

The UN/Italy Fellowship Program for the "Master on Navigation and Related Applications" of Politecnico di Torino and ISMB

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**Chair of the
Navigation Signal Analysis and Simulation Group**



Outline

1 – Involved Entities

2 – Overview of the Master Programme

3 – Details on the UN/Italy Fellowship Programme

4 – Other Educational Projects Related to GNSS

5 – The Research Environment

6 – Conclusion and Future Work

The Players

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Master On Navigation and Related Applications

A joint initiative of ISMB and Politecnico di Torino



III Faculty
School of Information
Technologies

with the support of



United Nations
Office for Outer
Space Affairs



Torino Wireless
Foundation

NavSAS Group

Politecnico di Torino and ISMB



- Politecnico di Torino is one of the leading academic institutions in Italy and Europe in the field of technical-scientific training in Engineering and Architecture
- It promotes the ability to carry out theoretical and applied research, and also the capacity to achieve concrete and reliable productive processes or organize services and facilities



- ISMB is a private research centre organized in different laboratories, where ISMB and Politecnico researchers, research assistants and PhD students jointly cooperate
- The ISMB mission is to foster research and higher education, aiming at building an international centre of excellence in the ICT sector, focused particularly on wireless tech

IEN and TOW



- Istituto Elettrotecnico Nazionale Galileo Ferraris is a public research institution operating under the responsibility of the Ministry for Education, University and Research (MIUR)
- IEN performs fundamental and applied research activities on both **metrology** and **innovative materials and devices**



- Supports the **development** of **Torino ICT technological cluster** through synergy of R&D, entrepreneurship and finance resources
- Objective: Region **ICT GDP** from **5%** to **10%** in 10 years

Training on GNSS

1 – Involved Entities

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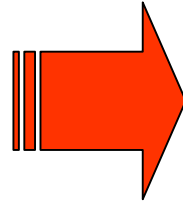
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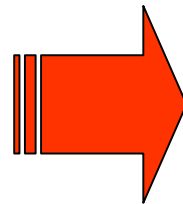
Master On Navigation and Related Applications

The Challenge



To create a technological background on GNSS in both developed and developing countries able to take advantage of the benefits inherent the navigation and positioning applications

Curriculum Guidelines



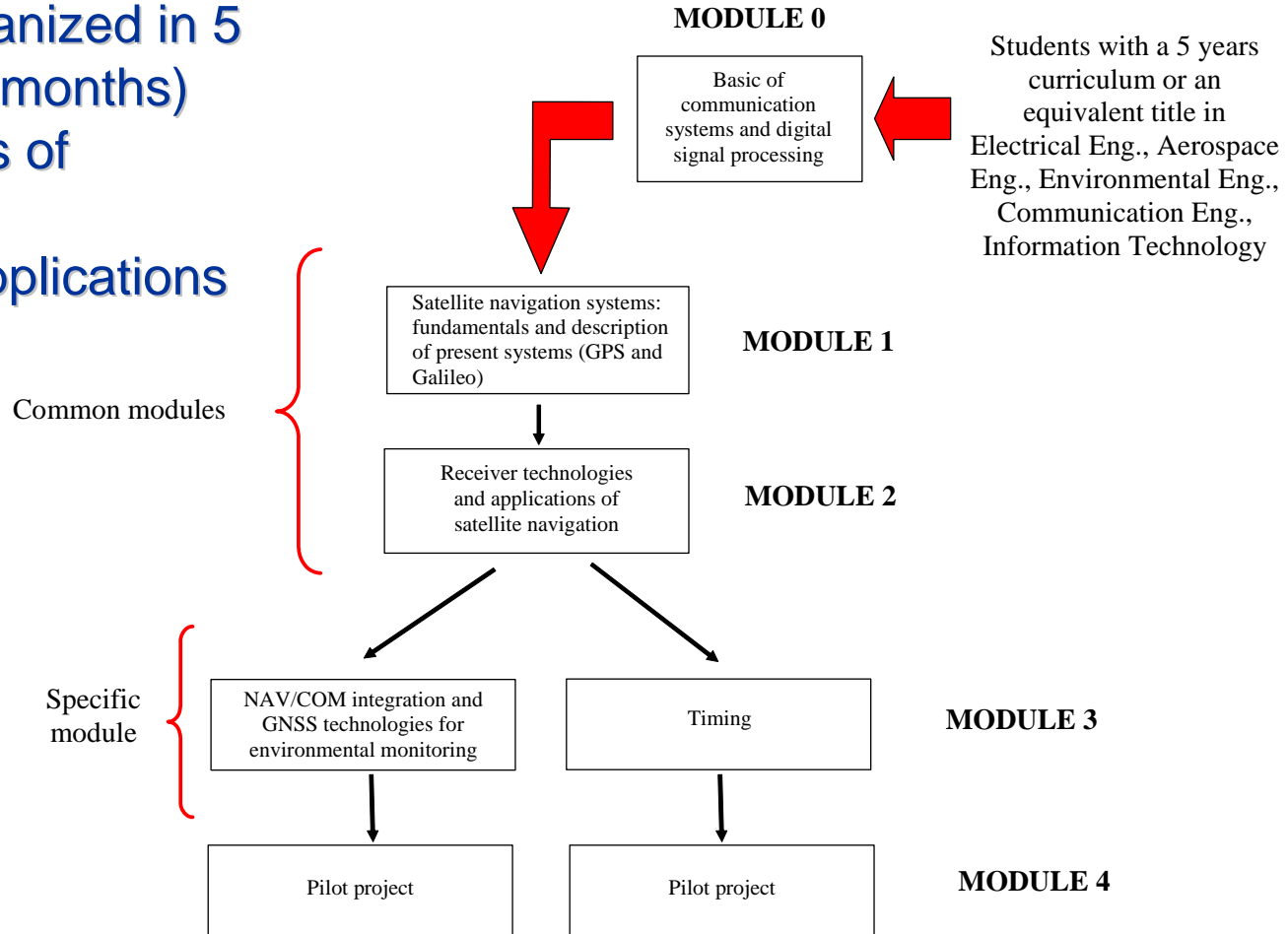
- develop a strong technical background
- ease the synergies among worldwide experts in the field of navigation (stimulating the creation of joint programs)
- develop the new generation of innovative added-value services and new SME initiatives

