

The Impact of Technion Aerospace Engineering on Israel



AMERICAN
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Impact

The innovative aerospace and aviation technology developed at the Technion - Israel Institute of Technology keeps Israel and its citizens safe every day. This technology also drives Israel's space exploration program, strengthens its civilian aviation industry, creates solutions for a cleaner environment through advances in sustainability, and contributes significantly to the nation's economy.

It is vital for Israel to produce its own aerospace and defense technologies in light of ongoing military threats. The Technion has become the epicenter for training the nation's aerospace engineers and conducting research to advance the national aerospace industry. Technion alumni hold strategic positions in the Israeli Air Force and in industry, and have provided research that led to groundbreaking technologies such as Iron Dome, which has saved countless lives.

Aerospace scientists also have their eye on the many wonders of outer space. The Technion helped Israel join the elite club of space-launch-capable countries in 1988 with the launch of Israel's first space satellite, Ofek 1. Just a decade later, Technion students built and launched the microsatellite Gurwin TechSat II, which orbited space for more than 11 years, a record for academic activity in space. And most recently,

Technion aerospace engineers launched the Adelis-SAMSON project, a trio of miniature satellites that move autonomously in space without guidance from the ground.

Lastly, Israel has become a global leader in satellite technologies and space systems, providing more than its fair share to the bottom line. Its aerospace and related industries contribute more than \$10B to Israel's gross national product, while accounting for nearly 3% of the nation's workforce. As the only university in Israel with an aerospace faculty, the Technion has trained most of the nation's rocket scientists. That prominence, coupled with the Technion's longstanding partnerships with industry, including Israel Aerospace Industries (IAI), has made the university indispensable to Israel's space tech exports and a critical mainstay in all its aerospace efforts.



PROF. BENI CUKUREL
Faculty of Aerospace Engineering



HISTORIC PHOTOS OF THE Technion Faculty of Aerospace Engineering

About

The Faculty of Aerospace Engineering is a world leader, ranking among the top 20 of its kind in several international university rankings. Led by Dean Tal Shima, it is made up of 400 undergraduates, 150 graduate students, and 23 faculty members conducting research in areas that include control, navigation, and guidance; aerodynamics and fluid mechanics; design optimization; combustion and propulsion; astronautics; and structures and solid mechanics.

Throughout its 70-year history, the Faculty has served a crucial national purpose, educating professionals in Israel's defense and commercial aviation industries, and developing technologies that maintain its position as a global aerospace market leader.

History

The Faculty of Aerospace Engineering was opened in 1954 to address Israel's need for a center of aeronautics research that could help ensure the nascent nation's security. Created at the behest of Prime Minister David Ben-Gurion, it has been said that the Faculty then went on to provide Israel with everything from night goggles to an entire aerospace industry. Technion aerospace engineering alumni have contributed to many critical aeronautical advances ranging from Israel's defense programs (including Iron Dome) to the national space program and satellite industries. Many Faculty alumni have received high-level awards, including the Israel Prize. To this day, the Faculty is Israel's only department of aerospace, and the producer of nearly all the country's qualified aerospace engineers.

Addressing Urgent Needs

The Technion aerospace program is vital to Israel's security and space exploration. That is why support for the Faculty of Aerospace Engineering is a priority for both the Technion and the State of Israel.

The Faculty must grow and modernize to meet the needs of a rapidly changing field, and to inspire future generations of aerospace engineers. It still operates out of the first building erected on the Technion's main campus more than 70 years ago. Designated for preservation due to its historical importance, the building currently fails to meet basic safety standards and space requirements. The

Technion plans to construct a substantially larger building with state-of-the-art teaching and research labs.

The need is urgent. Israel's thriving space-tech sector is placing demands on the Technion to expand the faculty and student enrollment. Emerging research domains associated with Israel's industrial goals and defense needs require the Technion to keep up or risk falling behind.

Funding opportunities are available through the Aerospace Capital Fund and specific capital naming gifts.

From VISIONARY EDUCATION to a WORLD of IMPACT

The American Technion Society supports visionary education and world-changing impact through the Technion - Israel Institute of Technology. Our investments in the Technion's growth and innovation advance critical research and technologies that serve the State of Israel and the global good.

When the Technion enrolled its first students in 1924, no one could have fathomed the impact it would have on Israel's economic development and global scientific advancement. As we approach the centennial anniversary, the Technion continues to nurture the next generation of exceptional scientific leadership.



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