DEPARTMENT OF AEROSPACE ENGINEERING | TECHNION Israel Institute of Technology

The 4th Annual Professor Singer Memorial Lecture

The Challenges in using Composite Materials for Aeronautical Structures

The use of advanced composite structures is continuously increasing in the modern aerospace industry. Military aircraft were the first to take advantage of the weight saving potential of composites. The most recent civil aircraft mirror this trend, with much of their major structure exploiting composites. The use of all-composite structures for unmanned vehicles is routine nowadays.

While composites present many advantages relative to conventional metallic structures, in terms of weight, stiffness, fatigue behavior and corrosion resistance, they also suffer from many limitations, especially their labour intensive manufacturing methods, which result in high recurring cost.

The lecture will focus on the challenges of implementing composites in aeronautical structures, and will present actual applications in Israel Aerospace Industries different products, with the reasoning behind the selection of their structural concept and manufacturing technology.

Gila Ghilai

Director of Aeronautical Structures Development
Engineering Center
Israel Aerospace Industries (IAI)

Gila Ghilai is currently Director of Aeronautical Structures Development at the Israel Aerospace Industries (IAI) Engineering Center, responsible for the disciplines of Structural Design, Stress Analysis, Loads & Dynamics, Fatigue & Damage Tolerance, Weight & Cost control and Liaison.

She also serves as counselor to the European Commission for evaluation of Research & Development proposals, and is a member of the program committee of several conferences, among which: The Israel Annual conference on Aerospace Sciences (IACAS) and Airtec - International Aerospace Supply Fair.

Gila Ghilai holds an M.Sc. in Structural Engineering from the Technion.

Monday, March 20, 2017 at 16:30 (gathering at 16:00)

Faculty of Aerospace Engineering, Library classroom (room 165)

Light refreshments will be served before the lecture.