Master Organization

The Master is organized in 5 modules (over 12 months) covering the areas of systems technical description and applications development

The overall program includes 80 Educational European Credits (ECTS)

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Pilot Project

Students will spend 4 months (internship) in a research lab or a company operating in the field of navigation with the goal to develop a specific pilot project

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Students Selection

- The Master will start in **January the 17th, 2005**
- More than 60 applications have been received. The application is now closed.
- **19 grants available** from private and public sectors
- **Grants available** (tuition and/or additional support)
 - **Torino Wireless Foundation** (for UN students) (5)
 - **UN-OOSA** travel expenses (5), see next slides
 - **ALPIP Project** (3), through the III Faculty of Politecnico di Torino
 - **ASIAN Project** (4), through the III Faculty of Politecnico di Torino
 - **Comitato Promotore Galileo Torino** (3)
 - **Other from private companies** (4)

Selected Students

Students from **13 different countries** will be trained on GNSS

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Country	Project	Students
Pakistan	UN	1
Iran	UN	1
Sri Lanka	UN	1
Giordania	UN	1
Bangladesh	UN	1

Country	Project	Students
Italy	Other	7
Albania	Other	1

Country	Project	Students
Argentina	ALPIP	1
TBD	ALPIP	1
TBD	ALPIP	1

Country	Project	Students
Indonesia	ASIAN	2
Vietnam	ASIAN	1
Kenya	ASIAN	1

Fellowship Details

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Fellowship Details

“Istituto Superiore Mario Boella (ISMB) and Politecnico di Torino of Italy have established a Long Term Fellowship Programme which will provide scientists and specialists from developing countries with an opportunity to receive a Master Degree in Navigation and Related Applications.”

United Nations Vienna, June 2004

The fellowship is configured as the possibility for student selected by United Nations to attend the Master on Navigation and Related Applications

Fellowship Details

The agreement among Politecnico di Torino, ISMB and UN-OOSA covers the following aspects:

Contribution to the Master Curriculum definition

Financial Support

Master Organization

Master Promotion

Student Selection

Fellowship Details

Contribution to the Master Curriculum definition

The program of the courses has been prepared by the Master Scientific Committee and discussed with the UN-OOSA representatives

Master Promotion

The Master and the Fellowship initiatives have been promoted through the UN web site, the Politecnico web site and the ISMB web site. Leaflets have been distributed at many international events

Student Selection

For the first edition the fellowship has been offered to 5 students selected by UN-OOSA following the UN guidelines

Fellowship Details

Financial support

The first edition of the fellowship has been offered to 5 students that will receive complete financial support in the form of both tuition and general expenses for a total amount of € 16000 per each student. The Torino Wireless Foundation is covering all these expenses. UN-OOSA covers the travel expenses

Master organization

Politecnico di Torino is in charge of the Master organization, including support to students (e.g. housing, Italian class, access to university facilities)

