



The 57th Israel Annual Conference on Aerospace Sciences

In partnership with

Faculty of Aerospace Engineering, Technion

Ben Gurion University of the Negev

Civil Aviation Authority of Israel

Directorate of Defense R&D, IMoD

Elbit Systems

IMI Systems

Israel Aerospace Industries

Israeli Air Force

Israel Society of Aeronautics & Astronautics

Israel Space Agency

Rafael Advanced Defense Systems

Tel Aviv University

Supported by

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Program for Wednesday, March 15, 2017

Dan Panorama Hotel, Tel Aviv

Registration
08:00-09:00

Welcoming Address Hall A

09:00-09:05

Blasberger, Avi

Chair, 57th IACAS
Organizing Committee

WeKLPL Hall A

Keynote Lecture (Plenary Session)

Chair: Blasberger, Avi

Israel Space Agency

09:05-09:50

WeKLPL.1

Small Satellites: Changing the Economics of Space – or Fad?

Sweeting, Sir Martin

Surrey Space Centre

WePI1PL Hall A

Plenary Lecture I – The 25th Theodore von Kármán Lecture
(Plenary Session)

Chair: Givoli, Dan

Technion

09:50-10:40

WePI1PL.1

Subsonic Civil Transport Aircraft for a 2035 Time Frame: An Industry-NASA-University Collaborative Enterprise

Greitzer, Edward

Massachusetts Institute of
Technology (MIT)

Coffee Break
10:40-11:00

WePI2PL Hall A

Plenary Lecture II (Plenary Session)

Chair: Cohen, Jacob

Technion

11:00-11:50

WePI2PL.1

"Migrating Birds Know No Boundaries"; the Israeli Air Force As a Test Case

Leshem, Yossi

Tel Aviv University

WePI3PL	Hall A
Plenary Lecture III - Internationally Recognized Student Projects (Plenary Session)	
Chair: Yehoshua, Tal	Tel Aviv University

11:50-12:15 WePI3PL.1

Development of an Autonomous Unmanned Aerial System for AUVSI SUAS Competition

Artzi, Dror	Technion
Eyal, Eliran	Technion
Gutnik, Yevgeni	Technion
Avraham, Ori	Technion
Greenfeld, Ido	Technion
David, Rea	Technion
Joseph, Daniel	Technion
Tzulker, Gal	Technion
Shain, Ziv	Technion
Shugaev, Slava	Technion
Argov, Omri	Technion
Scott, Maya	Technion
Noti, Dor	Technion
Shmuklerevich, Igor	Technion
Toporek, Adi	Technion
Bouscher, Shlomi	Technion
Shmuel, Nitzan	Technion
Nissim, Adi	Technion
Forte, Roni	Technion
Paz, Yuval	Technion
Kiswani, Ahmad	Technion
Aides, Amit	Technion
Joselson, Ben-Zion	Technion

12:15-12:40 WePI3PL.2

DBF 2016 – JONAH&LEVIATHAN: Students UAV Design Project

Geron, Shay	Tel Aviv University
Kam, Ori	Tel Aviv University
Melaver, Omri	Tel Aviv University
Galazan, Ben	Tel Aviv University
Argaman, Hen	Tel Aviv University
Orlov, Yuri	Tel Aviv University
Schwartz, Ben	Tel Aviv University
Osaadon, Tomer	Tel Aviv University
Frenkel, Stav	Tel Aviv University
Kats, Eli	Tel Aviv University
Tsach, Shlomo	Advanced Programs Group

