



The 63rd Israel Annual Conference on Aerospace Science

Thursday 9 May, 2024

PROGRAM

Event	Time/Venue
<ul style="list-style-type: none">• Opening• Plenary Lectures• Special Panel• Lunch	8:45-13:30 Churchill Hall, the Technion
<ul style="list-style-type: none">• Regular Sessions• Tutorial Session• Exhibition stands of IACAS sponsors: IAI, Rafael	13:30-18:00 The Faculty of Aerospace Engineering, the Technion

sponsors and supporters





IACAS-2024 Program - Table of Content

Thursday 9.5.2024		Technion, Haifa
Time/Code	Session	Hall
8:45-12:00		
8:45-8:55	Welcoming Address: Prof. Uri Sivan, Technion President	Churchill Hall
8:55-9:00	Conference Opening: Prof. Dan Blumberg, Chair IACAS-2024	
9:00-9:50	Prof. Colin Price , Tel Aviv University Satellites are the “heroes” of climate change research	
<i>Coffee Break 9:50-10:15</i>		
10:20-11:10	Dr. Raz Itzhaki , Orbit Catapult Down to Earth – Space Entrepreneurship as a Driver to Space Exploration	
11:10-12:15 ThPI3	Space Startups Panel Moderator: Brig. Gen. (Ret.) Amnon Harari - Technion	
Lunch 12:15-13:30		
13:30-15:30		
ThL1T1	Guidance, Navigation and Control I	A
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ThL1T3	Aerospace Design and Manufacturing	C
ThL1T4	Tutorial Session: Hamiltonian Mechanics and Power Geometry Tools in Space Mechanics and Astrodynamics	D
ThL1T5	Aerodynamics & Aeroacoustics	E
ThL1T6	Aeroelasticity & Fluid-Structure Interaction	F
ThL1T7	Propulsion and Combustion	G
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ThL2T2	Flow Control and CFD	B
ThL2T3	Aerospace Design, Manufacturing and Multi-Disciplinary Optimization	C
ThL2T4	Data, AI and Autonomy	D
ThL2T5	Aerodynamics, Hydrodynamics and Aeroacoustics	E
ThL2T6	Astrodynamics and Space Systems	F
ThL2T7	Solid Mechanics	G



[Click here for Session Halls Map at the Faculty of Aerospace Engineering](#)





Professor Colin Price, Tel Aviv University

Satellites are the “heroes” of climate change research

Chair: Dan Blumberg, Ben-Gurion University of the Negev

Climate change is real. Global temperatures are rising, sea level is rising, and rainfall patterns are changing. The weather is becoming more extreme, and decisions about the causes of these changes and future scenarios need to be based on scientific data and scientific research. But vast regions of the globe are uninhabited (polar regions, oceans, deserts, rainforests) with no surface data from these regions. Therefore, before the satellite era we lacked important evidence of what was happening in those isolated parts of our planet. But in the last 45 years key scientific evidence that our climate is changing has come primarily from satellite measurements. Changes in ocean temperatures, sea, and land ice changes, changes in the biosphere, sea level, etc., are now readily available to the public and scientists due to the constellations of Earth-observing satellites orbiting our planet. These satellite observations from space are key to monitoring the Earth's changing climate today and provide long-term data for scientific research to understand how we are impacting our climate while also providing key evidence for policymakers and world leaders about the urgency of acting on climate change. In this talk examples of the role of satellite observations will be provided, with ways these data are used by policy makers.

About Professor Colin Price

Prof. Colin Price is a Full Professor in the Department of Geophysics in the Porter School of the Environment and Earth Sciences at Tel Aviv University.

He is an Atmospheric Physicist, specializing in the Earth's weather and climate, with a focus on lightning, thunderstorms, climate change, and natural hazards. He was born in Johannesburg, South Africa, in 1962. After starting his university studies in South Africa, he transferred to Tel Aviv University in 1982 where he completed his B.Sc. and M.Sc. degrees in Geophysics and Atmospheric Sciences. He received his Ph.D. at Columbia University, New York, in 1993, while working at NASA's Goddard Institute for Space Studies in New York. After completing a postdoctoral fellowship at the Lawrence Livermore National Laboratory in California, he returned to Israel and joined the faculty of Tel Aviv University in 1995. He has published more than 170 scientific papers and has a team of 10 graduate students and researchers working under his guidance on various scientific research projects. He heads the Tel Aviv University Climate Crisis Initiative (PlanNet Zero) looking for innovative multidisciplinary solutions for the climate crisis. He is the Israeli national representative to IUGG, IAMAS, and SCOSTEP.