Training Initiatives

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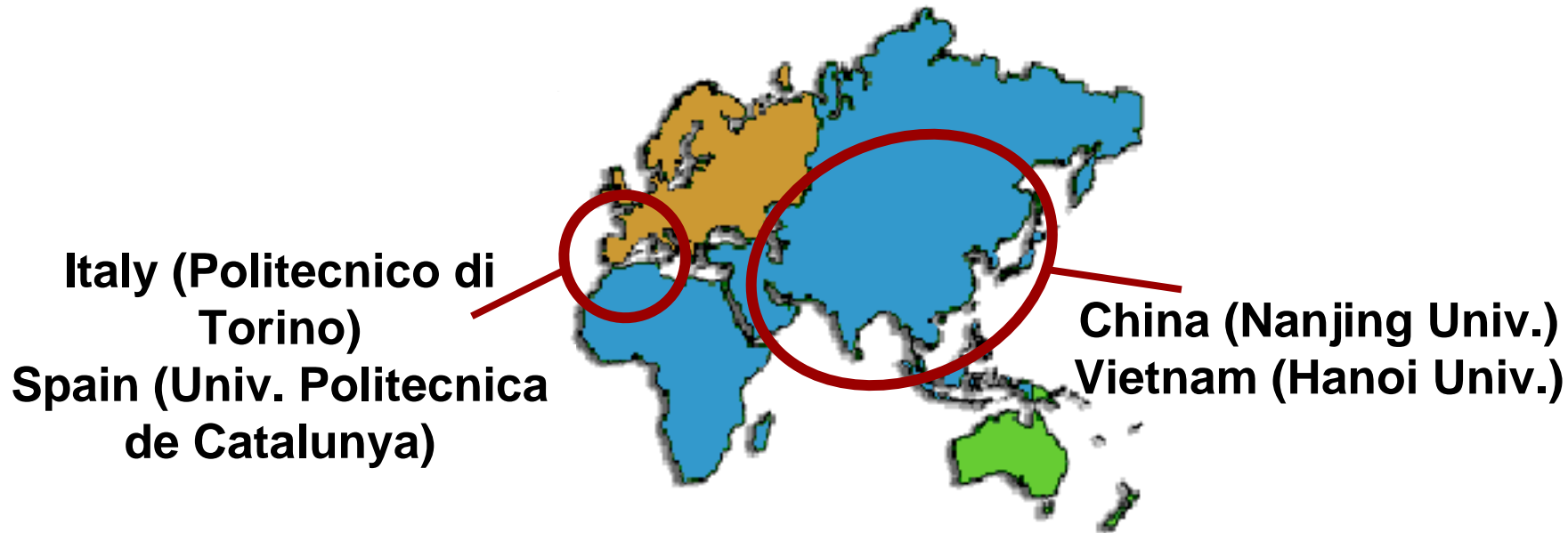
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JEAGAL project (2005-2007) - EC funded

EU-Asia Information Technology & Communication Programme

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A Galileo 'train-the-trainer' program for China and Vietnam

Research Initiatives

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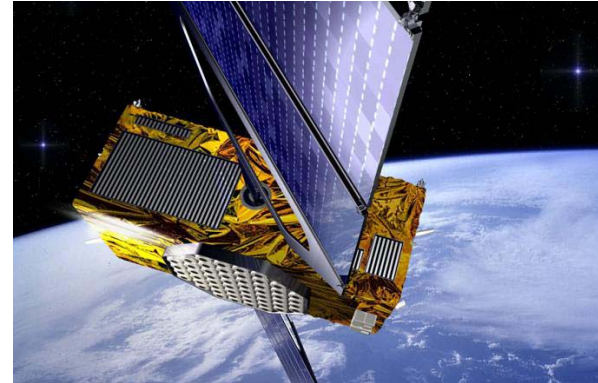
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NavSAS: Politecnico - ISMB Joint Group

Navigation Signal Analysis and Simulation



NavSAS researchers operate in the
Navigation Lab at ISMB

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NavSAS Lab

- The Lab has been created with the goal to support **current and future R&D activities related to Galileo and GPSIII**
- **12 researchers** are working in the Lab
- The Lab is now a reference point for companies and SME operating in GNSS: CRF, Telecom Italia, Alenia Spazio, ST Microelectronics, etc



- Participation to committee and working groups (**Galileo Signal Task Force**)

Conclusions

- Educational programs in the Galileo area
 - Master
 - UN/Italy fellowship program
 - grants available for private and public sectors
 - JEAGAL project (EC funded)
- Research activities in the Galileo area

Contact information

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Visit the following web sites for additional information

<http://www.navsas.polito.it>

<http://www.didattica.polito.it/master/III>

<http://www.ismb.it>

