

DATE	1/11/2018
------	-----------

Part A. Personal Information

Surname(s)	Sánchez Caja	
Forename	Miguel	
Researcher codes	WoS Researcher ID (*)	G-6424-2015
	SCOPUS Author ID(*)	ID: 35402225800
	Open Researcher and Contributor ID (ORCID)	0000-0003-0677-1482

A.1. Current position

Post/ Professional Category	Professor (Catedrático de Universidad)	
UNESCO Code	120404 (Differential Geometry)	
Key Words/ Lines of research	Differential Geometry, Mathematical Relativity, Lorentzian, Riemannian and Finslerian Geometries, Analysis on Manifolds	
Name of the University/Institution	Universidad de Granada	
	Department/Centre	Geometría y Topología
	Full Address	Facultad de Ciencias, Campus de Fuentenueva s/n. E-18071 Granada (Spain)
	Email Address	sanchezm@ugr.es
	Phone Number	(+34) 958246396
Start date	07/07/2007	

A.2. Academic Preparation (title, institution, date)

1994	Universidad de Granada	PhD	Doctor en Ciencias Matemáticas
------	------------------------	-----	--------------------------------

Part C. Accomplishments (Order by typology)

C.1. Publications

Most representative publications of the period (2013-2017):

- 1.- A.N. Bernal, B. Janssen, A. Jiménez-Cano, J.A. Orejuela, M. Sánchez, P. Sánchez-Moreno: On the (non-)uniqueness of the Levi-Civita solution in the Einstein-Hilbert-Palatini formalism, *Physics Letters B*, 768 (2017) 280-287.
- 2.- L.A. Aké Hau; M. Sánchez: Compact affine manifolds with precompact holonomy are geodesically complete, *J. Math. Analysis Appl.* 436 Issue 2 (2016) 1369-1371.
- 3.- J.L. Flores, J. Herrera, M. Sánchez: Hausdorff separability of the boundaries for spacetimes and sequential spaces, *J. Math. Phys* 57 Issue 2 (2016) 25 pp.
- 4.- E. Caponio, A.V. Germinario, M. Sánchez: Convex regions of stationary spacetimes and Randers spaces. Applications to lensing and asymptotic flatness, *J. Geometric Anal.* (2016), 26(2), pp. 791-836.
- 5.- P. Morales Álvarez, M. Sánchez: A note on the causal homotopy classes of a globally hyperbolic spacetime, *Class. Quant. Grav.* 32 Issue 19 (2015) (12pp).
- 6.- M.A. Javaloyes and M. Sánchez: On the definition and examples of Finsler metrics, *Ann. Sc. Norm. Super. Pisa, Cl. Sci.* (5), Vol. XIII (2014), 813-858.
- 7.- O.F. Blanco, M. Sánchez and J.M.M. Senovilla: Structure of second-order symmetric Lorentzian manifolds, *J. Eur. Math. Soc.* 15, 595–634 (2013).
- 8.- A.M. Candela, A. Romero, M. Sánchez: Completeness of the Trajectories of Particles Coupled to a General Force Field, *Arch. Rational Mech. Anal.* 208, 1 (2013) 255-274.
- 9.- J.L. Flores, J. Herrera and M. Sánchez: Computability of the causal boundary by using isocausality, *Class. Quant. Grav.*, 30 (2013) 075009 (36pp).
- 10.- J.L. Flores, J. Herrera and M. Sánchez: Gromov, Cauchy and causal boundaries for Riemannian, Finslerian and Lorentzian manifolds, *Memoirs Amer. Mat. Soc.* 226 (2013) No. 1064.

C.2. Projects

Projects 2013-2017 where I am the Principal Investigator (all of them leaded from U. Granada, with the participation of other institutions).

- TITLE: Geometría semi-riemanniana y problemas variacionales en Física Matemática.
REFERENCE: MTM2016-78807-C2-1-P
FUNDING BODY: MINECO (Spain)
START/END DATES: 1-1-2017 / 31-12-2020.

- TITLE: Geometría semi-riemanniana y problemas variacionales en Física Matemática.
REFERENCE: MTM2013-47828-C2-1-P
FUNDING BODY: MINECO (Spain)
START/END DATES: 1-1-2014 / 28-02-2018.

- TITLE: Geometría semi-riemanniana y problemas variacionales en Física Matemática.
REFERENCE: MTM2010--18099
FUNDING BODY: Ministerio de Investigación, Ciencia e Innovación (MICINN, Spain)
START/END DATES: 1-1-2011 / 28-02-2015

- TITLE: Proyecto de Excelencia Geometría de Lorentz y Gravitación
REFERENCE: P09-FQM-4496
FUNDING BODY: Consejería de Innovación, Ciencia y Empresa (J. Andalucía, Spain).
START/END DATES: 3-02-2010 / 2-02-2014

C.5 Thesis supervised

-Ph D Thesis supervised: R. Bartolo (U. Granada, 2000), JL Flores (U. Granada, 2002), J. Herrera (U. Málaga, 2011), O. Fdez. Blanco (U. Granada, 2012), Luis Aké (U. Málaga 2018).
-Ph D Theses under current supervision: Christian Röken (started 2016/17), Fidel Fernández (started 2018/19).
-Master theses supervised in 2013-2018: F. Fernández (Máster Matemáticas 17/18); J. Avilés (Máster Matemáticas 16/17); P. Morales (Máster Fisymat, 2014/15); P. Galindo (Máster Fisymat, 2013/14).

C.6. Labor as a scientific expert

Editor of Mediterranean J. Mathematics (JCR journal) since October, 2016.

C.7. Plenary lectures

TITLE: Ehlers-Kundt conjecture and the initial value problem for gravitational waves
CONGRESS: Field equations on Lorentzian space-time
ORGANIZER: Department of Mathematics, U. Hamburg
PLACE AND DATE: U. Hamburg (Germany), 19-23 March, 2018.

TITLE: Finslerian Geometry from a Lorentzian viewpoint
CONGRESS: New Methods in Finsler Geometry
ORGANIZER: Department of Mathematics, Leipzig University, EMS (Satellite Event of the 7th European Congress of Mathematics, Berlin 2016)
PLACE AND DATE: U. Leipzig (Germany), 5-9 July, 2016.

TITLE: Lorentzian Variational Problems, Fermat Principle and Zermelo Navigation
CONGRESS: Achievements and Perspectives in Nonlinear Analysis
ORGANIZER: Department of Mathematics, Univ. Bari "Aldo Moro".
PLACE AND DATE: U. Bari (Italy), 14-17 June, 2016.

TITLE: Some links between Lorentzian and Finslerian geometries
CONGRESS: General Relativity: 100 years after Hilbert

ORGANIZER: Lepage Research Institute (Czech Rep.) University of Prešov (Slovakia), Jagiellonian University in Kraków (Poland), Eötvös Loránd University (Hungary), University of Hradec Králové (Czech Rep.)

PLACE AND DATE: Stará Lesná (Slovakia), 17-21 August, 2015.

TITLE: Wind Finsler structures: from Zermelo's navigation to the causality of spacetimes

CONGRESS: Second Japanese-Spanish workshop on Differential Geometry.

ORGANIZADOR: Tokyo Inst. Technology

PLACE AND DATE: Tokyo (Japan), 5-10 February, 2014.