



Part A. PERSONAL INFORMATION

CV date	01/01/2020
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First and Family name	Juan Francisco PRIETO		
Social Security, Passport, ID number	05265200-V	Age	55
Researcher codes	WoS Researcher ID (*)	I-7198-2012	
	SCOPUS Author ID(*)	7201826710	
	Open Researcher and Contributor ID (ORCID) **	0000-0002-7235-5295	

(*) At least one of these is mandatory

(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad Politécnica de Madrid		
Department	E.T.S. de Ingenieros en Topografía, Geodesia y Cartografía		
Address and Country	Ctra. Valencia km 7 – E28031 Madrid		
Phone number	910673991	E-mail	juanf.prieto@upm.es
Current position	Associate Professor	From	06/03/2017
Key words	Geodesy, Remote Sensing, Natural and Anthropoid Hazards, GNSS, Geodetic Networks and Deformation Analysis, Tectonics		

A.2. Education

PhD	University	Year
Geodesy and Geomatics	Universidad Politécnica de Madrid (UPM)	2016

A.3. JCR articles, h Index, thesis supervised...

- Number of Research Activity periods of 6 years (*Sexenios*) with positive evaluation: **2**
- Number of Transfer and Assessment of Research Results periods of 6 years (*Sexenios de Transferencia*) with positive evaluation: **1**
- Total number of citations of published works: **292** (*Google Scholar*)
- Average number of citations / year during the last 5 years: **5.4**
- Total number of publications Q1: **6**
- h-Index = **9** - i10-Index = **9**
- Average number of citations per published SCI article (up to 2019): **13.1**
- Number of articles with 10 or more citations: **7**
- Average number of articles / year published 2014-2019: **2.8** (total)
- Average number of articles / year published 2009-2013: **1.8** (total)

Part B. CV SUMMARY (*max. 3500 characters, including spaces*)

Juan F. Prieto holds a PhD in Geodesy and Geomatics from the ETSI Agrónomos (UPM, 2016), a M.S. in Geodesy and Cartography Engineering (EPES-UPM, 2000) and a B.S. in Engineering Surveying (UPM, 1986). From 2000 until now, he has been teaching in technical engineering programs, undergraduate and master's degrees in the School of Surveying, Geodesy and Cartography Engineering (UPM).

His research is developed within the framework of Geodesy and Geomatics, and its application to applied geodesy (shape and dimensions of the Earth), to natural risks (earthquakes, volcanoes, terrain instabilities) and anthropogenic, both in the observational aspects (using terrestrial and space techniques) and data processing. His research work has developed national GNSS geodetic networks in general (in Europe and Africa), as well as fields of crustal displacements and gravity variations in volcanic (Canary Islands) and seismic areas (Spain). All these works are a fundamental tool for the location and positioning on the surface of the Earth, as well as in situations of volcanic crisis, or in the study of crustal properties and the mantle in general. Concerning geodetic monitoring, new observational and data processing methodologies have been jointly applied in Radar Synthetic Aperture



Interferometry (InSAR), gravimetry, and GNSS (Global Navigation Satellite System), in collaboration with other national and foreign groups.

He has participated in a total of 45 research projects (Spanish national, European Union, ESA NASA and other Space Agencies, World Bank and international organizations), being in 7 of them Coordinator or Responsible Investigator.

He has directed, or co-directed, about fifty B.S. Thesis and M.S Thesis, some of them awarded in several national competitions.

In his professional role he was assigned to the National Geographical Institute of Spain, now under the Ministry of Public Works, as a career officer from 1989 to 2000. Throughout this period, he belonged to the *Cuerpo Nacional de Ingenieros Técnicos en Topografía* and the *Cuerpo de Gestión de Sistema e Informática de la Administración del Estado*. During this period, it developed its activity in the Geodetic Programs Service of the aforementioned Geographical Institute, participating in the major geodetic projects using GNSS spatial techniques developed by the IGN: IBERIA95, BALEAR98, REGENTE Network and the GNSS Permanent Station Network. It also participates in the old projects by terrestrial techniques: ROI and RPO Geodetic Networks.

