CVITAE ALBERTO GARCÍA RIGO

Date of birth	25 June, 1981	**Nationality**	Spanish
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Languages: Spanish (native), Catalan (native), English (fluent), German (reasonable)

Academic Background

Ph.D. studies in Aerospace Science and Technology at the group of Astronomy and GEomatics of the Technical University of Catalonia UPC (gAGE/UPC), granted by the Spanish Ministry of Education and Science (FPI), from 2005.

Engineer of Telecommunications, Technical University of Catalonia UPC (1999-2005).

PhD thesis topics

Prediction of IGS Global Ionospheric Maps

Detection of solar flares by monitoring ionospheric Total Electron Content (TEC) using GPS

R+D Projects

“GNSS Contribution to Next Generation Global Ionospheric Monitoring” (AGIM), funded by ESA-ESOC, March 2009 – January 2010.

“Very precise GNSS navigation over the Iberian Peninsula by using the 'Wide Area Real-Time Kinematics' technique” (IBER-WARTK), funded by the Spanish Ministry of Science, October 2007 – September 2010.

“WARTK based on EGNOS and GALILEO: Technical Feasibility Study” (WARTK-EGAL), funded by GALILEO-JU / GSA, coordinated by gAGE/UPC, October 2005 – November 2006.

“Real Time Ionospheric Corrections for the GPS network CATNET”, funded by Institut Cartogràfic de Catalunya, 2005.

Research stages

University of Warmia and Mazury (UWM), in Dr. Andrzej Krankowski research group,

Olsztyn, Poland. Topic: Prediction of GIMs. Two months visit from February 2009 to March 2009.

Journals

Hernández-Pajares M., J.M. Juan, J. Sanz, R. Orus, A. Garcia-Rigo, J. Feltens, A. Komjathy, S.C. Schaer, and A. Krankowski (2009): The IGS VTEC maps: a reliable source of ionospheric information since 1998, Special IGS Issue of Journal of Geodesy, 83(3-4), 263-275, doi:10.1007/s00190-008-0266-1

García-Rigo, A., M. Hernández-Pajares, J.M. Juan Zornoza, and J. Sanz. "Solar flare detection system based on Global Positioning System data. First results". Advances in Space Research. 39 (5): 889-895. ISSN: 0273-1177. 2006.

Proceedings

García-Rigo, A., M. Hernandez-Pajares, J.M. Juan, and J. Sanz. "Solar flare detection system using Global Positioning System data". 7th Geomatic Week, February 2007, Barcelona, Spain.

Presentations/Meetings

García-Rigo, A., M. Hernández-Pajares, E. Monte, J.M. Juan, J. Sanz, A. Krankowski, and P. Wielgosz. "Assessment of UPC model for ionosphere VTEC prediction" (Poster). Geodesy for Planet Earth (IAG), August-September 2009, Buenos Aires, Argentina.

García-Rigo, A., E. Monte, M. Hernández-Pajares, J.M. Juan, J. Sanz, A. Krankowski and P. Wielgosz. "Prediction of Global Ionospheric TEC maps: First results on a UPC forecast product" (Poster). European General Assembly (EGU), April 2009, Vienna, Austria.

García-Rigo, A., M. Hernández-Pajares, J.M. Juan and J. Sanz. "Real Time Ionospheric TEC monitoring method applied to detect Solar Flares" (Poster). European General Assembly (EGU), April 2008, Vienna, Austria.

García-Rigo, A., M. Hernandez-Pajares, J. M. Juan, and J. Sanz. "Solar Flare detection system applied to the X65 flare on 6th December, 2006" (Poster). Beacon Satellite Symposium, June 2007, Boston, USA.

García-Rigo, A., M. Hernandez-Pajares, J.M. Juan, and J. Sanz. "Solar flare detection system using Global Positioning System data." (Oral presentation). 7th Geomatic Week February 2007, Barcelona, Spain.

Reports

A. Krankowski, Hernandez-Pajares, M., García-Rigo, A., Bilitza, D., Langley, R.B., Wielgosz, P. “IGS Ionosphere Working Group Report”. 35th IGS Governing Board Meeting December 13, 2009 in San Francisco

García-Rigo, A., M. Hernández-Pajares, J.M. Juan, J. Sanz. “IGS iono-WG: IGS ionospheric combination transfer to UWM”, 2008.

Hernández-Pajares, M., J.M. Juan, J. Sanz and A. García-Rigo. “Development of a GBAS ground station prototype”, 2008.

Hernández-Pajares, M., J.M. Juan, J. Sanz, A. Aragón-Angel, P. Ramos-Bosch and A. García-Rigo. “EGNOS integrity analysis using the Stanford-ESA & gAGE/UPC derived techniques in the position domain”, 2007.

Hernández-Pajares, M., J.M. Juan , J. Sanz, A. García-Rigo et al. “WARTK based on EGNOS and Galileo: Technical Feasibility Study. FINAL REPORT”, 2006.

Hernández-Pajares, M., J.M. Juan, J. Sanz, and A. García-Rigo. “WP7000: Experiment using a first WARTK Test Bed”, 2006.

Hernández-Pajares, M., J.M. Juan, J. Sanz, and A. García-Rigo. “WP5000: Preliminary design of WARTK Service”, 2006.

Roldán, P., A. García-Rigo, M. Hernández-Pajares, J.M. Juan et al. “Ionospheric models, applications over CATNET. Installation manual”, 2005.

Roldán, P., A. García-Rigo, M. Hernández-Pajares, J.M. Juan et al. “Ionospheric models, applications over CATNET. User manual”, 2005.

Codirection of Master thesis

Valls-Moreno, A. “Wide Area Real Time Kinematic (WARTK): Usage of RTCM format, and real-time implementation” Master thesis at gAGE/UPC, codirected by Hernández-Pajares, M. and García-Rigo, A., February 2008.

Other activities

Generation of the UPC global forecast product, made available daily from 2009 in test mode.

Generation and evaluation of IGS ionospheric products from 2005.

Combination of IGS ionospheric products, from 2005 to 2008.

Implementation of an algorithm to gather real time GNSS streams from NTRIP casters and to distribute them internally to gAGE group.

Informatics

Operating Systems:

Linux, Unix and Microsoft Windows (user/administrator).

Programming languages:

C-shell, gawk, C, fortran, matlab and java.

Graphical tools: matlab, xtpanel, gnuplot and GMT.

Ofimatics: Microsoft Office, Openoffice and LaTeX.