2	Tracking the Albedo and Thermal Radiation with a Lunar Narrow Field of View Radiometer	Ping Zhu, Özgür Karatekin, Burak Yağlıoğlu, Huizeng Liu, Fahri Öztürk, Shaopeng Huang, Qinquan Li, Hüseyin Erdem Kazak, Gregoire Henry, Duo Wu
3	Orbital Transfer Performance Analysis for the First Turkish Lunar Mission	Enes Dağ, Abdulkadir Köker, Şahin Ulaş Köprücü, Burak Yağlıoğlu
4	An Overview of the Propulsion System of the First Turkish Lunar Mission	Seda Kayra Güllü, Yusuf Yurttaş, İlksen Burat, Barış Çal, Burak Yağlıoğlu
5	Instrument Overview of the Turkish Lunar Mission Optical Payloads	Eray Arpa, Zeynep Nilufer Öztürk, Mustafa Ekinci, Burak Yağlıoğlu
6	Radiation Analysis for the First Turkish Lunar Mission	Ulaş Fırat Noyan, Çınar Yüncüler, Sera İflazoğlu



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9 JUNE 2023 FRIDAY
10:45 – 12:00

Session : Optical Systems and Applications – II

Chair : Alim Rüstem Aslan

Hall: Seminar Hall 1

No.	Title	Authors
1	Design of a Compact Telephoto Objective for 6U CubeSats	Betül Konaklı Yazgan, Mustafa Ekinci, Ahmet Bingöl, Özgür Karcı
2	A Comparative Study of Maksutov-Cassegrain and Ritchey-Chretien Optical Designs for 6U CubeSats	Eray Arpa, Meltem Yeşiltepe, Mustafa Ekinci, Özgür Karcı
3	Performance Comparison of Deblurring Techniques for Optical Satellite Imagery Using MTF	Onur Ozan, Gizem Kaya, Gizem Tarhan, Melisa Doğan, Necip Gökhan Kasapoğlu
4	Sigma Vector Calculations in Nodal Aberration Theory (NAT) and Its Experimental Investigations	Meltem Yeşiltepe, Eray Arpa, Mustafa Ekinci, Sefer Bora Lişesivdin, Özgür Karcı



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9 JUNE 2023 FRIDAY
10:45 – 12:00

Session : Remote Sensing and Photogrammetry – I

Chair : Mehmet Özdemir

Hall: Seminar Hall 2

No.	Title	Authors
1	Comparative Analysis of Deep Learning and Machine Learning Models for Burned Area Estimation Using Sentinel- 2 Image: A Case Study in Mugla-Bodrum, Türkiye	Hasan Tonbul, Elif Özlem Yılmaz, Taşkın Kavzoğlu
2	Vessel Detection from Optical Remote Sensing Images with Deep Learning Methods	Furkan Büyükanber, Mustafa Yanalak, Nebiye Musaoğlu
3	Alternative Methods Based on Subtraction and Linearization of the Noise Fields for Wide-Beam SAR Image Denoising	Halit Nazlı, Necip Gökhan Kasapoğlu
4	Comparison of Feature Extraction Methods for Automated Target Recognition by Reducing Speckle Noise in SAR Data	Hasna El Hasnaouy, Necip Gökhan Kasapoğlu
5	Evaluation of Modern Deep Learning Architectures in Remote Sensing Scene Classification	Gülşen Taşkın, Hüseyin Kaya



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9 JUNE 2023 FRIDAY

10:45 – 12:00

Session : Spacecraft and Space Mission Architecture and Subsystems - II

Chair : Husameldin Mukhtar

Hall: Seminar Hall 3

No.	Title	Authors
1	Cluster Satellite Relative Navigation with Angularly Oriented and Colored Light Source Image Processing	Tuncay Yunus Erkeç
2	The Development and Validation of a Dependable Power Distribution Module with Four Switching Lines for Nanosatellite Application	Mohammed Beldjehem, Faiza Arezki, Messouad Bensaada
3	A PLL Frequency Synthesizer Design for C-band Satellite Communications	Abdenmour Zekri, Lahcene Hadj Abderrahmane
4	Dual-Polarized Reflectarray for High-Speed Satellite Communication	Selda Yılmaz, Ahmet Hulusi Gülseren, Nurhan Türker Tokan
5	First Reaction Wheel Qualified in Türkiye	Barış Çolak, Ali Özdemir, Şaban Ötenkaya, Burak Selamlar, Mustafa Emre Öncüler, Süleyman Çetinkaya
6	Novel Design of Multi-Band Satellite Antenna for X-band Applications	Faiza Merad, Kourdi Zakarya, Ahmed-Ali Kanoun, Rabah Mohammed Amin



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9 JUNE 2023 FRIDAY
14:00 – 15:30