Lunch
12:40-14:00

WeL1T1	Hall A
Aerospace Systems & Systems Engineering - Supported by the Gordon Center for Systems Engineering (Regular Session)	
Chair: Rosen, Aviv	Technion
14:00-14:25	WeL1T1.1
<i>Phase Change Material (PCM) Engine for Micro Air Vehicle (MAV) – Design and Process Analysis</i>	
Fuchs, Jonathan	Technion
Sher, Eran	Technion
14:25-14:50	WeL1T1.2
<i>Motion Planning for a Slung Load Transportation System Using Rotary-Wing Aerial Vehicles</i>	
Potyagaylo, Svetlana	Technion
Cooper, Anton	Technion
Rand, Omri	Technion
14:50-15:15	WeL1T1.3
<i>Conceptual Design, Initial Sizing and Sensitivity Analyses of a High Altitude Airship Using Revised Volumetric Drag</i>	
Shaik, Subhani	Technion
Pant, Rajkumar	Indian Inst. of Technology
15:15-15:40	WeL1T1.4
<i>Dynamic Instability of a Light Weight, Low Drag Towed Body</i>	
Shabtay, Royi	Israel Aerospace Industries
Gabriel, Eliezer	Israel Aerospace Industries
15:40-16:05	WeL1T1.5
<i>Transport Category Airplanes Ditching Operations and Regulations</i>	
Berlowitz, Ilan	Israel Aerospace Industries

WeL1T2	Hall B
Propulsion Systems (Regular Session)	
Chair: Michaels, Dan	Technion
14:00-14:25	WeL1T2.1
<i>Ammonium Perchlorate Based Composite Propellant Grain Geometries Via Computer Aided Manufacturing</i>	
Raja, Arun Chandru	Indian Inst. of Science
Oommen, Charlie	Indian Inst. of Science
Balasubramanian, Nikhil	Indian Inst. of Science
Rajaghatta Sundara Ram, Bharath	Indian Inst. of Science
Basavanahalli N, Raghunandan	Indian Inst. of Science
14:25-14:50	WeL1T2.2
<i>A New Approach to the Analysis of the Explosion Limits of Hydrogen-Oxygen System</i>	
Lidor, Alon	Technion
Weihs, Daniel	Technion
Sher, Eran	Technion
14:50-15:15	WeL1T2.3
<i>Theoretical and Experimental Study of Airblast Atomizer</i>	
Gaissinski, Igor	Technion
Levy, Yeshayahou	Technion
Sherbaum, Valery	Technion
Kutikov, Dany	Technion
Rovenski, Vladimir	Haifa University
15:15-15:40	WeL1T2.4
<i>Large Agglomerates As the Cause of Increased Slag in SRMs Containing Propellant Loaded with HMX</i>	
Solomon, Yair	Technion
Peles, Oren	IMI Systems
Kochav, Shiri	IMI Systems
Bachar, Neta	IMI Systems
Wirzberger, Hod	IMI Systems
Sivan, Jonathan	IMI Systems
Dvir, Sharon	IMI Systems
Okon, Yishay	IMoD

15:40-16:05	WeL1T2.5
<i>Estimation of Energy Losses During Spray Formation by Homogenous Flash Boiling Process</i>	
Moshkovich, Yahav	Technion
Sher, Eran	Technion
Levy, Yeshayahou	Technion

WeL1T3	Hall C
Guidance and Obstacle Avoidance (Regular Session)	

Chair: Choukroun, Daniel	Ben-Gurion Univ. of the Negev
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14:00-14:25	WeL1T3.1
<i>Optimal Guidance Laws for Brunovsky Form Systems</i>	
Klein, Itzik	Rafael
Rusnak, Ilan	Rafael

14:25-14:50	WeL1T3.2
<i>Optimal Guidance Law against Spiraling Target: Constant Jerk Amplitude</i>	
Rusnak, Ilan	Rafael
Peled-Eitan, Liat	Rafael

14:50-15:15	WeL1T3.3
<i>Linear Quadratic Optimal Guidance with Obstacle Avoidance</i>	
Weiss, Martin	Technion
Shima, Tal	Technion

15:15-15:40	WeL1T3.4
<i>Obstacle Avoidance for Autonomous Vehicles Using an Adaptive Lyapunov Vector Field</i>	
Pothen, Abin Alex	Indian Inst. of Science - Bangalore
Ratnoo, Ashwini	Indian Inst. of Science - Bangalore

WeL1T4	Hall D
Flow Control I (Regular Session)	

Chair: Wygnanski, Israel	University of Arizona
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14:00-14:25	WeL1T4.1
<i>Defying Pitch-Up Criteria on Swept-Back Wings by Active Flow Control</i>	
Tewes, Philipp	University of Arizona
Wygnanski, Israel	University of Arizona

14:25-14:50

WeL1T4.2

Dynamic Pin Actuator and Its Application for Separation Control

Amitay, Miki

Rensselaer Polytechnic Inst.