10:20-11:10

ThPI2

Dr. Raz Itzhaki, Orbit Catapult

Down to Earth – Space Entrepreneurship as a Driver to Space Exploration

Chair: Daniel Zelazo, Technion

The lecture will delve into the transformative role of entrepreneurship in advancing space exploration. This lecture aims to equip emerging entrepreneurs and researchers with actionable insights and strategies for founding successful space-related ventures. Emphasizing the mitigation of high risks associated with space products, it will outline how integrating government and industrial partnerships or tapping into vast market opportunities through global satellite constellations can create substantial value. Furthermore, the session will explore the dynamic interplay between academia and the space industry, illustrating through real-world examples how these sectors can synergistically collaborate for mutual benefit. Additionally, Dr. Itzhaki will demonstrate the various funding and development cycles crucial for space ventures, using the Israeli market as a specific case study.

About Dr. Raz Itzhaki

As the founder and Managing Partner of Orbit Catapult, Dr. Raz Itzhaki has been at the forefront of Israel's burgeoning space technology sector. With a deep expertise in aerospace engineering and computer science, Dr. Itzhaki brings over 30 years of experience in leading innovative space tech ventures.

Orbit Catapult Fund, under his leadership, is a pioneering venture capital firm dedicated to propelling Israeli space technologies into global markets. The fund specifically focuses on pre-seed and seed investments, leveraging Israel's unique position as a hub of space innovation. With an annual commitment to launching satellites, the fund provides crucial early-stage support, including space launch coordination and mentorship, thereby accelerating technology validation and facilitating rapid company growth.

Previously, Dr. Itzhaki served as the CEO of NSLComm and Beetlesat, where he directed multiple landmark projects, including the launch of innovative satellite systems. His tenure as Nano-Satellites Department Manager at Israel Aerospace Industries saw him contribute to over 10 satellite missions, emphasizing his role as a key figure in Israel's space industry.

Dr. Itzhaki's academic credentials include a PhD in Computer Science from the Hebrew University and a Master's in Aerospace Engineering from the Technion – Israel Institute of Technology. He is also a respected author, with multiple publications in the fields of aerospace and satellite technologies.





ThPI3

Churchill Hall

Space Startups Session

Moderator: Brig. Gen. (Ret.) Amnon Harari - Technion

Join us for an engaging panel discussion showcasing Israeli startups at the forefront of the space industry. Discover the innovative technologies and groundbreaking ideas emerging from Israel's entrepreneurial ecosystem as experts delve into topics ranging from satellite technology and space exploration to commercial space ventures. Gain insights into how these startups are shaping the future of space innovation and advancing global space capabilities. Whether you're a space enthusiast, investor, or industry professional, this event promises to inspire and inform you about the exciting developments in Israel's space startup landscape.

THE SPACE STARTUPS PANELISTS:

- Mr. Alex Pospikhov, CEO Mission Space
- Mr. Yigal Harel, Co-Founder & CTO at WeSpace Technologies
- Prof. Meir Ariel, Head of the Tel Aviv University New Space Center on the TEVEL Project
- Dr. Noam Leiter, CEO LulavSpace





ThL1T1

Hall A

Guidance, Navigation and Control I

Chair: Daniel Zelazo

Technion

Co-Chair: Liat Peled-Eitan

RAFAEL

13:30-13:45

ThL1T1.1

Reachability-Based Delayed Decision Guidance for Conventional Interceptors

Vitaly Shalumov

Technion

Gleb Merkulov

Technion

Tal Shima

Technion

13:45-14:00

ThL1T1.2

Guidance on Stationary Target with Range-Rate Information Only

Liat Peled-Eitan

RAFAEL

Ilan Rusnak

RAFAEL

14:00-14:15

ThL1T1.3

Attitude Quaternion Estimation from Two Vector Observations

Daniel Choukroun

Ben-Gurion University of the Negev

Caitong Peng

Ben-Gurion University of the Negev

14:15-14:30

ThL1T1.4

GNSS Spoofing Observed in Israel Using Wideband RF Data and Software Radio

Mark Psiaki

Virginia Tech

Alex Frid

Technion

14:30-14:45

ThL1T1.5

Altruistic Kalman Filtering

Ronny Shapiro

Technion

Yuval Aldema-Tshuva

Technion

Nitai Stein

Rafael

Yaakov Oshman

Technion

14:45-15:00

ThL1T1.6

Bearing-only Formation Control with Directed Sensing

Jiacheng Shi

Technion

Daniel Zelazo

Technion





15:00-15:15

ThL1T1.7

[Cooperative Guidance for Simultaneous Interception Using Multiple Sliding Surfaces](#)