He is also an International Consultant of the World Bank (STC-HQ) in geodetic matters, and since 1999 has carried out research and development projects for the new geodetic networks of national coverage, using space techniques for the Islamic Republic of Mauritania (1999), the Republic of Mozambique (2002), the Republic of Zambia (2006), Mongolia (2008), the Federal Republic of Nigeria (2010), Burkina Faso (2014), the Dominican Republic (2015) and the Republic of Guinea (Conakry, 2016)).

Part C. RELEVANT MERITS

C.1. Publications (last 10 years, including books)

- 1) López-Cuervo Medina, S., Pérez-Martín, E., Herrero Tejedor, T.R., Prieto, J.F., Velasco, J., Conejo Martín, M.A., Ezquerra-Canalejo, A., Aguirre de Mata, J. 2019. Assessment of DSMs Using Backpack-Mounted Systems and Drone Techniques to Characterise Ancient Underground Cellars in the Duero Basin (Spain). *Sensors*, 19(24) 5352 doi: 10.3390/s19245352 (SCI FI 3.1)
- 2) Camacho, A.G., Prieto, J.F., Ancochea, E., Fernández, J. 2019. Deep volcanic morphology below Lanzarote, Canaries, from gravity inversion: New results for Timanfaya and implications. *Journal of Volcanology And Geothermal Research*, 369(1) 64-79 doi: 10.1016/j.jvolgeores.2018.11.013 doi: 10.1038/s41598-018-33128-0 (SCI FI 2.492)
- 3) Fernández, J., J. F. Prieto, J. Escayo, A. G. Camacho, F. Luzón, K. F. Tiampo, M. Palano, T. Abajo, E. Pérez, J. Velasco, T. Herrero, G. Bru, I. Molina, J. López, G. Rodríguez-Velasco, I. Gómez, J. J. Mallorquí, 2018. Modeling the two -and three- dimensional displacement field in Lorca, Spain, subsidence and the global implications. *Scientific Reports*, 8:14782(FI: 4.259)
- 4) Fernández, J., González, P.J. Camacho, A.G., Prieto, J.F., Bru, G., (2015). An Overview of Geodetic Volcano Research in the Canary Islands. *Pure and applied geophysics*, 172/11, 3189-3228, doi: 10.1007/s00024-014-0916-6. (FI: 1.677)
- 5) Velasco-Gómez, J., Prieto, J. F., Molina, I., Herrero, T., Fábrega, J., & Pérez-Martín, E., (2016). Use of the gyrotheodolite in underground networks of long high-speed railway tunnels. *Survey Review*, doi:10.1179/1752270615Y.0000000043. (JCR FI 0.533)
- 6) Camacho, A.G., Carmona, E., García-Jerez, A., Sánchez-Martos, F., Prieto, J.F., Fernández, J., Luzón, F., (2015) Alluvial valleys structure via 3-D gravity inversion: The Low



Andarax Valley (Almería, Spain) test case.- *Pure and Applied Geophysics*, vol. 172, N° 11 3107-3121 doi: 10.1007/s00024-014-0914-8 (SCI FI 1.584)

7) Velasco, J., Herrero, T., Molina, I., López, J., Pérez-Martín, E., Prieto, J., (2015) Metodología de diseño, observación y cálculo de redes geodésicas interiores en túneles de ferrocarril de alta velocidad. *Informes de la Construcción*. doi:10.3989/ic.13.172, Vol 67, No 538. (JCR FI 0.465)

8) M.A. Conejo-Martín, T. R. Herrero-Tejedor, J. Lapazaran, E. Perez-Martin, J. Otero, J. F. Prieto, J. Velasco, (2015). Characterization of Cavities Using the GPR, LIDAR and GNSS Techniques. - *Pure Applied Geophysics*, Vol 172, Issue 11, pages 3123-3137 doi: 10.1007/s00024-014-0985-6 (SCI FI 1.584)

