

October 2024

The **Stephen and Nancy Grand Aerospace Building** in the Faculty of Aerospace Engineering

Launching a New Era



TECHNION

Israel Institute of Technology

Situated in Haifa, the Technion-Israel Institute of Technology, founded in 1912, stands as Israel's oldest university, offering a wide array of degrees in science, engineering, and interdisciplinary fields to its diverse student body of over 15,000. Known for its groundbreaking research in areas such as energy, nanotechnology, and life sciences, the Technion hosts 18 academic faculties and over 60 research centers, playing a pivotal role in shaping both academic discourse and the socio-economic landscape of Israel.

With a rich history spanning a century, the Technion maintains its position as a globally recognized institution, consistently ranking among the top academic establishments worldwide. Its sprawling campus overlooking the Mediterranean serves as a hub for applied research, attracting renowned faculty members and fostering a culture of innovation and collaboration. Among its 565 faculty members are leaders in their fields, boasting numerous international honors and prizes, including three Nobel Prizes, and contributing significantly to the advancement of knowledge through their research endeavors.

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Launching a New Era

The Faculty of Aerospace Engineering is a focal point of national aerospace research in Israel.

The only university department of its kind in the nation, the Faculty was entrusted by Prime Minister David Ben-Gurion with a vital role: to train the engineers who would go on to provide the Israeli Air Force with the technological edge necessary to achieve air supremacy in the region. Today, 70 years later, the Faculty continues to serve as a constant, foundational element in the state's defense strategy.

The Faculty sits at the core of Israel's endeavors in advancing space exploration, creating technologies for its defense, and spurring commercial enterprise to fuel its economy. Supported by and partnering with Israel's Ministry of Defense and its major defense industries, the Faculty's alumni have developed groundbreaking innovations such as the famed "Iron Dome" defense system.

Aerospace research at the Technion focuses on areas such as control, navigation, and guidance; aerodynamics and fluid dynamics;



design optimization; combustion and propulsion; astronautics; structures and solid mechanics. Several international university rankings place the Faculty among the top of its kind in the world (e.g., #25 in the 2023 Shanghai Ranking). More than 80% of engineers at Israeli defense industry companies such as Rafael, IAI, and Elbit are Technion graduates, the majority of whom have degrees in aerospace engineering. ■

On the **Front Line**

Challenges to Israel's defense continuously evolve and proliferate as newer technologies are introduced.

As witnessed by international conflicts around the world, as well as in the conflict that began in October 2023 that launched Operation Iron Swords, manned aircraft, drones and other airborne technologies have proven game-changers in combat. The Technion plays an integral role in this critical mission to outperform aggressive regional powers and work alongside government and industry partners to independently ensure the safety and security of Israeli citizens.

On the commercial front, Israel has solidified itself as a global leader in satellite technologies and space systems design, and is one of a handful of countries with independent satellite-launch capacity. Additionally, the nation is committed to developing high-speed technologies, and is already a recognized trailblazer in autonomous aviation and aircraft design. ■



Addressing **Urgent Needs**

The historical home of the Faculty of Aerospace Engineering — the very first building to be erected on the Technion's main Mt. Carmel campus more than 70 years ago — has been designated for preservation due to its historical importance and unique architectural features. Nevertheless, the building now fails to meet safety standards and spatial dimensions as required by the City of Haifa's municipal building code. Additionally, the facilities within the building are now considered obsolete and insufficient in meeting the scientific expectations of the Faculty and its students as the Faculty continues to grow and advance research in aerospace engineering.



Rendering of the new Stephen and Nancy Grand Aerospace Building

The Technion plans to construct a new Aerospace Engineering building alongside the original structure, featuring a substantial increase in available space for classrooms, laboratories, and offices. Designed to inspire Israel's future generations of aerospace engineers and researchers, the planned 40,690 ft² (3,780 m²) facility will offer state-of-the-art teaching and research environments – comparable to those found in the world's elite technological universities.

The future home of the Faculty of Aerospace Engineering will feature expanded, modernized facilities, including laboratories outfitted with the instrumentation necessary to enhance the development of Israeli security technology, as well as with teaching facilities equipped to meet 21st century standards in STEM education.