Maximillian Fainkich

Technion

Tal Shima

Technion

15:15-15:30

ThL1T1.8

[Adjoint Differentiation Method for Trajectory Simulations with Terminal Conditions](#)

Amir Mittelman

The University of Queensland

Gollan Rowan

The University of Queensland

Ingo Jahn

University of Southern Queensland





ThL1T2

Hall B

Fluid Mechanics

Chair: Vassilis Theofilis
Co-Chair: Michael Karp

Technion
Technion

13:30-13:45

ThL1T2.1

Sensitivity of Flows Over Three-Dimensional Swept Wings at Low Reynolds Number

Anton Burtsev
Vojtech Pezlar
Vassilis Theofilis

University of Texas at Austin
Czech Technical University in Prague
Technion

13:45-14:00

ThL1T2.2

Linear Stability of Compressible Flows in Open-Cavities with Curved Downstream Walls

Vojtech Pezlar
Kamil Dylewicz
Vassilis Theofilis

Czech Technical University in Prague
University of Liverpool
Technion

14:00-14:15

ThL1T2.3

Investigation of Global Instabilities on Rotex-T Cone-Flare Geometry

Kamil Dylewicz
Vassilis Theofilis

University of Liverpool
Technion

14:15-14:30

ThL1T2.4

Investigation Of Near-Wall Scatter of Scaled Inflectional Mean Velocity Profiles of Turbulent Separated Flow Over The Gaussian Bump

Eric Vaizman
Igal Gluzman

Technion
Technion

14:30-14:45

ThL1T2.5

The Initial Stages of a Pressurized Hydrogen Jet Release: Analysis via High-Fidelity Numerical Simulations

Odie Nassar
Moran Ezra
Marcel Martins Alves
Sergey Kudriakov
Etienne Studer
Liel Ishay

Tel Aviv University
Tel Aviv University
Tel Aviv University
Université Paris-Saclay
Université Paris-Saclay
NRCN





Yoram Kozak

Tel Aviv University

14:45-15:00

ThL1T2.6

Kinetic Description of Flow Detachment At a Micro-Step

Din Ben-Adva

Technion

Giorgos Tatsios

University of Edinburgh

Avshalom Manela

Technion

15:00-15:15

ThL1T2.7

On Instabilities of Entropy-Layers in Compressible Flow

Iliya Milman

Technion

Michael Karp

Technion

15:15-15:30

ThL1T2.8

**Drastic reduction of Cavity Flow Pressure Oscillations at Supersonic Speed by
Modifying its Rear Face into an Ellipse shape**

Jacob Cohen

Technion

Soumya Ranjan Nanda

Technion

Sudip Das

Birla Institute of Technology Mesra

S. K. Karthick

Indian Institute of Technology Hyderabad





ThL1T3

Hall C

Aerospace Design and Manufacturing

Chair: Yoav Ofir

Israel Aerospace Industries

Co-Chair: Ilan Berlowitz

IBAero

13:30-13:45

ThL1T3.1

The Dream Chaser Re-Entry Space Vehicle Actuation System

Ilan Berlowitz

IBAero

13:45-14:00

ThL1T3.2

Boeing 737NG Hydrogen Fuel Cell Taxi System

Ilan Berlowitz

IBAero

14:00-14:15

ThL1T3.3

Transport Aircraft Cabin Air Quality Improvement

Ilan Berlowitz

IBAero

14:15-14:30

ThL1T3.4

A Data-Driven Strategy for Minimizing Parts Count in Aircraft Design

Yuval Freed

Israel Aerospace Industries

Maoz Koren

Israel Aerospace Industries

14:30-14:45

ThL1T3.5

Numerical Prediction of Stringer De-Bonding in Composite Stiffened Panels Subjected to Combined Loading

