Short C.V. of the teacher Maurizio Di Ruscio

STUDIES

- Laurea (Master) in Electronic Engineering - Laurea (Ph.D.) in Aerospace Engineering ACADEMIC POSITION

- Full Professor at the Aerospace Engineering School of the Sapienza-University of Rome.

TEACHING ACTIVITY

He has been teaching two courses:

- “Aerospace Telemetry Systems“ at the Aerospace Engineering School of the Sapienza University of Rome

- “Ground Stations” at the Faculty of Engineering of the Sapienza-University of Rome.

RESEARCH AND APPLICATION ACTIVITIES

Responsible for the activities of the San Marco Project Research Center (CRPSM) in supporting space missions of ESA, ESOC, ASI, CNES, NASA, ESRIN, performed by the ground stations (TT&C e Remote Sensing) located at the Broglio Space Center (BSC) in Malindi (Kenya).

He supervised the configuration of the ground equipment in order to match the qualification requirements necessary to carry out the operational support to the flights of vehicles such as Delta II, Delta IV, Titan, Athena, Ariane4, Ariane5, Soyuz,Vega, more frequently exploited by the international space agencies.

He is involved in research areas which are dealing with theoretical and application developments of components and equipment used in the space systems either in the on-board units or in the ground segments.

MANAGERIAL DUTIES

As CRPSM Technical Director, he has taken over the responsibilities of the ground systems engineering design, electronic equipment procurements , operations coordination relevant to several international cooperative programs and space-based data acquisitions.

He has undertaken the responsibility of the Malindi CRPSM ground stations operations to support the ESA/ESOC missions during the LEO phases and to acquire the ESA/ESRIN remote sensing satellites science data.

He has been member of the Steering Committee for managing the Italy/Kenya Intergovernmental Agreement as representative of the Sapienza- University of Rome.

For several months, he has performed the task, entrusted by the Italian Space Agency to the CRPSM, to coordinate the Malindi Station operations related to the AGILE and SWIFT orbiting scientific satellites. He directed all the Malindi ground station activities, which were carried out for the Japanese USERS recovery project as well as for the pre-launch, launch, early orbit activities requested by Chinese SZ-5 and SZ-6 programs.

PAST EXPERIENCE

He has been responsible for:

- The design, the manufacture and test of the radiofrequency subsystems mounted on the San Marco C, San Marco C2, San Marco D/L spacecraft.

- The design, the manufacture and test of the command decoders of the San Marco C, San Marco C2, san Marco D/L.

- The design, the manufacture and test of the on board telemetry of the San Marco D/L spacecraft.

- The design, the manufacture and test of the power system of the San Marco D/L spacecraft.

- The realization of the spin and attitude control systems of the San Marco D/L spacecraft.

- The design and the realization of the electronics of the of the “Broglio Drag Balance” experiment flown on San Marco D/L spacecraft.

- The San Marco D/L integration and electronics tests for flight qualification.

- The orbital operations of the San Marco D/L mission from the San Marco VHF Ground station located in Kenya.

- The realization of the data link between BSC and the CRPSM site in Rome.

SOME PUBLICATIONS

M. Di Ruscio "The Command and Telemetry Systems of the San Marco D/L Spacecraft "Proc. IEEE 1983 National Aerospace and Electronics Conference, Dayton Ohio, May 1983.

M. Di Ruscio, J. Maurer "Telemetry and Command Data Processing System University of Michigan / Space Physics Research Lab 84130, Contract NAS 25031, April 1984.

M. Di Ruscio, J. Maurer "Telemetry and Data Handling "University of Michigan/ Space Physics Research Lab 84130, Contract NAS 5-25031, April 1984

M. Di Ruscio, J. Day Jr.,A. Agneni "San Marco D/L Solar Array System Design and Performance " NASA Technical Memorandum 86125 ,Greenbelt Md. June 1984.

L. Broglio,C. Arduini ,U. Ponzi, M. Di Ruscio "San Marco 5 Spacecraft Scientific Mission Objectives and Preliminary results " 40th IAF Congress 89-174 , Oct.1989.

M. Di Ruscio, N. Roberto, F. Longo “An Improved Prototype of a Portable Low Cost Ground System” XIX Congresso AIDAA, Sett. 2007.

M. Di Ruscio , N. Roberto , F. Longo “Study of a Telemetry Receiver for Space Applications” Proceedings ,Forum Tecnologico sulla Strumentazione Virtuale, NIDays 2006.

M. Di Ruscio , N. Roberto , F. Longo “An Experimental Low Cost Ground System for S-Band Malindi Station” XVII Congresso AIDAA, Sett 2005.

M. Di Ruscio , N. Roberto , F. Longo “A digital Processing Approach for Signal with high Frequency Components” XVII Congresso AIDAA, Sett 2005.