9) Velasco, J.; Herrero, T.; Prieto, J. (2014) Metodología de Diseño, Observación y Cálculo de Redes Exteriores para Túneles de gran longitud. *Informes de la Construcción*, Vol 66, No 533. (JCR FI 0.465)

10) Smets, B., d'Oreye, N., Kervyn, F., Kervyn, M., Albino, F.; Arellano, S.R., Bagalwa M., Balagizi, C., Carn, S.A., Darrah, T.H., Fernández, J., Galle, B., González, P., Head, E., Karume, K., Kavotha, D., Lukaya, F., Mashagiro, N., Mavonga, G., Norman, P., Osodundu, E., Palleró, J.L.G., Prieto, J.F., Samsonov, S., Syauswa, M., Tedesco, D., Tiampo, K:F., Wauthier, C., Yalire, M.M. (2014) Detailed multidisciplinary monitoring reveals pre-and co-eruptive signals at Nyamulagira volcano (North Kivu, Democratic Republic of Congo). *Bulletin of Volcanology*, 76(1) 787. doi:10.1007/s00445-013-0787-1 (SCI FI 2.667)

11) J. Velasco, I. Molina, E. Martínez, A. Arquero, J. Prieto., (2014). Sea Bottom Classification by Means of Bathymetric LIDAR Data. *IEEE Latin America Transactions*, 12 (4), 590-595. DOI:10.1109/TLA.2014.6868859 (JCR FI 0.326)

13) Fernández, J., P. Tizzani, M. Manzo, A. Borgia, P. J. González, J. Martí, A. Pepe, A. G. Camacho, F. Casu, P. Berardino, J. F. Prieto, R. Lanari. (2009). Gravity-driven deformation of Tenerife measured by InSAR time series analysis. *Geophys. Res. Letters*, 36, L04306, doi: 10.1029/2008GL036920 (SCI FI: 3.204)

14) Camacho, A.G., Fernández, J., González, P.J., Rundle, J.F., Prieto, J.F., Arjona, A Título: Structural results for La Palma Island using 3D gravity inversion (2009), *Journal of Geophysical Research*, 114, B05411 doi: 10.1029/2008JB005628 (SCI FI 3.082)

15) Prieto, J.F., P. J. González, A. Seco, G. Rodríguez-Velasco, L. Tunini, P. A. Perlock, A. Arjona, A. Aparicio, A. G. Camacho, J. B. Rundle, K. F. Tiampo, J. L. G. Palleró, S. Pospiech, J. Fernández (2009) Geodetic and Structural Research in La Palma island, Canaries, Spain: 1992-2007 results - *Pure and Applied Geophysics*, vol. 166,(2009) N° 8/9 1461-1484 doi: 10.1007/s00024-009-0505-2 (SCI FI 0.938)

C.2. Research projects and grants (last 5 years)

1) Estudio del sistema de alimentación magmático profundo usando nuevos métodos geodésicos y geofísicos (RTI2018-093874-B-I00), from 01/01/2019 to 31/12/2021. MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES. Convocatoria Retos, 2018. Partners IGEO (CSIC), UPM, Univ. Alicante. Principal Investigators: IP1: J. Fernández (CSIC), IP2: I. Vigo (U. Alicante). Support 96,800.00 €

2) Clúster de cálculo y servicio en remoto del nodo español de EPOS Espacio. (UCMA15-EE-3294), from 01/01/2016 to 30/06/2018. Ministerio de Economía y Competitividad, España. Convocatoria de Infraestructura Científico Tecnológica 2015. Partners: IGEO (CSIC-UCM). PI: J. Fernández (CSIC). Support 107,056.00 €

3) EPOS Implementation Phase (EPOS IP). (Grant agreement no: 676564-EPOS IP). (01/10/2015-30/09/2019). EU VII Framework Program, ESFRI. Convocatoria INFRADEV-3-2015: Individual implementation and operation of ESFRI projects. Coordination: M. Cocco (INGV, Italia). PI CSIC: R. Carbonell (Inst. C.T. Jaume Almera, Barcelona), J. Fernández (IGEO, Madrid, Space). Support: 18,374,344.00 € (CSIC: 460,349.90 €; IGEO: 139.025 €).