David Bardenstein

Israel Aerospace Industries

Iddo Kressel

Israel Aerospace Industries

Alexander Lukatsky

Israel Aerospace Industries

14:45-15:00

ThL1T3.6

An Open Source Quadcopter Platform for Simulink

Joseph Attias

Technion

Yael Marciano

Technion

Ruslan Arhipov

Technion

Daniel Zelazo

Technion





15:00-15:15

ThL1T3.7

Real-Time Health Monitoring of Aeronautical Structures via Sensitivity Tests
Utilizing Principal Component Analysis

Yoav Ofir

Israel Aerospace Industries

Uri Ben Simon

Israel Aerospace Industries

Shay Shoham

Israel Aerospace Industries

Iddo Kressel

Israel Aerospace Industries

Jonathan Bohbot

Tel Aviv University

Moshe Tur

Tel-Aviv University

15:15-15:30

ThL1T3.8

'Smart Wing' Flight Demonstration of a Novel Composite Wing With Embedded
Electronics and Sensing Capabilities

Erez Zemel

Rafael



ThL1T4

Hall D

Tutorial Session: Hamiltonian Mechanics and Power Geometry Tools in Space Mechanics and Astrodynamics

Moderators:

Vladimir Martinusi – Technion

Alexander Batkhin – Technion

13:30-14:15

ThL1T4.1

A Brief Introduction to Hamiltonian Formalism Applied in Astrodynamics

14:15-14:45

ThL1T4.2

Power Geometry Techniques for Hamiltonian Systems

14:45-15:30

ThL1T4.3

Applications: Small Periodic Non-Conservative Perturbations





ThL1T5

Hall E

Aerodynamics & Aeroacoustics

The session is dedicated to the memory of Sharon Gordani

Chair: Hadar Ben-Gida

Technion

13:30-13:45

ThL1T5.1

On the Performance and Longitudinal Stability of Custer Channel Wing (CCW)

Moshe Zilberman

Azrieli Academic College of Engineering

Sharon Gordani

Azrieli Academic College of Engineering

13:45-14:00

ThL1T5.2

Integrating Ultrasonic and Photonic Forces

Ariel Sharon

Technion

Yeshayahou Levy

Technion

14:00-14:15

ThL1T5.3

Towards Low Distortion Airborne Optical Turrets: Leveraging Computational Aero-Optics and Data-Science Methods

Michael Weidenfeld

Elbit

Ori Haber

Elbit

14:15-14:30

ThL1T5.4

Experimental Study of the Side-Edge Vortex System on a Supercritical Wing Model

Hadar Ben-Gida

Technion

Satoshi Baba

University of Toronto

Oksana Stalnov

Technion

Stéphane Moreau

Université de Sherbrooke

Philippe Lavoie

University of Toronto





14:30-14:45

ThL1T5.5

Aeroacoustic Characterization of a High-Lift Multi-Element Configuration

Hadar Ben-Gida

Technion

Marinus Okoronkwo

University of Toronto

Dominic Geneau

University of Toronto

Stéphane Moreau

Université de Sherbrooke

Oksana Stalnov

Technion

Philippe Lavoie

University of Toronto

14:45-15:00

ThL1T5.6

Comparison of Traditional Acoustics and Psychoacoustics

Analysis of a Rotor in Hover

Aleksandra Kvurt

Israel Aerospace Industries

Aharon Karon

Israel Aerospace Industries

Danny Abramov

Israel Aerospace Industries

Shai Alexandroni

Technion

15:00-15:15

ThL1T5.7

**Deep Learning with Graph Neural Networks for
Compressible Turbulent Flow**

Peleg Levin

Rafael

15:15-15:30

ThL1T5.8

**Classifying Structure and Air Borne Noise Pathways in Urban Structures Subjected
to Subsonic Wind Flow**

Saar Golan

Dynamica Design



Aeroelasticity & Fluid-Structure Interaction

Chair: Daniella Raveh Technion
 Co-Chair: Gali Alon Tzezana Rafael

13:30-13:45 ThL1T6.1

Preliminary Structural Design Tool for Flexible Slender Bodies With Aeroelastic Constraints