Gildersleeve, Samantha

Rensselaer Polytechnic Inst.

14:50-15:15

WeL1T4.3

Active Flow Control Implementation for Mitigating Outer Wing Flow Separation

Detinis, Igor

Israel Aerospace Industries

Steinbuch, Moshe

Israel Aerospace Industries

Segal, Shaul

Israel Aerospace Industries

Seifert, Avi

Tel Aviv University

Lagutin, Michael

Tel Aviv University

15:15-15:40

WeL1T4.4

Aerodynamic Flow Control of an Axisymmetric Platform in Freely-Pivoting Yawing Motion

Lambert, Thomas

Georgia Inst. of Technology

Vukasinovic, Bojan

Georgia Inst. of Technology

Glezer, Ari

Georgia Inst. of Technology

WeL1T5

Hall E

Student Competition I (Regular Session)

Chair: Yudilevitch, Gil

Technion

14:00-14:25

WeL1T5.1

PANDA - Parachuted Assistance for Natural Disaster Areas

Gottlieb, Gilad

Technion

Landkof, Benjamin

Technion

Eisen, Nachum

Technion

Tzahi, Calderon

Technion

Ben-Naim, Avihai

Technion

Yanay, Amir

Technion

Rosental, Gal

Technion

Potashnikov, Daniel

Technion

Vahav, Michal

Technion

Baidani, Amir

Technion

14:25-14:50

WeL1T5.2

Chiron: Advanced Jet Trainer Design Project

Attar, Moshe	Israel Aerospace Industries
Klaiman, Aviram	Technion
Baruch, Raz	Technion
Bashkanskiy, Roman	Technion
Wexler, Guy Yoel	Technion
Shulman, Shahar	Technion

14:50-15:15

WeL1T5.3

Aerial - Drilling Rigs Defense Missile

Naveh, Oded	Technion
Ringel, Alvaro	Technion
Kuflik, Asaf	Technion
Hassidof, Avishai	Technion
Sweid, Husen	Technion
Hochstein, Leora	Technion
Sahar, Liran	Technion
Cohen, Ortal	Technion
Katz, Ofek	Technion
Perepech, Vladimir	Technion
Regensberg, Yifat	Technion

15:15-15:40

WeL1T5.4

QCS Quantum Communication Satellite

Engad, Neta	Technion
Rivlin, Or	Technion
Pardes, Elya	Technion
Zibitsker, Alex	Technion
Rozenzweig, Nati	Technion
Eidelstein, Shalev	Technion
Zalmanovich, Michal	Technion
Meller, Oron	Technion
Yaish, Avichay	Technion
Herscovitz, Jacob	Technion

15:40-16:05

WeL1T5.5

*Silverbolt –High Speed Cruising Extended Loitering
Duration UAV*

Hurwitz, Dror	Technion
Lengo, Aviad	Technion
Mashiach, Eyal	Technion
Meir, Sior	Technion
Oren, Shay	Technion
Shiloni, Elad	Technion
Shtainshnaider, Rachel	Technion
Shusterman, Yehuda	Technion
Tuashi, Asaf	Technion
Weinreb, Amit	Technion
Yakir, Oded Zvi	Technion
Zivan, Lior	Israel Aerospace Industries

WeL1T6

Hall F

Aeroelasticity (Regular Session)

Chair: Raveh, Daniella	Technion
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14:00-14:25

WeL1T6.1

*Assessment of Advanced Flutter Flight Test Techniques
and Flutter Boundary Prediction Methods*

Iovnovich, Michael	Israeli Air Force
Nahom, Tzvil	Israeli Air Force
Presman, Michael	Technion
Avsaid, Dorin	Technion
Braier, Tomer	Israeli Air Force
Raveh, Daniella	Technion

14:25-14:50

WeL1T6.2

Aeroelastic Limit Cycle Oscillations on a 3D Wing

Mortchéléwicz, Guy Daniel	ONERA the French Aeronautic Lab
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14:50-15:15

WeL1T6.3

*Assessment of Dynamic Response to Store Ejection
Solution Methods*

Kariv, Daniel	Technion
Iovnovich, Michael	Israeli Air Force
Raveh, Daniella	Technion