Session : Special Session – Guidance, Navigation and Control Technologies for
Advanced Aerospace Systems - I

Chair : Chingiz Hajiyev

Hall: Vatan Conference Hall

No.	Title	Authors
1	Relative State Estimation for Two-Satellite Formation with Three Extended Kalman Filters Architecture using GNSS Receivers	Tuncay Yunuz Erkeç, Chingiz Hajiyev
2	Comparison of EKF & UKF for GNSS Based Micro Satellite Orbital State Estimation	Mert Sever, Tuncay Yunus Erkeç, Chingiz Hajiyev
3	Spacecraft Control During the Descent to the Surface of Jupiter's Satellite Callisto	Olga L. Starinova, T.V. Starostina
4	Quadcopter Guidance Law Design Using Deep Reinforcement Learning	Şevket Utku Aydın, Ali Türker Kutay
5	Design of a Guidance System for an Airlaunch Rocket Using Iterative Guidance Mode	Tahir Yanık, Halil Ersin Söken



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9 JUNE 2023 FRIDAY
14:00 – 15:30

Session : Electronic Warfare Systems Design and Development

Chair : H. F. Selim Bayraklı

Hall: Seminar Hall 1

No.	Title	Authors
1	Quality Assurance & Standards in Space Projects	Sefa Aydes, Zafer Öznalbant
2	Designing of Harmonics Filter for Radio Systems at 30-49 MHz	Emre Erden, Mustafa Tekbaş, Sabahattin D. Yıldön, Serkan Topaloğlu
3	A Novel Metasurface Multifunctional Polarization Converter in X- and Ku-Bands for Radar Cross Section Reduction Application	Fatih Tutar, Merve Kurt, Gökhan Öztürk
4	Vivaldi Antenna Design With Frequency Selective Surfaces for GPR Applications	Peyman Mahouti, Ahmet Kızılay, Vladimir V. Razevig, Mehmet Ali Belen, Onur Can Piltan
5	FPGA Implementation of CCCDS Standards Based on Satellite Telecommand System	Khadidja Gaffour, Salah Eddine Bentata, Mohammed Berroua Benzina



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9 JUNE 2023 FRIDAY
14:00 – 15:30

Session : Remote Sensing and Photogrammetry – II

Chair : Elif Sertel

Hall: Seminar Hall 2

No.	Title	Authors
1	Multi-Criteria Strategy for Estimating GEDI Terrain Height	Ömer Gökberk Narin, Roderik Lindenbergh, Saygın Abdikan
2	Superpixel Weighted Low-Rank and Sparse Approximation for Hyperspectral Unmixing	Taner İnce, Tuğcan Dünder, Seydi Kaçmaz, Hasari Karci
3	Locality Constraint Joint-Sparse and Weighted Low-Rank Based Hyperspectral Image Classification	Tuğcan Dünder, Taner İnce
4	Geometry and Image Quality Assessment of SkySat Imagery for Building Identification	Gürcan Büyüksalih, Cem Gazioğlu, Osman İsa Çelik, Karsten Jacobsen
5	Determination of Caspian Sea Coastal Changes Using Remote Sensing and Geographic Information Systems	Ramil Safarov, Elif Sertel



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9 JUNE 2023 FRIDAY
14:00 – 15:30

Session : Satellite Systems Design and Experiments

Chair : Espen Oland

Hall: Seminar Hall 3

No.	Title	Authors
1	Low Earth Orbit-Based Small-Size Constellation Satellite System Design for Communication Between Türkiye and Antarctica	Mercan İlayda Boduroğlu, Ufuk Sakarya
2	Trends in SAR Satellite Design: From Tons of Mass to Hundreds of Kilograms in Designing SAR Satellite	Ersin Makas, Alim Rüstem Aslan
3	Early Detection of Wildfires in the European Area with Nano-Satellite Constellations	Bilge Memiş, Boğaç Karabulut, Bengisu Kaplan, Alim Rüstem Aslan
4	Tether Experiment: PocketQube Deployed from a CubeSat	İlknur Akkaya, Sevde Özkan, Mert Öz, Eren Adıgüzel, Uğur Anıl Köse, Uğur Murat Leloğlu
5	Cost Effect of Launch Site Location on Multistage Rocket Design to Be Used in Geostationary Satellite Launch Missions	Hasan Hüseyin Cam, İbrahim Özko
6	The Design and Development of the High-Altitude “ECubeSat” Model for Academic and Professional Purposes	Parvin Jumshudlu, Alim Rüstem Aslan



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9 JUNE 2023 FRIDAY
15:45 – 17:00

Session : Special Session – Guidance, Navigation and Control Technologies for
Advanced Aerospace Systems - II

