



ITALY-ISRAEL WORKSHOP ON NANOSATELLITE TECHNOLOGIES

April 9-10, 2018, ASI - Rome, Italy

Call for Participation

Nanosatellites and related technologies have been gaining increasing interest in the space sector, due to the numerous possibilities they convey to space missions. Building on the active collaboration between Italy and Israel in the space field, a joint 2-day workshop will be held in Rome, which will accentuate the strengths and experience of each country in nanosatellite research and development. The workshop will be held under the sponsorship of the Italian Space Agency (ASI) and Israeli Space Agency (ISA).

During the first day of the workshop, participants from each side will present research activities relevant to nanosatellite technologies. Such activities include, but are not limited to, the following topics:

1. New attitude control devices
2. Astrodynamics and orbit control
3. New mission concepts
4. Miniaturized electric propulsion systems
5. Cluster flight and formation flying
6. Subsystem design
7. Inter-satellite communication
8. Imaging, optics and remote sensing
9. Novel materials, additive layer manufacturing and 3D printing
10. On board computers, sensors, and timing devices
11. New applications and services produced by Nano satellites
12. Augmentation of large satellite systems performances due to Nano satellites

The second day will be devoted to round-table discussions, with the purpose of encouraging Israeli and Italian research institutions to develop academic relationship and to carry out joint research projects.

Prospective participants are requested to prepare presentation proposals in the form of short abstracts, which will be mailed to the following contacts:

Italian participants: Mr Roberto Formaro roberto.formaro@asi.it and Prof. Paolo Gaudenzi paolo.gaudenzi@uniroma1.it

Israeli participants: Prof. Pini Gurfil, pgurfil@technion.ac.il

Israel- Italy Nanosatellite Workshop, Rome 9-10 April 2018, ASI premises

(Under the patronage of Italian Space Agency ASI and Israel Space Agency ISA)

Academic organizing institutions: Technion and Università di Roma La Sapienza

Motivations and contents of the workshop

The workshop aims at strengthening the cooperation between Italy and Israel in the space sector by approaching the opportunities offered by small and Nano satellite systems. Space systems based on small and Nano platforms, especially if considered in the frame of constellations and formations, are considered very promising from the perspective of enhanced performance of space systems both for scientific missions and for applications. Issues as standardization, new concept of operations, advanced and cooperative flight control systems, miniaturization, additive manufacturing, launching opportunities and ground segment terminals are topics that are under investigation in both countries and can offer innovative solutions to the entire space sector .

In the workshop the policies by both National space agencies will be illustrated and the major programs in development in the Universities and Research centers will be presented, along with major developments and programs developed by Italian and Israeli companies. One of the aims of the workshop is to pave the line towards a cooperative program in small/Nano satellites.

1st day Monday 9 of April

9.00: Registration

9.20: **Inaugural session**

9.20: Address by ASI top management

9.40: Address by ISA top management

10.00: Keynote by Prof. Pini Gurfil (Technion)

10.20: Keynote by Prof. Paolo Gaudenzi (Sapienza)

10.40: Coffee break

11.00: first Working session - The contribution by Space Agencies and Space Industry

11.00: The Italian small satellite programs, ASI

11.20: The Israel small/nanosat program, ISA

11.40: The view on small/Nano satellites by industry, the Italian viewpoint, Italian space company (one contribution from Thales Alenia Space Italia and one from a small company)

12.20: The view on small/Nano satellites by industry, the Israeli viewpoint, Israel Space company (two contributions)

13.00: Launching opportunities, the Vega option for small/nanosat, ELV

13.20: Lunch

14.30: Second Working session - The contribution by Universities and research centers

Contributions by major Universities and Research centers (among others: CNR, INAF, INGV, ... , Politecnico di Torino, Technion, Università di Roma La Sapienza (Dipartimento di Ingegneria Meccanica e Aerospaziale), Università di Roma La Sapienza (Scuola di Ingegneria Aerospaziale), Università di Napoli Federico II, Università di Bologna, ...)

17.30: Round table with participants about possible joint cooperation and initiatives

18.15: Closing of the first day

20.30: Social dinner in Rome

2nd day Tuesday 10 of April

9.20 : Third working session - New application and services based on small satellites, standardization, integration with programs based on large systems

Industrial or institutional contributions

Italian companies: Thales Alenia Space, telespazio, Leonardo, Sitael, ...

Israel companies:

9.20: New missions based on constellations of small sat, the international scenario

9.40: Ground terminals and receivers

10.00: Augmentation of existing services from large satellites systems

10.20: Integration with ESA or EU programs

10.40: New small sat/Nano sat standards

11.00: Coffee break

11.20: fourth Working session - Promoting cooperation (working session on possible joint program on small/Nano sat), possible intervention by Foreign Affairs Ministries and other public and private institutions or sponsors)

12.20: Concluding remarks by organizers

13.00: End of the workshop