

F'SATI is a research and training center mainly designed for Master and Doctorate students. The graduate school aims to boost skills in critical fields of technology and support research geared towards addressing industry-related problems.

OVERVIEW

WHAT F'SATI OFFERS TO...

Students

- » MTech Degree from TUT or CPUT and MSc degree from the ESIEE
- » DTech or PhD with opportunities of co-tutelle and bursaries offers
- » Involvement in international exchange programmes

Universities

- » Strengthening of the scientific and research excellence
- » Upliftment of academic staff qualifications
- » Enhancement of attractiveness with an original training offer

Companies

- » Access to cutting-edge and innovative technologies
- » International network of academia, institutions and industries
- » Collaboration with highly skilled and specialized experts

The French South African Institute of Technology is the result of a partnership between the Paris Ile-de-France Chamber of Commerce and Industry, its Engineering School (ESIEE Paris), the Tshwane University of Technology (TUT), the Cape Peninsula University of Technology (CPUT) and the Université de Paris-Est Créteil (UPEC).

Courses and research projects take place in the two F'SATI nodes:

- TUT which focuses on the Enabled Environment and Assistance to the Handicapped, Telecommunications, Energy and Industrial Power Systems;
- CPUT which specializes in Space Technologies, Satellite Engineering and embedded electronics.

Strongly supported by the French Ministry of Foreign Affairs (MAE), the Department of Science and Technology (DST) and the National Research Foundation (NRF), the institute has become a leading center in human capacity development and scientific innovation.

STAKEHOLDERS



AIMS

- Train up skilled manpower in Electrical Engineering
- Focus on innovation and development in the industry
- Expand partnerships between South African and French Institutions
- Develop the host institutions' research capacities

KEY FIGURES

8 start-ups created since the F'SATI launch in **1998**,

7 of them acquired by major companies.

2 patents, **45** peer-reviewed journal papers and **4** books in **2013**

44 doctoral and **120** master students in **2013**

Satellite Engineering

This programme covers the broad fields of embedded electronics, power systems and satellite communications. The CPUT node resides within the Department Electrical, Electronic and Computer Engineering, and hosts the Research Chair "Innovative Small Satellite Technology and Applications for Africa".

Major achievements

ZACUBE-1, Africa's first nano-satellite, was developed by F'SATI students and staff and launched from Russia in November 2013. The event was largely covered by the media. F'SATI is also commercializing satellite communication subsystems, distributed by the Clyde Space scottish company on the international market.



ZACUBE-1 Satellite



Enabled environment & Assistance to Handicap

This area covers the control and enabling technologies needed to assist persons in handicap situations, such as a wheelchair virtual reality platform or assistive devices. In order to run these projects, TUT is working closely with the UPEC and the Université de Versailles-Saint-Quentin-en-Yvelines (UVSQ).



Telecommunications

The focus of the research niche is the design and control of wireless ad hoc networks, and the optimisation of the power consumption in wireless sensor networks. Strong partnerships have been established with the UVSQ, the UPEC, CNAM-Paris, Wits University and the University of Johannesburg.



Energy & power systems

The ambition of this programme is to generate new ideas and technological innovations in Power Engineering, Energy and Industrial Systems. The niche area is geared towards issues such as Power Electronics and Distribution Systems, Electric Motors and Drives, Renewable Energies or Coal technology.



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