Chair : Chingiz Hajiyev

Hall: Vatan Conference Hall

No.	Title	Authors
1	Analyzing the Effects of Visual Based Tracking Algorithms on Classical Guidance Methods	Yağız Kurt, Şevket Utku Aydın, Halil Ersin Söken
2	Performance Analysis of System Identification Techniques for a Rocket	Hazel Demirel Bayrı, Halil Ersin Söken
3	Aircraft State Estimation via KF&AKF Methods	Mert Sever, Tuncay Yunus Erkeç, Chingiz Hajiyev
4	A Semi-Analytic Approach for Trajectory Design Optimization Using Linearized Equations of Motion	Aimar Negrete, Madhusudan Vijayakumar, Ossama Abdelkhalik



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9 JUNE 2023 FRIDAY
15:45 – 17:00

Session : Orbit, Trajectory and Asteroid Mining Approaches

Chair : Demet Cilden Güler

Hall: Seminar Hall 1

No.	Title	Authors
1	Conjunction Analysis and Avoidance Principles from Uncontrolled Space Objects Used at Turksat	Ümit Cezmi Yılmaz
2	Preliminary Design of Asteroid Mining Tycoon Game	Mehmet Talha Arlier, Ozan Ünsalan
3	Petrography of Vigarano Type NWA 5508 Carbonaceous Chondrite	Ceren Kamil, Ozan Ünsalan, Osman Candan
4	Robust Trajectory Optimization of Constrained Re-entry Flight	Akan Selim, İbrahim Özkol
5	Trajectory Optimization for a Single Stage Launcher with Constrained Conditions	Nevsan Şengil, Tuğrul Eren Dağlı, Begüm Güngör, Ezgi Polat
6	SAR Satellite Orbit Design and Power Consideration	Şamil Uysal, Alperen Şafak, Awni Alrawashdeh, Erkan Uzunay, Ersin Makas



10TH INTERNATIONAL CONFERENCE ON
Recent Advances in
Air and Space Technologies
RAST 2023



9 JUNE 2023 FRIDAY
15:45 – 17:00

Session : Remote Sensing and Photogrammetry – III

Chair : Gürcan Büyüksalih

Hall: Seminar Hall 2

No.	Title	Authors
1	Extraction of Modulation Transfer Function by Using Simulated Satellite Images	Kamil B. Alici
2	Performance Analysis of MADGRAD, MirrorMADGRAD and ADAM Optimizers on a CNN Model in the Hyperspectral Image Classification	Eren Can Seyrek, Murat Uysal
3	Sufficiency Assessment of Assembly Areas after Kahramanmaraş Earthquakes 2023 by Remote Sensing	Onur Yılmaz, Aslı Sabuncu
4	Estimation of Strain Values of Aluminum Based Aviation Materials by Using Artificial Neural Networks	Ali Sinan Nalci, Muhammed Çetinkaya, Anıl Burak Karalar
5	Design and Development of Reflector Telescope	Mehmethan Bahtiyar, Selman Sert, İbrahim Ethem Korkmazdağ, Ekrem Berat Türkoğlu, Alper Şanlı
6	Object-Oriented Extraction of Highway Bridges Using Very High Resolution Digital Aerial Images and Digital Surface Model	Mehmet Özdemir, Taner Üstüntaş



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9 JUNE 2023 FRIDAY
15:45 – 17:00

Session : Decision-Making Applications on Space Technologies

Chair : Fatma Kutlu Gündoğdu

Hall: Seminar Hall 3

No.	Title	Authors
1	Case Study on Selecting Optimal Design for Main Central Cone of Low Earth Orbit Satellite	Semih Türkoğlu, Özge Özdemir
2	Optimization of the Aeroacoustics and Aerodynamics of a Wind Turbine Airfoil with Serrations Using Multi-Criteria Decision Making	Khaoula Qaissi, Omer A. Elsayed, Mustapha Faqir, Elhachmi Essadiqi
3	Ranking the Criteria for Assessing Space Debris Removal Technics by BMW and FUCOM Methods	Enes Beştaş, Barış Yayla, Onur Koçyiğit, Serhat Aydın
4	Launch Vehicle Selection with TOPSIS: Multi-Criteria Decision Making for Space Mission	Mücahid Alp, Mert Cihan Tohum, Doğukan Omaygenç, Hande Bodur, Ersin Makas
5	Air Aid Bridge Problem for the Case of Possible Istanbul Earthquake	Serhat Saylam, Mustafa Erol, Süleyman Mücahid Yücel, Oğuzhan Danyeri
6	Decision for the Next Unmanned Aerial Vehicle Considering Regional Operational Requirements Based on Z-Fuzzy Best-Worst Method	Serhat Saylam, Fatma Kutlu Gündoğdu

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