

**18th ISRAELI SYMPOSIUM ON JET ENGINES & GAS TURBINES,
November 28 2019**

TECHNICAL PROGRAM

	18th ISRAELI SYMPOSIUM ON JET ENGINES & GAS TURBINES, NOVEMBER 28 2019, Auditorium(235), Faculty Aerospace Engineering, Technion
08:30 - 09:30	(Registration) הרשמה
09:30 – 09:50	Opening: Professor Emeritus Yeshayahou Levy , Chairman, Faculty of Aerospace Engineering, Technion.
	Professor Itschak Frankel , Dean, Faculty of Aerospace Engineering, Technion
	Major Yigal Ben Shabat , Head, Propulsion Systems Branch, Aeronautical Division, MOD/MFAT
09:50 - 13:10	מושב ראשון (First Session)
45 min. lectures	Session Chairman: Lt. Col. Avi Yosfan, Engineering Group Leader , Propulsion Branch, IAF
A1	Turbine Research at Purdue from Innovation to Maturity Prof. Guillermo Paniagua, Purdue Univ., USA
A2	Development of Cooled Vanes for the High Impact Technologies Research Turbine Dr. John Clark, Air Force Research Laboratory, USA
11:20 - 11:40	(Break and refreshment) הפסקה וכיבוד קל
30 min. lectures	Conversion of Jet Engine Combustor from Jet Fuel to Natural Gas Prof. Emeritus Levy Yeshayahou, Technion
A3	
A4	Development of Ultra-Compact Micro Gas Turbines with 400W Electric Power Output as a Battery Replacement in Drones Prof. Beni Cukurel, Technion
A5	Small Recuperated Turbo-Fan conceptual design Dr. David Lior, RJET & TURBOGEN

13:10 -14:40	ארוחת צהריים וסיור במעבדה (Lunch and laboratory visit)
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ההרצאות 20 ד', באנגלית ובעברית.		14:40 -17:15		Lectures in English and Hebrew, 20 min each lectures.	
Second Session מושב שני 14:40 -15:40 Auditorium (room 235)		Third Session מושב שלישי 14:40 -15:40 room 240		Forth Session מושב רביעי 14:40 -15:40 room 241	
Rotor dynamics and Vibrations		Turbomachinery Optimization		Production Technologies	
Session Chairman: Dr. Amiram Leitner Rafael		Session Chairman: Dr. Shaul Eliahu Niv IAI		Session Chairman: Ariel Cohen Bet Shemesh Engines	
B1	Educational Facilities for Jet Engine Rotordynamics and Balancing Alexander Kleiman, Technion	C1	Optimization Method Demonstrated on a Test Bench Design Shachar Balas, RAFAEL, Adjoint-Based CFD	D1	Blisk Milling - From Component to Machine Design Dr. Bernhard Bringmann, Starrag AG, Switzerland
B2	Estimation of Jet Engine Rotor Bearings Stiffness by Modal Testing Afik Lifshitz, Eyal Setter, Shachar Tresser, RAFAEL,	C2	ICE Turbochargers Failures and Some Features of the Study of Their Causes Using the Fault Tree Analysis Dr. Alexander Khrulev and Prof. Sergey Dmitriev, Ukraine,	D2	Abradable Coating in Turbomachinery and Plasma Technology, Performance Improvement Yochanan Nachmana, Bet Shemesh Engine Ltd,
B3	Spline-Coupling – Effective Stiffness Effect on Rotating System Dynamics Ori Kam, Bet Shemesh Engine Ltd.,	C3	Unusual Challenges in Mixed-Flow Pump Design Dvir Mendler, ORMAT,	D3	Single Crystal Casting Simulation Shir Avrahami and Ori Kam, Bet Shemesh Engine Ltd,

15:40- 15:55 (Break and refreshment) הפסקה וכיבוד קל	
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Fifth Session מושב חמישי 15:55 -17:15 Auditorium (room 235)		Sixth Session מושב שישי 15:55 -17:15 room 240	
Control & Diagnostics		Combustion	
Session Chairman: Dr. Amiram Leitner Rafael		Session Chairman: Dr. Shaul Eliahu Niv, IAI	
E1	Vibro-acoustic Diagnostics of Turbocharger Roman A. Varbanets, Odessa National Maritime University, Ukraine,	F1	Combustion Instability in a Swirl Stabilized Combustor Nikhil Balasubramanian and Prof. Danny Michaels, TECHNION,
E2	Measurement of Coating Thermal Properties via Induction Phase Radiometry Shani Eitan, IAF,	F2	Electric Company Extended Operation Load Range of Gas Turbines As a Tool for Control Electricity Grid Equipped with Renewable Energy Suppliers. Dr. Boris Chudnovsky, Alexander Lazenikov and Ilya Chatskiy, Israel
E3	Temperature Measurements innovations in the Aerospace Industry Giora Brandwine, Elcon Mamab Control Instruments Ltd.,	F3	Lagrangian Simulation of a Slinger Combustor Ariel Cohen, Bet Shemesh Engine Ltd,
E4	Reliable, Comprehensive AI Powered Health Diagnostics and Prognostics of Turbo-Jet Engines and Gas Turbines through Fusion of Hybrid Methodologies Dr. Michael Grebstein, RSL Electronics Ltd.,	F4	A New Tunnel for Ignition Research Iker Laso, Natali Rozin, Joël van der Lee and Prof. Joseph Lefkowitz, Technion,