15:15-15:40 WeL1T6.4

Towards Flutter-Boundary Tests with Controlled Vibration Levels

Karpel, Moti Technion
Roizner, Federico Technion

15:40-16:05 WeL1T6.5

F-16 Aircraft Ground Vibration Test Analysis Using Advanced Multi-Patch Estimation Techniques

Iovnovich, Michael Israeli Air Force

Coffee Break
16:05-16:25

WeL2T1 Hall A

Navigation and Control (Regular Session)

Chair: Cohen, Agnes IMI Systems

16:25-16:50 WeL2T1.1

Active Online Self-Calibration and Accurate Navigation Via Belief Space Planning and Factor Graph Based Incremental Smoothing

Ben Elisha, Yair Technion
Indelman, Vadim Technion

16:50-17:15 WeL2T1.2

Joint Inference and Belief Space Planning Methodology for Efficient Inference Update

Farhi, Elad I. Technion
Indelman, Vadim Technion

17:15-17:40 WeL2T1.3

Bearing-Only Cyclic Pursuit in 2-D for Capture of Moving Target

Mukherjee, Dwaipayan Technion
Trinh, Hoang Minh Gwangju Inst. of Science and Technology
Zelazo, Daniel Technion
Ahn, Hyo-Sung Gwangju Inst. of Science and Technology

17:40-18:05	WeL2T1.4
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Hopfield Networks in an Anisotropic Norm Setup

Yaesh, Isaac

IMI Systems

Stoica, Adrian-Mihail

University Pol. of Bucharest

WeL2T2

Hall B

Space Systems (Regular Session)

Chair: Mishne, David

Technion

16:25-16:50

WeL2T2.1

Hard Disk Drive Based CubeSat Attitude Control

Sahar, Liran

Technion

Edlerman, Eviatar

Technion

Agalarian, Hovhannes

Technion

Balabanov, Vladimir

Technion

Gurfil, Pini

Technion

16:50-17:15

WeL2T2.2

Non-Propulsive Collision Avoidance Maneuver of Satellites Using Drag and Solar Radiation Pressure

Mishne, David

Technion

Edlerman, Eviatar

Technion

17:15-17:40

WeL2T2.3

An Experimental Study of the Combustion Processes of the Leaf of the Payload Fairing During Atmospheric Re-Entry

Trushlyakov, Valeriy

Omsk State Tech. University

Iordan, Juliya

Omsk State Tech. University

Davydovich, Denis

Omsk State Tech. University

Zharikov, Konstantin

Omsk State Tech. University

17:40-18:05

WeL2T2.4

Long Duration Vacuum Arc Thruster for Nanosatellite Propulsion

Kronhaus, Igal

Technion

Laterza, Matteo

Technion

Maor, Yonatan

Technion

WeL2T3 Hall C

Pursuit and Evasion (Regular Session)

Chair: Arogeti, Shai Ben-Gurion Univ. of the Negev

16:25-16:50 WeL2T3.1

On Matrix Games Associated with Pursuit-Evasion Problem for a Switched System

Turetsky, Vladimir Ort Braude College
Shima, Tal Technion

16:50-17:15 WeL2T3.2

Optimal Control of a Dubins Car and the Homicidal Chauffeur Differential Game

Coates, Sean Air Force Inst. of Technology
Pachter, Meir AFIT/ENG
Murphey, Robert Air Force Res. Lab

17:15-17:40 WeL2T3.3

Attacker-Defender-Target Problem in the Framework of Space Intercept

Kumkov, Sergey Inst. of Mathematics and
Mechanics UrB RAS
Patsko, Valery, S. Inst. of Mathematics and
Mechanics UrB RAS

17:40-18:05 WeL2T3.4

Near Optimal Evasion from an Estimating Intercept Missile

Shaferman, Vitaly Israeli Air Force

WeL2T4 Hall D

Fluid Dynamics and Fluid Mechanics (Regular Session)

Chair: Jacobi, Ian Technion

16:25-16:50 WeL2T4.1

On LSB Dynamics and Vortical-Acoustic Feedback-Loop Interactions in Boundary Layers of Transitional Airfoils