Yaara Karniel Technion
 Daniella Raveh Technion

13:45-14:00 ThL1T6.2

Flutter and Post-Flutter Response of Plates with Acoustic Cavity Coupling

Maxim Freydin Technion

14:00-14:15 ThL1T6.3

Hypersonic Vehicle Aeroelasticity Research Using Ansys Aerodamping Workflow

Dvir Mandler Ansys
 Konstantinos Giannokostas Ansys

14:15-14:30 ThL1T6.4

Flight-Dynamics Aeroelastic Coupling of Flexible and Very Flexible Wings

Dor Naftaly Israeli Air Force
 Daniella Raveh Technion

14:30-14:45 ThL1T6.5

Wind-Tunnel Investigation of the F-16 Transonic Buffet Phenomenon

Tzlil Nahom Jidovetski Israeli Air Force
 Michael Iovnovich Israeli Air Force
 Daniella Raveh Technion

14:45-15:00 ThL1T6.6

Inducing Failure of an Aluminum Structure Using an Explosive-Filled Expanding Tube

Lev Misiuk Israel Aerospace Industries
 Tal Lahav Israel Aerospace Industries
 Ori Shnitman Israel Aerospace Industries
 Ilan Weissberg Israel Aerospace Industries





15:00-15:15

ThL1T6.7

Flutter Control of A Symmetric Wing Using Active Flow Control

Shay Monat
Oksana Stalnov

Tel Aviv University
Technion

15:15-15:30

ThL1T6.8

Design, Numerical and Experimental Investigation of Wing
With a Morphing Aileron Section

Gali Alon Tzezana
Gal Doron
Valentin Nov
Avishay Kidron

Rafael
Rafael
Rafael
Rafael





ThL1T7

Hall G

Propulsion and Combustion

Chair: Alon Gany

Technion

13:30-13:45

ThL1T7.1

Dynamic Testing of Underwater Hybrid Ram Rockets

Sagi Dinisman
Nachum Eisen
Alon Gany

Technion
Israel Aerospace Industry
Technion

13:45-14:00

ThL1T7.2

An Exploration of Wall-Based Ignition Using Nanosecond-Pulsed High-Frequency Discharges

Weronika P. Senior-Tybora
Joseph Lefkowitz

Technion
Technion

14:00-14:15

ThL1T7.3

Dual Mode Scramjet Operation and Engine Unstart

Eran Arad
Ido C. Ruhman

Technion
Technion

14:15-14:30

ThL1T7.4

Pulse Detonation Ignition of n-Dodecane Spray and Air Mixtures

Hertzel Kadosh
Dan Michaels

Technion
Technion

14:30-14:45

ThL1T7.5

Modular Modelling Approach for Efficient Gradient Evaluation of a Low-Order Integrated Scramjet Propulsion System

Amir Mittelman
Kieran Mackle
Ingo Jahn
Gollan Rowan

The University of Queensland
The University of Queensland
University of Southern Queensland
The University of Queensland





14:45-15:00

ThL1T7.6

Helical Hybrid Engine Operating in a Blowdown Regime, Technion Rocketry Club

Ethan Loskove

Technion

15:00-15:15

ThL1T7.7

Investigation of Radial Inward Porous Inert Media Combustors
for Ammonia-Air Combustion

Guguloth Mahesh Nayak

Technion

Silky Elanjickal

Technion

Beni Cukurel

Technion

Joseph Lefkowitz

Technion



ThL2T1

Hall A

Guidance, Navigation and Control II

Chair: Moshe Idan

Technion

Co-Chair: Ilan Rusnak

Rafael

16:00-16:15

ThL2T1.1

Application of the Riccati Inequality to Design a Controller for Stabilization of Nonlinear Affine System

Gyorgy Hexner
Ilan Rusnak

Rafael
Rafael

16:15-16:30

ThL2T1.2

Nonlinear Control of an Air-Breathing Hypersonic Vehicle Subject to Scramjet Engine Constrains

Ofir Vaknin
Moshe Idan

Technion
Technion

16:30-16:45

ThL2T1.3

Novel Class of Expected Value Bounds and Applications in BSP

Ohad Levy-Or
Vadim Indelman

Technion
Technion

16:45-17:00

ThL2T1.4

Simplified Continuous High Dimensional Belief Space Planning with Adaptive Probabilistic Belief-dependent Constraints

