

UNDER **EXTREME** CONDITIONS

The Israeli Conference on Materials and Mechanical Systems @ the Forefront of Technology

Program | November 25, 2015

D. Dan and Betty Kahn Faculty of Mechanical Engineering Building
Technion - Israel Institute of Technology

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- 08:45-09:30 Gathering + Refreshments
 - 09:30-10:30 **Opening Session**
 - 09:30-09:45 **Opening Remarks**
 - 09:45-10:30 *"System Engineering Challenges: Integrating Mission Systems on Platforms"*
Mr. Jehezkel (Hezi) Grizim, VP Corporate Special Programs, IAI
 - 10:30-10:50 Coffee Break
 - 10:50-12:10 **1st Session - Strength and Failure of Aircraft/Aerospace Materials and Structures**
 - 10:50-11:10 *"Materials Solutions for Extreme Conditions"*
Dr. Ehud Galun, MAFAT
 - 11:10-11:30 *"Dynamic Failure Under Extreme Conditions: Experiments and Modeling"*
Prof. Daniel Rittel, Faculty of Mechanical Engineering, Technion
 - 11:30-11:50 *"Fracture Mechanics and Fatigue: Application to Aircraft Structures"*
Prof. Leslie Banks-Sills, School of Mechanical Engineering, Tel Aviv University
 - 11:50-12:10 *"Failure Analysis of Material Systems Operating Under Extreme Conditions"*
Prof. Yizhak Roman, Department of Applied Physics, Hebrew University of Jerusalem
 - 12:10-13:20 Lunch Break
 - 13:20-15:00 **2nd Session - Novel Design and Maintenance Methodologies for Improved Reliability & New Production Routes for Aerospace Materials and Structures**
 - 13:20-13:40 *"Structure Health Monitoring of a UAV Fleet Using Fiber Optic Distributed Strain Sensing"*
Mr. Iddo Kressel, Engineering Division, IAI
 - 13:40-14:00 *"Submarine Maintenance Challenges"*
LCDR. Dmitry Daskal, Israeli Navy
 - 14:00-14:20 *"Open Issues and New Horizons in Dynamic Behavior of Materials Under Extreme Conditions"*
Dr. Zeev Lovinger, Rafael
 - 14:20-14:40 *"Multi-Site Stress Corrosion Damage Repair of a Navy Missile Corvette Deck Using Bonded Composite Repair"*
Mr. Uri Ben-Simon, Engineering Division, IAI
 - 14:40-15:00 *"Additive Manufacturing: New Routes, Mechanical Properties of Ti6Al4V and Application Examples"*
Dr. Amnon Shirizly, Rafael
 - 15:00-15:20 Coffee Break
 - 15:20-16:20 **3rd Session - Advances In Propulsion and Heat Transfer Systems**
 - 15:20-15:40 *"Under Extreme Rotating Speeds, High Frequency & Fast Vibrations"*
Prof. Izhak Bucher, Faculty of Mechanical Engineering, Technion
 - 15:40-16:00 *"Avoiding Creep in Engine Hot Gas Section by Advanced Cooling Schemes and Online Monitoring of Gas/Metal Temperatures"*
Prof. Beni Cukurel, Faculty of Aerospace Engineering, Technion
 - 16:00-16:20 *"Failure Analysis of Transom's Cracking in Israeli Navy Speed Boats"*
LCDR. Omri Tuval, Israeli Navy
 - 16:20-16:30 **Closing Remarks**