Golubev, Vladimir Embry-Riddle Aeronautical
University
Nguyen, Lap Embry-Riddle Aeronautical
University
Mankbadi, Reda Embry-Riddle Aeronautical
University

16:50-17:15 WeL2T4.2

Transonic Cavity Flows in the Presence of a Store Release Body

Das, Sudip Birla Inst. of Tech. Mesra
Cohen, Jacob Technion

17:15-17:40 WeL2T4.3

Noise Reduction of a UAV Propeller Using Grit-Type Boundary Layer Tripping

Ben-Gida, Hadar Israeli Air Force
Faran, Michael Israeli Air Force
Kogan, Tuvia Israeli Air Force
Stalnov, Oksana Technion

17:40-18:05 WeL2T4.4

Induced-Charge Electrophoresis of a Pair of Conducting Cylinders

Frankel, Itzhak Technion
Oren, Shay Technion

WeL2T5 Hall E

Student Competition II (Regular Session)

Chair: Yudilevitch, Gil Technion

16:25-16:50 WeL2T5.1

Experimental Study of Fiber-Optics-Based Shape Sensing for Elastic Wings

Freydin, Maxim Technion
Rattner, Miko Technion
Raveh, Daniella Technion
Shoham, Shay Israel Aerospace Industries
Ben-Simon, Uri Israel Aerospace Industries
Kressel, Iddo Israel Aerospace Industries
Sheinkman, Sagi Israeli Air Force
Davidi, Roy Tel Aviv University
Tur, Moshe Tel Aviv University

16:50-17:15

WeL2T5.2

Design Project: "Thrust-X" Aerobatic Airplane

Einhorn, Maytav

Meteor Aerospace Ltd. and
Technion

Slaav, Shemer

Technion

Azoulai, Eliezer

Technion

Shapiro, Dmitry

Technion

Mutzary, Ben

Technion

Gazit, Noam

Technion

WeL2T6

Hall F

***General Meeting of
the Israel Society of Aeronautics & Astronautics
17:00-18:00***

Dekel Hall

***Festive Dinner
18:15-20:45***

Program for Thursday, March 16, 2017

The Technion, Haifa

Registration
08:30-09:00

Technion Welcoming Address Churchill Auditorium
09:00-09:10

Shwartz, Adam Senior Executive Vice President

ThPI1PL Churchill Auditorium
Plenary Lecture IV (Plenary Session)

Chair: Cohen, Jacob Technion

09:10-10:00 ThPI1PL.1

From a Ramjet to an After Burner in Marine Two-Phase Jet Propulsion

Gany, Alon Technion

Coffee Break
10:00-10:30

ThPI2PL Churchill Auditorium
Plenary Lecture V (Plenary Session)

Chair: Oshman, Yaakov Technion

10:30-11:20 ThPI2PL.1

From Art to Science: The Satellite Constellation Design Evolution

Mortari, Daniele Texas A&M University

ThPI3PL Churchill Auditorium
Plenary Lecture VI (Plenary Session)

Chair: Levy, Yeshayahou Technion

11:20-12:10 ThPI3PL.1

Rotating Detonation - the Future of Propulsion

Gutmark, Ephraim (Effie) University of Cincinnati

Lunch
12:10-13:30

ThL1T1	Room 149
Combustion Processes in Rocket Propulsion (Regular Session)	
Chair: Sher, Eran	Technion
13:30-13:55	ThL1T1.1
<i>Testing Electric Effects on the Burning Rate of Ammonium Nitrate Based Solid Propellants</i>	
Zamir, Inna	Technion
Gany, Alon	Technion
Grinstein, Dan	Israel Ministry of Defense
13:55-14:20	ThL1T1.2
<i>Characterization of NaI-Water Propellants with Different Powder Coatings</i>	
Wollmark, Shahar	Technion
Yavor, Yinon	Technion
14:20-14:45	ThL1T1.3
<i>Preliminary Experimental Tests of a Ducted Rocket with a Hybrid Gas Generator</i>	
Komornik, Daniel	Technion
Gany, Alon	Technion
14:45-15:10	ThL1T1.4
<i>Examination of Condensed Combustion Products of Boron by Microwave Technique</i>	
Glotov, Oleg	Voevodsky Inst. of Chemical Kinetics and Combustion
Perov, Viktor	Voevodsky Inst. of Chemical Kinetics and Combustion
Zarko, Vladimir	Voevodsky Inst. of Chemical Kinetics and Combustion
Surodin, Grigory	Voevodsky Inst. of Chemical Kinetics and Combustion
15:10-15:35	ThL1T1.5
<i>Modified Thermal Resistance Model Solution for a Combustion Problem of Liquid Fuel Contained within an Inert Porous Particle</i>	
Mor, Yoash	Technion
Gany, Alon	Technion