Simultaneously, the Technion has implemented an ambitious strategic development plan to expand the Faculty of Aerospace Engineering from 23 to 32 faculty members.



Architect's rendering of the new Stephen and Nancy Grand Aerospace Building



Architect's rendering of the new building's interior

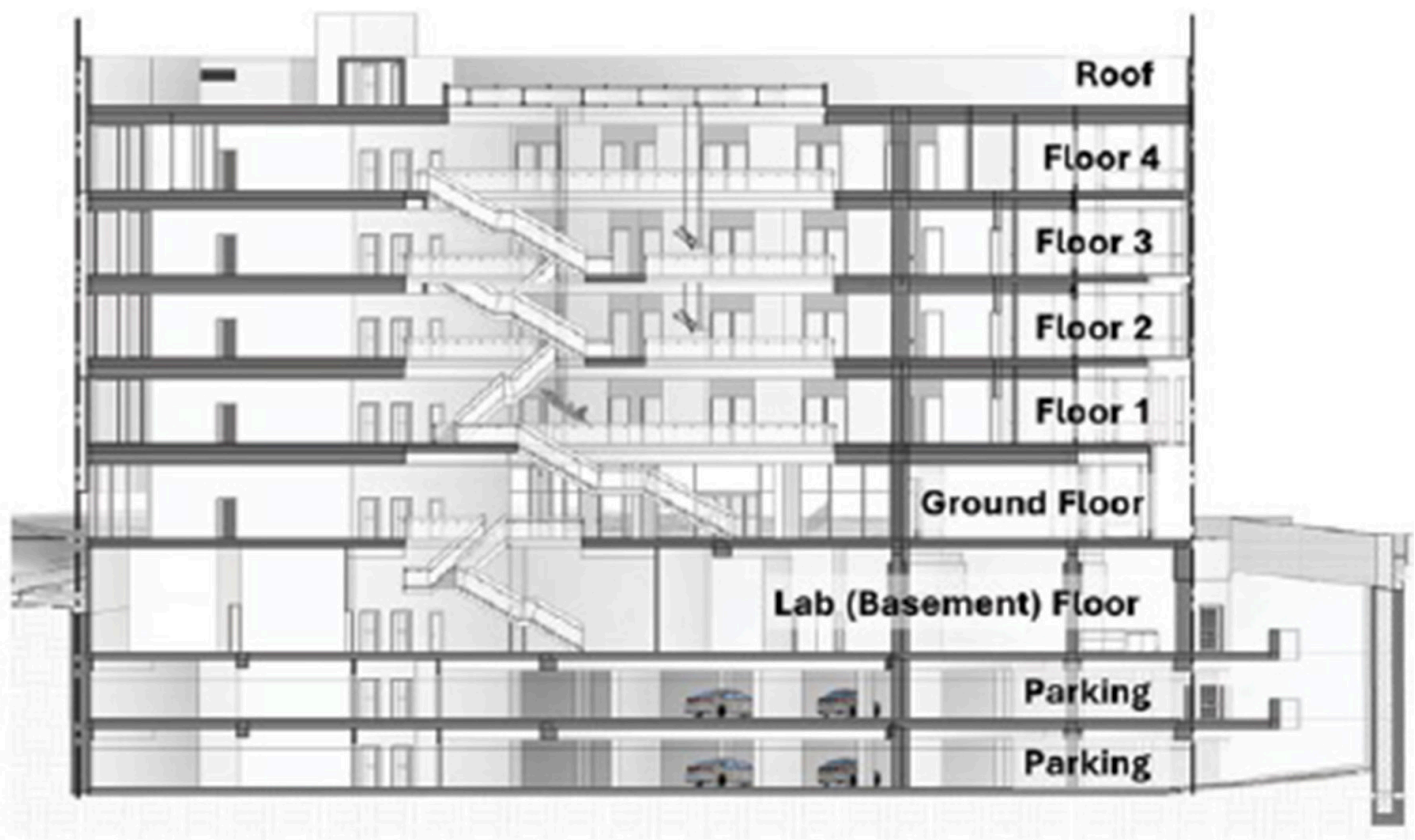
With this growth, the Technion anticipates undergraduate enrollment will increase from approximately 350 students to 400 students, a 14% increase, and graduate enrollment will increase approximately 150 students to 200 students, a 33% increase, in the next several years.