Andrey Zhitnikov
Vadim Indelman

Technion
Technion

17:00-17:15

ThL2T1.5

Robustness of the SDC Based Quadratic Optimal Control of Nonlinear Systems

Maital Levy
Ilan Rusnak

Technion
Rafael





17:15-17:30		ThL2T1.6
	Model-Based Mesh Generation for Orthogonal Collocation Transcription	
Ilan Taub		Technion
Vitaly Shaferman		Technion
Joseph Z. Ben-Asher		Technion
17:30-17:45		ThL2T1.7
	Diodes and the Importance of Network Orientations in Diffusively-Coupled Networks	
Feng-Yu Yue		Technion
Daniel Zelazo		Technion





ThL2T3

Hall C

Aerospace Design, Manufacturing and Multi-Disciplinary Optimization

Chair: Dan Givoli

Technion

Co-Chair: Steve Katzeff

Israel Aerospace Industries

16:00-16:15

ThL2T3.1

Hybrid 3D-1D Finite Element Modeling for Elastodynamic Bending: Preliminary Results

Yana Avni

Technion

Daniel Rabinovich

Technion

Dan Givoli

Technion

16:15-16:30

ThL2T3.2

Composite Grid Structure with Embedded Fiber Optic Sensing Capability

Ilan Weissberg

Israel Aerospace Industries

Daniel Arviv

Israel Aerospace Industries

Nir Lalazar

Israel Aerospace Industries

Giovanni Totaro

CIRA - Italian Aerospace Research Center

De Nicola Felice

CIRA - Italian Aerospace Research Center

Giusto Giovangiuseppe

CIRA - Italian Aerospace Research Center

Spena Paola

CIRA - Italian Aerospace Research Center

16:30-16:45

ThL2T3.3

Optimization of Aircraft Stringer Reinforcements

Steve Katzeff

Israel Aerospace Industries

16:45-17:00

ThL2T3.4

Isogrid Composite Structure from Design to Production

Olga Polovinets

Rafael

17:00-17:15

ThL2T3.5

Matlab Interpolation of Planar Curves with Non-Monotonic Independent Variables

Baruch E. Karlin





17:15-17:30

ThL2T3.6

Identification of an Elastic Inclusion Using a Time-Dependent Adjoint Method

Amit Sayag
Dan Givoli

Technion
Technion

17:30-17:45

ThL2T3.7

Hourly Scale Model of Wind Magnitude and Direction Based on Stochastic
Differential Equations

Maayan Shimoni
Anna Clarke

Technion
Technion



ThL2T4

Hall D

Data, AI and Autonomy

Chair: Itzik Klein

University of Haifa

Co-Chair: Michael Weidenfeld

Elbit

16:00-16:15

ThL2T4.1

AI-Empowered Resilient Quadrotor Navigation

Itzik Klein

University of Haifa

16:15-16:30

ThL2T4.2

Anomaly Detection in Structural Vibration-Tests through Machine-Learning Processes on Accelerometer Measurements

Shiran Tsolker

Rafael

Shahar Yehezkel

Rafael

Ido Hauzer

Technion

Ariel Drachinsky

Rafael

16:30-16:45

ThL2T4.3

Machine Learning Optimization of Support Jigs for Freighter Conversion

Maoz Koren

Israel Aerospace Industries

Yuval Freed

Israel Aerospace Industries

Boris Dorfman

Israel Aerospace Industries

Yana Geras

Technion

16:45-17:00

ThL2T4.4

Efficient Aerodynamic Database Construction: Leveraging Sparse Sensing and Machine Learning

Michael Weidenfeld

Elbit

Shimon Julius

Elbit

17:00-17:15

ThL2T4.5

Deep Compression of Neural Networks for Optimal Control Applications

Johannes Diepolder

Technical University of Munich

Joseph Z. Ben-Asher

Technion





17:15-17:30		ThL2T4.6
Asynchronous Sampled-Data Synchronization with Small communication Delays		
Gal Barkai		Technion
Leonid Mirkin		Technion
Daniel Zelazo		Technion
17:30-17:45		ThL2T4.7
GAIA—Generative AI for Aerospace		
Aviv Fried		Israel Aerospace Industries
Erez Sharon		Israel Aerospace Industries
17:45-18:00		ThL2T4.8
A Lecture on Smart Maintenance		
Keren Liadski		Israel Aerospace Industries



