(CV) Jaume SANZ SUBIRANA

Dr. Jaume Sanz obtained his Degree in Physics in 1982 and his PhD in Physics in 1987, both from the University of Barcelona, Spain.

Since 1983 he works in the Department of Applied Mathematics IV in the Technical University of Catalonia (UPC), being Associate Professor from 1987.

His research activities are being developed in the research group of Astronomy and Geomatics (gAGE/UPC), working firstly in Galactic Dynamics during the PhD and afterwards in Space Geodesy and Satellite Navigation. His current research interest is in the area of GPS data processing Algorithms, GPS ionospheric tomography, Satellite-Based Augmentation Systems (SBAS) and Precise Radio Navigation.

Born: July 16th 1960, in Puig-Reig, Barcelona (Spain).
Nationality: Spaniard.

Languages: Spanish, English, French, Catalan.

Education:

1982 Degree in Physics, University of Barcelona, Spain.

1987 PhD. in Physics, University of Barcelona, Spain.
Title: "Contribution to the Study of the Stellar Systems with Axial Symmetry".

Professional Experience:

1983-1987: Lecturer. Technical University of Catalonia (UPC).

1987 - : Associate Professor. Technical University of Catalonia (UPC).

Technical Experience:

Platforms: Workstations, PCs.

Oper. Sys.: UNIX, Windows.

Languages: FORTRAN, C, C-shell, perl, awk.

Packages: Matlab (octave), Maple, Mathematica, …

Five Selected Papers:

AUTORS: HERNANDEZ-PAJARES M., J.M. JUAN, J. SANZ
TITLE: MEDIUM SCALE TRAVELING DISTURBANCES AFFECTING GPS MEASUREMENTS: SPATIAL AND TEMPORAL ANALYSIS.
REF.: JOURNAL OF GEOPHYSICAL RESEARCH, 111, A07S11, doi:10.1029/2005JA011474, 2006.

AUTORS: HERNANDEZ-PAJARES M., J.M. JUAN, J. SANZ, R. FARNWORTH, S. SOLEY
TITLE: EGNOS TEST BED IONOSPHERIC CORRECTIONS UNDER THE OCTOBER AND NOVEMBER 2003 STORMS
REF.: IEEE TRANSACTION GEOSCIENCE AND REMOTE SENSING. 2005, 43(10), P.2283-2293.

AUTORS: GARCIA-FERNANDEZ M., HERNANDEZ-PAJARES M., J.M. JUAN, J. SANZ
TITLE: IMPROVEMENT OF IONOSPHERIC ELECTRON DENSITY ESTIMATION WITH GPSMET OCCULTATIONS USING ABEL INVERSION AND VTEC INFORMATION
REF.: JOURNAL OF GEOPHYSICAL RESEARCH, 108: 1338-1344, 2003

AUTORS: HERNANDEZ PAJARES, MANUEL; JUAN ZORNOZA, JOSE MIGUEL; SANZ SUBIRANA, JAIME
TITLE: IMPROVING THE REAL-TIME IONOSPHERIC DETERMINATION FROM GPS SITES AT VERY LONG DISTANCES OVER THE EQUATOR
REF.: JOURNAL OF GEOPHYSICAL RESEARCH, 107 (A10), 1296, 2002

AUTORS: HERNANDEZ-PAJARES M., J.M. JUAN, J. SANZ, O. COLOMBO, AND H. VAN DER MAREL
TITLE: A NEW STRATEGY FOR REAL-TIME INTEGRATED WATER VAPOR DETERMINATION IN WADGPS NETWORKS
REF.: GEOPHYSICAL RESEARCH LETTERS, 28 : 3267-3270 , 2001

Some Selected Courses:

2001- 2005 GPS Data processing: Code and Phase. Institute of Geomatics, Barcelona, Spain

June 2005 Training Course on Galileo. Southeast University, Nanjing, China.

June 2005 EGNOS Tutorial. Southeast University, Nanjing, China.

July 2005 GPS Data processing. Hanoi University of Technology. Hanoy, Vietnam.

Additional Information:

In recent years, and in collaboration with his gAGE/UPC colleagues Dr. M. Hernández-Pajares and Dr. J.M. Juan, have developed and tested techniques for very long baseline kinematic GPS: Wide Area RTK algorithm for GPS (1999, in collaboration with Dr. O. Colombo from GSFC/NASA). These techniques have been extended to the GALILEO and GPS-III: the invention of instantaneous Wide Area RTK algorithms for three-frequency systems (2002, under ESA contract and international patent). In the context of SBAS systems, since 2001, together with his gAGE/UPC colleagues, he developed several scientific tools for analyzing the performance of the ESTB/EGNOS system, including a Global Monitoring System for EGNOS under Eurocontrol contract.

Presently, he has been the Principal Investigator of more than 10 national and international scientific projects. He has publishing more than 30 papers in peer reviewed journals and more than 100 papers in meeting proceedings, and he has three best paper awards from the US Institute of Navigation. He is co-authoring four patents and two GPS processing books. He is reviewer of several international journals in the field and he has been invited to participate in several international meetings.

He is member of the International Astronomical Union (IAU) since 1991, the European Geophysical Society (EGS) since 1995 and the Institute of Navigation (ION) since 1999. He belongs to several international working groups related with GNSS.