The rise in the number of undergraduate students is being driven by growing interest in five emerging application areas:

- 1) autonomous aviation and future aircraft design;
- 2) microsatellites and nanosatellites;
- 3) high-speed, and in particular hypersonic, air vehicles;
- 4) underwater vehicles and platforms; and
- 5) renewable and high-efficiency energy systems. ■

Funding Opportunities

The Technion seeks dedicated partners to help build a worthy home for the Faculty of Aerospace Engineering. The following individual facilities within the building are available for naming:



Cross-section of the new Stephen and Nancy Grand Aerospace Building

Floor	Description	Cost (CAD)
Lower Ground Floor	Naming Lower Ground Floor (HOLD)	3,200,000
	Lower Lobby	1,200,000
	Large, Multidisciplinary Research Labs (3)	1,100,000
	Standard Research Labs (3)	800,000
Ground Floor	Naming Ground Floor	3,200,000
	Lobby	1,600,000
	Large Classroom	640,000
Floor 1	Small Auditorium	675,000
	Teaching Labs (3)	400,000
	Multipurpose Room	400,000
	Balcony	SOLD
	Meeting Room/Bomb Shelter	SOLD
	Graduate Student/Research Staff Offices (6)	40,000
Floor 2	Naming Floor 2	3,200,000
	Learning Center for Undergraduates Dining Area and Kitchenette	875,000
	Graduate Student Study Area (ON HOLD)	475,000
	Multipurpose Meeting/Teaching Room	475,000
	Group Study Rooms (2 - Undergrad and Grad)	240,000
	Undergraduate Silent Study Room	160,000



Floor	Description	Cost (CAD)
Floor 2	Excellence Program Study Room	120,000
	Music Room	80,000
	Graduate Silent Study Room (4)	39,000
Floor 3	Naming Floor 3	3,200,000
	Admin Office	360,000
	Dean's Office	240,000
	Lounge	240,000
	Meeting Room/Bomb Shelter Faculty Floor	260,000
	Balcony	40,000
	Faculty and Research Staff Offices (20)	40,000
Floor 4	Faculty Lounge	320,000
	Meeting Room/Bomb Shelter	160,000
	Faculty Offices (25)	40,000

The Aerospace Capital Fund will allow the Technion to provide direct support to the general capital or maintenance needs of the Stephen and Nancy Grand Aerospace Building. Gifts equivalent of USD\$100,000 and above are welcomed to support this fund. ■

Donor Recognition

The highest form of donor recognition bestowed by the Technion is inclusion in the President's Circle. This extraordinary honor is awarded by the University to its most devoted friends upon reaching the milestone of the equivalent of USD\$10 million in support. Donors who provide the equivalent of USD\$1 million in support and above are bestowed the title of Technion Guardian and are honored by physical and digital plaques situated in a most prominent central campus location.

Gifts starting at the equivalent of USD\$100K will be listed in the President's Report, the official annual report of the Technion. Gifts are listed in one printed version of the Report and then in perpetuity in the online version; listings appear when gifts reach 50% completion.

Donors to the Aerospace Capital Fund will receive an annual report containing updates



