



Propulsion Branch
IMOD



DEPARTMENT OF
AEROSPACE ENGINEERING

Turbo and Jet Engine Laboratory
Department of Aerospace Engineering
Technion, Haifa

<http://jet-engine-lab.technion.ac.il>



Propulsion Branch
IAF

THE 13TH (Bar Mitva) ISRAELI SYMPOSIUM ON JET ENGINES AND GAS TURBINES

Venue: main building of the Faculty of Aerospace Engineering

Thursday, November 6 2014 (9:00-17:00)
Technion, Haifa

TECHNICAL PROGRAM

8:00 - 9:00	הרשמה (Registration)
9:00 - 9:20	Opening: Professor Yeshayahou Levy, Chairman of the Symposium, Head, Turbo and Jet Engine Laboratory, Faculty of Aerospace Engineering, Technion.
	Professor Yaakov Oshman, Dean, Faculty of Aerospace Engineering, Technion.
	Ltc. Uri Zvikel, Head, Propulsion Systems Branch, Aeronautical Division, MOD.
	Lt.Col. Shlomi Konforty, Head of Propulsion Branch, IAF
9:20 - 13:30	מושב ראשון (Session First) Session Chairman: Ltc Uri Zvikel, MOD & Mr. Emanuel Liban, Edmatech
A1	James A. Kenyon, Pratt & Whitney, USA, "Trends in Advanced Engine Technology"
A2	Thurmond Senter, GE Aviation, USA, "Technology Impact On Future Products"
A3	Richard Hausen, Honeywell Propulsion, USA, "Emissions and Ignition Trade Considerations for Small Engines Low Emissions Combustor Design"
11:20 - 11:40	הפסקה וכיבוד קל (Break and refreshments)
A4	Prof. Michael Casey, PCA Engineers Limited, UK, "A new approach to map prediction of radial compressors"
A5	Prof. Damian Vogt, University of Stuttgart, Germany, "Turbomachinery Blade Vibrations: Causes, Opportunities and Challenges"
A6	Student's Project: Dorin Avsaid, Alon Dahan, Tomer Yehezkeal, Dor Shitrit, Tamir Ben Nachum, Yonit Zaslavsky, Michael Presman, Maor Schkolnik, Technion, Israel, "Afterburner and Vectoring Nozzle for a Small Jet Engine"
13:30 - 14:45	ארוחת צהריים (Lunch)

**THE 13TH (Bar Mitva) ISRAELI SYMPOSIUM ON JET ENGINES AND GAS TURBINES
TECHNICAL PROGRAM (Cont.)**

Thursday, November 6 2014 (9:00-17:00),

14:45 - 15:45	2 ND Session, Fluid Mechanics & H.T. מושב שלישי, מונחים זורמים ומעבר חום Session Chairman: Dr. Khosid Savely, Rafael	14:45 - 15:45	3 RD Session, Fuel מושב שלישי, דלקים Session Chairman: Dr. Boris Chudnovski, Israel Electric Company
B1	Dr. Beni Cukurel, Technion, "Thermal Management Ramifications of Acoustic Resonances in Turbine Blade Internal Cooling Channels"	C1	Dr. Anat Bonshtien, Fuel Choices Initiative Prime Minister's Office , "The Fuel Choices Initiative – Pushing Towards Alternatives"
B2	Zvi Gorelik, Bet Shemesh Engines, "Identification and Treatment of Separation Phenomena during the CFD Design on Turbomachinery Blades"	C2	Mordechai Reshef and Dr. Boris Chudnovsky, Israel Electric Company, Dr. Moshe Keren and Shaike Baitel (Dor Chemical), "Long Term Experience of Methanol Firing in Utility Gas Turbine"
B3	Dr. Khosid Savely, Manor, Rafael, "Optimization using CFD: methods and tools for engineers"	C3	Prof. Yeshayahou Levy, Technion "Alternative Fuels for Gas Turbine and Jet Engines"
15:45 - 16:00	הפסקה וכיבוד קל (Break and refreshments)	15:45 - 16:00	הפסקה וכיבוד קל (Break and refreshments)
16:00 - 17:00	4 TH Session, Structure מושב רביעי, מבנה Session Chairman: Yitzhak Hochmann, Edmatech	16:00 - 17:00	5 TH Session, Systems & Control מושב חמישי, מערכות ובקרה Session Chairman: Dr. Moshe Shapira, Bet Shemesh Engines
D1	Ido Koresh, Shimshon Bar-ziv, Ahron Halevy, Anat Shenar, Shlomit Zamir, Manor Rafael, Israel, "Cold Spin Test (CST) of Silicon Nitride Discs for Jet-Engine Applications"	E1	Dr. David Lior, RJet Engineering, "Improvements in Cooling of Gas Turbines"
D2	Dolev Ohad, Rafael, Israel, "Additive Manufacturing for Jet Engine Applications"	E2	Ilan Berlowitz, Israel Aerospace Industries, "A View of the Future of Civil Transport Aircraft Propulsion Systems"
D3	Captain Shani Eitan , Israel Air Force, "Numerical and Analytical investigation of cracks in Turbine Exhaust Case Struts of F100 engine"	E3	Dr. Michael Lichtsinder, Bet Shemesh Engine, Israel, "Twin Spool Engine Control Using Partial Engine Model"