ThL1T2	Room 150
Liquid Fueled Combustion (Regular Session)	
Chair: Greenberg, J. Barry	Technion
13:30-13:55	ThL1T2.1
<i>On Conditions for Forced Ignition of a Fuel Spray/oxidant Mixture</i>	
Katz, Gershon	Technion
Greenberg, J. Barry	Technion
13:55-14:20	ThL1T2.2
<i>CFD Study of a Vaporizer for Small Jet Engine</i>	
Levy, Yeshayahou	Technion
Erenburg, Vladimir	Technion
Gaissinski, Igor	Technion
Sherbaum, Valery	Technion
14:20-14:45	ThL1T2.3
<i>On Droplet Size Distribution Effects in Jet Spray Flames</i>	
Weinberg, Noam	Technion
Greenberg, J. Barry	Technion
14:45-15:10	ThL1T2.4
<i>Numerical Study of Performances of Gas Turbine Combustor with Liquid and Gas Fuel Injectors</i>	
Levy, Yeshayahou	Technion
Erenburg, Vladimir	Technion
Sherbaum, Valery	Technion
Roizman, Alexander	Technion
Brandstein, Aviad	Israel Aerospace Industries
Aizik, Shalev	Israel Aerospace Industries
15:10-15:35	ThL1T2.5
<i>A Simple Model of Laminar Premixed Water-In-Fuel Emulsion Spray Flame</i>	
Yokev, Neta	Technion
Greenberg, J. Barry	Technion

ThL1T3	Room 165 (Library)
Computational Fluid Dynamics (Regular Session)	
Chair: Rosenfeld, Moshe	Tel Aviv University
13:30-13:55	ThL1T3.1
<i>On Linear Stability Analyses of Hypersonic Laminar Separated Flows in a DSMC Framework Part I: Base Flow Computations in a Double Cone and a 'Tick' Model</i>	
Tumuklu, Ozgur	University of Illinois at Urbana-Champaign
Perez, Jose Miguel	University Pol. De Madrid
Levin, Deborah	University of Illinois at Urbana-Champaign
Theofilis, Vassilis	University of Liverpool
13:55-14:20	ThL1T3.2
<i>A New, Low-Diffusion, Parameter-Free, All-Speed Scheme</i>	
Mor-Yossef, Yair	Israeli CFD Center
14:20-14:45	ThL1T3.3
<i>Preliminary Validation of the Subsonic Turbulent Flow Inside a Cavity with a Store Model</i>	
Ben-Gida, Hadar	Israeli Air Force
Adar, Motti	Israeli Air Force
14:45-15:10	ThL1T3.4
<i>Robust Implementation of High-Order Flux Approximation Schemes for Transonic Flows</i>	
Wasserman, Mark	Israeli CFD Center
Shousterman, Alex	Israeli CFD Center
15:10-15:35	ThL1T3.5
<i>On Linear Stability Analyses of Hypersonic Laminar Separated Flows in a DSMC Framework. Part II: Residuals Algorithm and the Least Damped Global Modes</i>	
Tumuklu, Ozgur	University of Illinois at Urbana-Champaign
Perez, Jose Miguel	University Pol. De Madrid
Theofilis, Vassilis	University of Liverpool
Levin, Deborah	University of Illinois at Urbana-Champaign

ThL1T4	Room 240
Multi-Disciplinary Analysis and Optimization (Regular Session)	

Chair: Attar, Moshe	Israel Aerospace Industries
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13:30-13:55	ThL1T4.1
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Mimic Materials Electromagnetic Reflection and Transmission Coefficient

Micheli, Davide	Sapienza University of Rome
Pastore, Roberto	Sapienza University of Rome
Vricella, Antonio	Sapienza University of Rome
Marchetti, Mario	Sapienza University of Rome

13:55-14:20	ThL1T4.2
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Optimal Combined Heat and Power Integration of a Micro Gas Turbine Unit in Distributed Energy Generation

Rist, Johannes	Tech. University of Munich
Dias, Miguel	Inst. Superior Tecnico
Zelazo, Daniel	Technion
Cukurel, Beni	Technion
Palman, Michael	Technion

14:20-14:45	ThL1T4.3
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A Sparsification Method for Efficient Decision Making under Uncertainty in High Dimensional State Spaces

Elimelech, Khen	Technion
Indelman, Vadim	Technion

14:45-15:10	ThL1T4.4
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Negotiation between Dynamical Systems with Connectivity Constraints

Ben shoushan, Yaniv	Technion
Zelazo, Daniel	Technion

15:10-15:35	ThL1T4.5
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High Fidelity Trajectory Optimization Using FALCON.m

Bittner, Matthias	Tech. University of Munich
Grüter, Benedikt	Tech. University of Munich
Diepolder, Johannes	Tech. University of Munich
Holzapfel, Florian	Tech. University of Munich
Ben-Asher, Joseph Z.	Technion

ThL1T5	Room 241
Estimation (Regular Session)	
Chair: Rusnak, Ilan	Rafael
13:30-13:55	ThL1T5.1
<i>Mean Squares Error Based Estimation of Nonlinear System with Prescribed Convergence Rate</i>	
Rusnak, Ilan	Rafael
13:55-14:20	ThL1T5.2
<i>Pareto Based Comparison of MSE-JML, EKF, SDDRE and UKF Filters for 2-D Barrel Roll Target Maneuver</i>	
Rusnak, Ilan	Rafael
Benaloul, Oron	Rafael
14:20-14:45	ThL1T5.3
<i>Dual Quaternion Kalman Filters for Spacecraft Relative Pose Estimation</i>	
Zivan, Yigal	Ben-Gurion Univ. of the Negev
Choukroun, Daniel	Ben-Gurion Univ. of the Negev
14:45-15:10	ThL1T5.4
<i>Relative Navigation in Asteroids Missions</i>	
Razgus, Bronius	European Space Agency
Mooij, Erwin	Delft University of Technology
Choukroun, Daniel	Ben-Gurion Univ. of the Negev
ThL1T6	Auditorium 235
Industrial Projects: Challenges and Lessons Learned (Regular Session)	
Chair: Tahan, David	Rafael
13:30-13:55	ThL1T6.1
<i>Aeroelasticity Effects under Maneuvering Conditions of Slender Body Configurations</i>	
Kominer, Sivan	Elbit Systems
Fastovsky, Dina	Elbit Systems
Shousterman, Alex	Israeli CFD Center
13:55-14:20	ThL1T6.2
<i>Test Range Safety Effect on Target Missile Design</i>	
Pereg, Kobi	Rafael

14:20-14:45	ThL1T6.3
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Engineering Challenges in Converting B737-700 into Freighter

Feldhorn, Zeev

Israel Aerospace Industries

14:45-15:10	ThL1T6.4
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The Future Unmanned Aerial Logistic Toolbox: Lessons Learned from Technology Demonstration Phase

Dvorjeski, Ariel

DDR&D, IMoD

Coffee Break

15:35-16:00

ThL2T1	Room 149
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Aerospace Structures (Regular Session)

Chair: Rand, Omri

Technion

16:00-16:25	ThL2T1.1
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DtN-Based Mixed-Dimensional Coupling in Aerospace Structures

Ofir, Yoav

Technion

Rabinovich, Daniel

Technion

Givoli, Dan

Technion

16:25-16:50	ThL2T1.2
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The Influence of Thickness and Hole Diameter on Mutual Interaction of Two Opposing Cracks at a Hole

Matias, Carmel

Israel Aerospace Industries

Amran, Yogev

Israel Aerospace Industries

16:50-17:15	ThL2T1.3
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Flight Validation of a Structural Health Monitoring System for CH-53 Helicopter Main Rotor Gearbox Support

Tur, Moshe

Tel Aviv University

Kalmanovich, Vadim

Israeli Air Force

Kressel, Iddo

Israel Aerospace Industries

Shapira, Osher

Israeli Air Force

Sheinkman, Sagi

Israeli Air Force

Glam, Benny

Israeli Air Force

Shoham, Shay

Israel Aerospace Industries

Ben-Simon, Uri

Israel Aerospace Industries

Yehoshua, Tal

Tel Aviv University

17:15-17:40

ThL2T1.4

Weibull or Log-Normal Distributions to Characterize Fatigue Life Scatter: Nearly Identical Twins or Distant Cousins?