Aerodynamics, Hydrodynamics and Aeroacoustics

Chair: Yuval Dagan

Technion

Co-Chair: Igal Gluzman

Technion

16:00-16:15

ThL2T5.1

Modified Pattern Free-Surface Synthetic Schlieren for Non-Uniformly Strained Liquid Surface

Hillel Mermelstein

Technion

Yuval Dagan

Technion

16:15-16:30

ThL2T5.2

Topology Based Multi-Fluid Flow Model

Ido Silverman

Soreq - NRC

16:30-16:45

ThL2T5.3

Development of a Thermoelectric Energy Harvesting System Integrated with a Phase Change Material Heat Sink

Daniel Jalontzki

Tel Aviv University

Moshe Bukai

Soreq Nuclear Research Center

Yoram Kozak

Tel Aviv University

16:45-17:00

ThL2T5.4

Investigation of Lift Coefficient Models and Unsteady Phenomenon During Pitching Motion

Naama Aliskevicius

Technion

Oksana Stalnov

Technion

17:00-17:15

ThL2T5.5

Computer Vision Algorithms Application for Tracking and Characterization of Bubble Breakup Dynamics in the Nozzle Flow of Multicomponent Liquids

Samuel Gabison

Technion

Igal Gluzman

Technion





17:15-17:30

ThL2T5.6

Computer Vision Algorithms Application for the Characterization of Bubbly Shock-Wave Morphology and Their Coupled Interactions with Bubbles in Aerated Cavitating Flow

Elad Zur
Igal Gluzman

Technion
Technion

17:30-17:45

ThL2T5.7

Assessment of Rotor Tonal Noise in the Time and Frequency Domains with Small in Diameter Propellers

Asaf Kor
Oksana Stalnov

Tel Aviv University
Technion





ThL2T6

Hall F

Astrodynamics and Space Systems

Chair: Vladimir Martinusi

Technion

16:00-16:15

ThL2T6.1

Analytical Dynamics Within Rotating Frames: Addressing the Keplerian Ballistic Problem

Iris Kanter

Technion

Vladimir Martinusi

Technion

16:15-16:30

ThL2T6.2

Employing Intermediate Points for Optimal Low-Thrust Docking with a Constrained Approach Direction

Or Nahum

Technion

Vitaly Shaferman

Technion

16:30-16:45

ThL2T6.3

Long-Term Mitigation of Earth Oblateness Effects on Large Aperture Satellite Constellations

Vladimir Martinusi

Technion

Ilay Lazarovich

Technion

16:45-17:00

ThL2T6.4

Integration of FOS for Health Monitoring of Composite High-Pressure Vessels in Spacecraft

Daniel Arviv

Israel Aerospace Industries

Ilan Weissberg

Israel Aerospace Industries

17:00-17:15

ThL2T6.5

Lunar Hoppers: Expanding Exploration Horizons on the Moon

Yigal Harel

WeSpace Technologies

17:15-17:30

ThL2T6.6

DriveSat Student Project

Nitzan Schwartz

Technion

Noa Offri

Elbit



ThL2T7

Hall G

Solid Mechanics

Chair: David Yanuka

Technion

16:00-16:15

ThL2T7.1

Enhancing Elastic Wave Attenuation in Single-Phase Phononic Crystals via the Coupling of Bragg and Local Resonance Mechanisms

Ilaie Nadejde

Technion

Pavel Galich

Technion

16:15-16:30

ThL2T7.2

Designing a Multistable Unit Cell Using Bistable Arches

Ankush Yadav

Technion

Pavel Galich

Technion

16:30-16:45

ThL2T7.3

Arc Discharge Heating for High-Enthalpy Wind Tunnel

David Yanuka

Technion

16:45-17:00

ThL2T7.4

Computed Tomography Integration into the PHFGMC Meso-Micro Mechanical Characterization of C/C-SiC Composites

Royi Padan

Tel-Aviv University

Chen Dahan-Sharhabani

Tel-Aviv University

Omri Regev

Rafael

Rami Haj-Ali

Tel-Aviv University





Session Halls at the Faculty of Aerospace Engineering

Halls **C&D**

Rooms 240 & 241



1st Floor

To **Hall G**
Lady Davis Fl.6

Hall **A**

Auditorium 235

Halls **E&F**

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Ground
Floor



Hall **B**

Library 165