אישור כניסה לרכב

הצגת תכנית זו בשער הטכניון תאפשר כניסה עם רכב לטכניון



יחידת האבטחה בטכניון
בטכניון - מוסד המחקר והטכנולוגיה לישראל



CAR ENTRANCE PERMIT

**PRESENTATION OF THIS PROGRAM WILL SERVE AS THE CAR ENTRANCE PERMIT AT THE
TECHNION'S GATE**



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Venue: Building of the Faculty of Aerospace Engineering

**Thursday, November 6 2014 (9:00-17:00),
*Technion, Haifa***

This year, as in the previous years, we plan to hold the Israeli Symposium on Jet Engines and Gas Turbines. During the last few years there has been a considerable expansion of activities in Israel in turbo jet propulsion. This is in addition to the serial production of small engines, increased electricity generation using gas turbines and combined cycles, production of various engines' spare parts and maintenance work. In Israel, many bodies are active in jet engines and gas turbine area, including: MAFAT (MoD), IAF, Israel Navy, EL-AL, IAI, Beit Shemesh Engines, RAFAEL, TAAS, ORMAT, Israel Electric Corporation, R-Jet & Becker Engineering, the Technion and more.

Improved engineering & technological innovations and new projects in Israel calls for continued professional meetings; for the exchange of information, for cross-pollination and for creating a fertile seedbed for cooperation. During the previous twelve symposia, in every one, more than hundred scientists and propulsion engineers met and presented their work from the various industries, the MoD and Academia. These symposia were a success, wetting the appetite for more such meetings.

The 13th symposium will be the Bar Mitzva one, already mature and established symposium. It will include invited introductory lectures on selected subjects (from large engine manufacturers and Academia). In addition there will also be presentations that concern activities in different Israeli industrial firms, institutes and universities as well as an open discussion and, upon request, a tour to the faculty's renovated Turbo and jet Engine laboratory. This will also be a good opportunity for professional meetings, exchange of ideas and presentation of jet engine models and products from various companies.

During the symposium there will be an opportunity to discuss all topics relevant to jet engines and gas turbines, including aerodynamics of turbo-machines, combustion, heat transfer, structures and dynamics, simulations, control, production processes and maintenance, combined cycles and more. Preference will be given to subjects of interest in Israel. The first half of the symposia (till lunch time) will be held in English.

This year there will be a special exhibition where different Israeli companies will present some of their products, including complete jet engines and associated components.

Price is 250 NIS (including lunch and book of abstracts). Full time students (graduate and undergraduates) are granted with free symposium registration (but without the lunch...). Payment to the symposium should be sent in advance by check, payable to "Technion", addressed as listed below. In special cases, one can register on the day of the symposium.

All presentations will be published in full, or as a "censored" version, after the conference on the conference website.

Those who wish to participate are asked to send the stub attached, mail, fax or e-mail, before the September 1st 2014 to the address listed below.

Looking forward to seeing you at the symposium,

Professor Yeshayahou Levy
Chairman of the symposium

To: Professor Yeshayahu Levy

e-mail: levyy@technion.ac.il

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Name: Company: Address:

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e-mail:

I would like to attend the conference,

- Attached is a check for NIS 250 payable to "Technion".
- I intend to register on the symposium day.

I recommend to send this note to:

