



Verónica Santalla del Río

Current position:

Associate professor at Signal Theory and Communications Department, University of Vigo, Spain.

Education:

PhD in Signal Theory and Communications, University of Vigo, Spain.

October 1996 Thesis: Characterization, analysis and applications of polarimetric radar measurements.

Advisors: Prof. Y.M.M. Antar and Prof. A.G. Pino

September 1990 MSE in Telecommunications Engineering.

ETSI Telecomunicación. University of Vigo, Spain.

Research:

Polarimetric weather radar. Estimation of Doppler and polarimetric parameters. Polarimetric SAR. Polarimetric SAR interferometry. Statistical characterization of data.

Radiowave propagation modelling in natural environments.

Modelling of attenuation and scattering of microwaves in forest.

Cooperation and direction of over 20 research projects.

Teaching:

Undergraduate: Electromagnetic fields

Principles of waveguides, transmission lines and radiation.

Radiowave propagation

Introduction to radar systems

Graduate: Polarimetric techniques in remote sensing and radar.

Microwave remote sensing.

Coverage prediction for broadcasting systems.

More than 30 Master Thesis directed and experience in teaching undergraduate students since 1992

PhD. Thesis

Contribution to polarimetric weather radar design. 2015

José Manuel Pidre Mosquera

Microwave scattering of statistically described vegetation covers

Loreto Abalde Lima. 2016

Publications:

2015

R. Nocelo, V. Santalla del Río "Statistical Characterization of the Ground Clutter Variability from Dual-Polarization Radar Measurements" 2015 IEEE International Radar Conference. 11-15

mayo de 2015. Arlington, VA, USA

Full Polarimetric and Doppler Measurements with Poldirad: A Practical Application of the 3-PoID Method

V. Santalla del Rio, University of Vigo, Vigo, Spain; and J. Reimann, M. Hagen, J. Dios-Quiroga, and A. Martinez-Mera. 37th Conference on Radar Meteorology, 13-18 September 2015, Norman OK. USA

V. Santalla del Rio, L. Abalde-Lima, and C. G. Christodoulou,

Electromagnetic Scattering From Vegetation Cylindrical Components. IEEE Geoscience And Remote Sensing Letters, VOL. 12, NO. 4, APRIL 2015, pp. 751-755

2014

R. Nocelo-López, M. Vera-Isasa, V. Santalla del Río

A Performance Study of a Cylindrical Polarimetric Array Radar

EuCap 2014, The Hague, The Netherlands, 6-11 April 2014

R. Nocelo-López, V. Santalla del Río, A. Petazzi

Estimation of the Atmospheric Refractivity Using a C-Band Polarimetric Weather Radar

EuCap 2014, The Hague, The Netherlands, 6-11 April 2014

José Manuel Pidre Mosquera, María Vera Isasa, Verónica Santalla del Río. "Efecto en medidas radar 3-POL del diagrama de radiación contrapolar". Actas del XXIX Simposium Nacional de la URSI. Septiembre, 2014. Valencia. España.

R. Nocelo, V. Santalla del Río "Statistical Characterization of the Atmospheric Refractivity from Weather Radar Data" 8th European Conference on Radar in Meteorology and Hydrology, 1 - 5 September 2014, Garmisch-Partenkirchen, Germany

J.M Pidre Mosquera, M. Vera-Isasa, V. Santalla del Río. "Antenna pattern requirements for 3-Pol weather radar measurements" 8th European Conference on Radar in Meteorology and Hydrology, 1 - 5 September 2014, Garmisch-Partenkirchen, Germany

A. Martínez-Mera, V. Santalla del Río "Performance comparison of receiving filters/algorithms in weather radar" 8th European Conference on Radar in Meteorology and Hydrology, 1 - 5 September 2014, Garmisch-Partenkirchen, Germany

V. Santalla del Río, J.M. Pidre Mosquera, M. Vera Isasa

3-Pol Polarimetric Weather Measurements With Agile-Beam Phased-Array Radars

IEEE Transactions on Geoscience and Remote Sensing, Vol. 52, No. 9, September 2014, pp 5783-5789. **Digital Object Identifier:** [10.1109/TGRS.2013.2292639](https://doi.org/10.1109/TGRS.2013.2292639)

2013

J.M. Pidre Mosquera, María Vera Isasa, Verónica Santalla del Río. "Requisitos de contrapolar para radar meteorológico en modo 3-pol." Actas del XXIX Simposium Nacional de la URSI.

Septiembre, 2013. Santiago de Compostela. España.

V. Santalla del Rio, J.M. Pidre-Mosquera, M. Vera-Isasa

“The 3-POL Method Applied to Polarimetric Weather Measurements with Agile-Beam Phased Array Radars” 2013 IEEE International Symposium on Phased Array Systems and Technology

Waltham-Boston, Massachusetts, USA 15-18 October 2013

2012

V. Santalla del Rio, L. Abalde-Lima and C.G. Christodoulou. “Multiple Electromagnetic Scattering from two Finite Oriented Cylinders at Oblique Incidence” IGARSS 2012, Munich, July 2012

PREVIOUS

A. Elmezoughi, R. Abdelfattah, V. Santalla Del Rio, and Z. Belhadj

Optimal rain rate estimation algorithm for light and heavy rain using polarimetric measurements. Natural Hazards and Earth System Sciences, vol.11, n.11, pp. 3067-3079, 2011

I. Cuiñas, V. Santalla del Río, A. Vázquez Alejos, M. Vera Isasa, E. de Lorenzo Rodríguez, M. García Sánchez

Playing LEGO Mindstorms while Learning Remote Sensing. International Journal of Engineering Education Vol. 27, No. 3, pp. 1–9, 2011 ISSN: 0949-149X

M. E. de Lorenzo, M. Vera-Isasa, V. Santalla del Río. 3-D-Microwave Breast Tumor Detection: Study of System Performance. IEEE Transactions on Biomedical Engineering, Vol. 55, nº 12, pp:2772-2777, Dec.2008

M. Vera-Isasa, J.M. Pidre Mosquera, V. Santalla del Río, M.E. de Lorenzo. UWB Corner-slot antenna. Microwave and Optical Technology Letters, vol. 50, n.3, pp 663-665, March 2008.

V. Santalla del Río, Least squares estimation of Doppler and polarimetric parameters for weather targets. IEEE Trans. On Geos. And Rem. Sens. Vol. 45, n. 11, pp 3760-3772 Nov.

2007

V. Santalla, Y.M.M. Antar and X. Fabregas. Maximum likelihood estimation of specific differential phase and attenuation in rain. IEEE Trans. On Geos. And Rem. Sens. Vol. 41,n. 12, pp 2771-2782
Dic. 2003

V. Santalla and Y.M.M. Antar. A comparison between different polarimetric measurement schemes. IEEE Trans. On Geos. And Rem. Sens. Vol. 40, n. 5, pp 1007-1017.
May 2002.

M. Vera-Isasa, G. Pedreira, M.E. de Lorenzo, V. Santalla. Broadband patch antenna for E-band applications. Microwave and Optical Technology Letters. Vol. 29, n. 1
pp 40-42 Abril 2001

V. Santalla del Río, Y.M.M. Antar y A.G. Pino. Polarimetric radar covariance matrix algorithms

and applications to meteorological radar data. IEEE Trans. on Geoscience and Remote Sensing. Vol. 37, n. 2, pp 1128-1137 Marzo 1999.

V. Santalla del Río, G.C. McCormick, Y.M.M. Antar. Optimal polarizations and application to meteorological targets. IEEE Trans. on Ant. and Prop. Vol. 47, n. 4, pp 767-769 Abril 1999

[back](#)