4) Observación radar multisatélite y multifrecuencia para vigilancia de infraestructuras hidráulicas críticas. (mufSARem) (RTC-2014-1922-5). (01/09/2014-30/06/2018). Ministerio de Economía y Competitividad, España. Convocatoria Retos-Colaboración 2014. Partners: Euroestudios S.L., IGEO (CSIC-UCM). Technical Coordinator: A. Morales (Euroestudios S.L.), PI CSIC: A. J. González Camacho. Scientific Coordinator: J. Fernández (CSIC). Support: 326.752,14 € (182.769,24 CSIC)

5) Estudio de Riesgos Geológico-Geotécnicos por Explotación de Acuíferos Mediante Técnicas Espaciales y Terrestres. (AQUARISK) (ESP2013-47780-C2-1,2-R). (01/01/2014-30/06/18). Ministerio de Economía y Competitividad, España. Partners: IGEO (CSIC-UCM), IGME. Coordinator: José Fernández. Support: 366.630,00 €. Subproject 1 (CSIC): PI-1: José Fernández Torres, PI-2: Antonio Jesús González Camacho. Support Subproject 1: 209.330,00 €.

6) Desarrollo de nuevas técnicas de control de deslizamientos mediante la integración de de observaciones terrestres y espaciales. (EOSLIDE) (IPT-2011-1234-310000). (04/05/2011-31/12/2014). Ministerio de Ciencia e Innovación, España. Call: INNPACTO-2011. Partners: Euroestudios S.L., IGEO (CSIC-UCM). PI: A. Morales (Euroestudios S.L.), Co-PI: J. Fernández (CSIC). Support: 711.304 € (192.450 CSIC).

C.3. Contracts (last 10 years)

1) REVISION OF GEODETIC NETWORK AND THE COMPLETION OF THE CARTOGRAPHIC COVERAGE (SMRP/CON/B.3/05/12). Duration: 8/2012-7/2014. Funding organization: Ministry of Mines and Steel Development, Federal Republic of Nigeria. Centros de ejecución: ETSI Topografía, Geodesia y Cartografía (UPM, España), Sustainable Management Mineral Project (Abuja, Nigeria). **Main Investigator: J. F. Prieto** (UPM, España). Total cost of the project: 25.000,00 \$

2) NOUVEAU RÉSEAU GÉODÉSIQUE ET DETERMINATION DES PARAMÈTRES DE TRANSFORMATION ENTRE RESEAU DES BORNES ASTRONOMIQUES ET SYSTÈME ITRF2008 DU BURKINA FASO (26/00/02/03/80/2014/00023MME/SG/PADSEM). Duration: 8/2014-7/2015. Funding organization: Ministère des Mines et de l'Énergie (République de Burkina Faso), IDA (EEUU). Execution centers: ETSI Topografía, Geodesia y Cartografía (UPM, España), Projet d'Appui au Développement du Secteur Minier (Ouagadougou, Burkina Faso). **Main investigator: J. F. Prieto** (UPM, España). Total cost 25.000,00 \$

3) RÉVISION DU RÉSEAU GÉODÉSIQUE DE LA RÉPUBLIQUE DE GUINÉE (021/PAGSEM/11/2014). Duración: 8/2015-7/2016. Funding organization: Ministère d'État des Mines et de l'Énergie (République de Guinée), IDA (EEUU). Execution centers: ETSI Topografía, Geodesia y Cartografía (UPM, España), Projet d'Appui a la Gouvernance dans le Secteur Minier (Conakry, Guinea). **Main investigator: J. F. Prieto** (UPM, España). Total cost of the project: 18.000,00 \$

4) Research and Development of the Transformation Algorithm between National Maps Coordinates and GPS Coordinates for the Dominican Republic (PON0007886629). Duration: 8/2015-7/2016. Funding organization: World Bank Group, Energy and Extractives (EEUU). Execution centers: ETSI Topografía, Geodesia y Cartografía (UPM, España). **Main investigator: J. F. Prieto** (UPM, España)