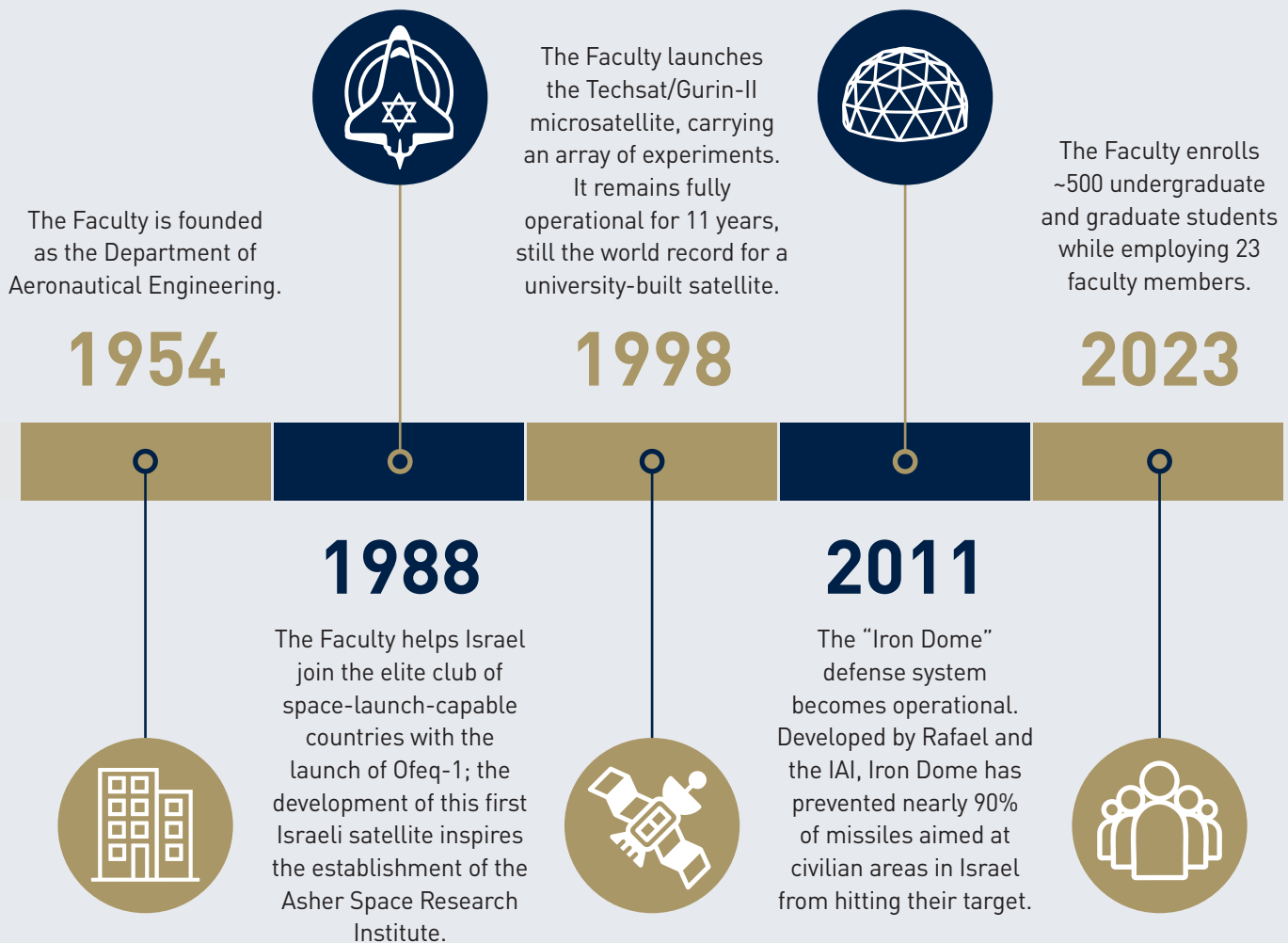
on construction plans, research, faculty, and students. Donors will also have their name included on a physical master plaque to be mounted at an appropriate location in the plaza in front of the Aerospace Building or in the lobby.

Donors who bestow specific aerospace capital naming gifts will receive an annual report containing updates on construction plans, research, faculty, and students. Their names will also be included on a physical plaque located in the specific facility they are supporting. ■



Selected Timeline Highlights –

Faculty of Aerospace Engineering





Thank You

The Technion reserves its most profound level of gratitude for those who support the construction of new buildings and facilities on campus. These gifts, which literally reshape the face of the University, are among the most enduring that can be bestowed by any donor. A new building or facility will serve for many decades as a symbol of the devotion of its benefactor to the Technion and Israel. The Stephen and Nancy Grand Aerospace Building will long serve as an extraordinary testament to the unique relationship between the donor and the Technion — one that will be enjoyed by generations of students and faculty — now that the University has commenced its second century of operation.



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