Brot, Abraham

A. Brot, Engineering Consultant

ThL2T3

Room 165 (Library)

Flow Control II (Regular Session)

Chair: Amitay, Miki

RPI

16:00-16:25

ThL2T3.1

An Integrated Study of Uav Wake Vortex Safety Analysis and Control

Golubev, Vladimir

Embry-Riddle Aeronautical University

Kazarin, Petr

Embry-Riddle Aeronautical University

MacKunis, William

Embry-Riddle Aeronautical University

16:25-16:50

ThL2T3.2

Modeling of a Heaving Airfoil Using Experimental Flow Field and Load Measurements

Troshin, Victor

Tel Aviv University

Seifert, Avi

Tel Aviv University

16:50-17:15

ThL2T3.3

Identifying Disturbance Sources in Shear Flows Using the Degenerate Unmixing Estimation Technique

Gluzman, Igal

Technion

Cohen, Jacob

Technion

Oshman, Yaakov

Technion

17:15-17:40

ThL2T3.4

Analysis and Performance Enhancement of Boundary Layer Ingesting Inlet

Rudin, Irena

Technion

Arad, Eran

Rafael

Cohen, Jacob

Technion

ThL2T4	Room 240
Measurement Techniques (Regular Session)	
Chair: Cukurel, Beni	Technion
16:00-16:25	ThL2T4.1
<i>Determination of Optimal Transonic Hotwire Probes in Constant Temperature Anemometry</i>	
Yablochkin, Efim	Technion
Cukurel, Beni	Technion
16:25-16:50	ThL2T4.2
<i>Generalization of Townsend's Breakdown Criterion for Non-Uniform Electric Fields across Spark Plugs Geometry Electrodes</i>	
Druker, Nir	Technion
Goldwine, Gideon	Technion
Sher, Eran	Technion
16:50-17:15	ThL2T4.3
<i>Development of Thermal Conductivity Apparatus for Ablative Composite Materials</i>	
Shilav, Ramin	Rafael
Leitner, Amiram	Rafael
Gany, Alon	Technion

ThL2T5	Room 241
Optimal Control Applications (Regular Session)	
Chair: Shima, Tal	Technion
16:00-16:25	ThL2T5.1
<i>Optimal Control Based Tracking Error Estimation for Model Reference Adaptive Control</i>	
Diepolder, Johannes	Tech. University of Munich
Heise, Christian David	Tech. University of Munich
Bittner, Matthias	Tech. University of Munich
Rieck, Matthias	Tech. University of Munich
Grüter, Benedikt	Tech. University of Munich
Holzapfel, Florian	Tech. University of Munich
Ben-Asher, Joseph Z.	Technion

16:25-16:50

ThL2T5.2

Bi-Level Homotopic Aircraft Sequencing Using Gradient-Based Arrival Time Assignment and Direct Optimal Control

Grüter, Benedikt	Tech. University of Munich
Bittner, Matthias	Tech. University of Munich
Rieck, Matthias	Tech. University of Munich
Diepolder, Johannes	Tech. University of Munich
Holzapfel, Florian	Tech. University of Munich

16:50-17:15

ThL2T5.3

Cooperative Docking Guidance and Control with Application to Civil Autonomous Aerial Refueling

Löbl, David	Tech. University of Munich
Weiss, Martin	Technion
Holzapfel, Florian	Tech. University of Munich
Shima, Tal	Technion

17:15-17:40

ThL2T5.4

High Speed Navigation Using Time Optimal Path Primitives

Ben-Asher, Joseph Z.	Technion
Rimon, Elon	Technion
Manor, Gil	Rafael

***Thank you for attending the
57th IACAS.
See you next year !***