MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

CV date	13/12/2021

Part A. PERSONAL INFORMATION

First name	Francisco Javier		
Family name	Alonso Morales		
Gender (*)	Male	Birth date (dd/mm/yyyy)	27/06/1968
Social Security, Passport, ID number			
e-mail	falonso@ugr.es	URL Web	www.ugr.es/~falonso
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-7547-0205	

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	23/01/1998		
Institution	University of Granada		
Department/Center	Statistics and Operations Research		
Country	Spain	Teleph. number	958-243154
Key words	Random fields; complexity; entropy and information measures; time series modelling; spatio-temporal modelling, risk analysis.		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
1990-1992	Assistant Professor I/University of Granada/Spain
1992-1994	Assistant Professor II/University of Granada/Spain
1994-1997	Assistant Professor III/University of Granada/Spain
1997-1998	Interim Associate Professor/University of Granada/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Mathematical Sciences B.S. degree	Granada/Spain	1990
Mathematical Sciences Ph.D. degree	Granada/Spain	1994

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

Francisco Javier Alonso has a degree in Mathematical Sciences (1990) and a Ph.D. in Mathematical Sciences (1994) from the University of Granada. He has been a professor from 1990 to the present in different professional categories.

He has performed several stays in foreign centers, including a three months stay at the University of Leeds (UK) and shorter stays at the same university. He has published 26 JCR articles and has attended numerous international scientific meetings as a speaker. He has been co-organizer and member of the Scientific Committee of two international congresses. He has published 4 articles in the first tertile in JCR rankings in 2021. He has been investigator

in 12 national research projects and 3 regional projects. He is Associate Editor of Computational Statistics journal. His areas of scientific interest include random fields, temporal and spatio-temporal statistical analysis and modelling, analysis of extremes in spatio-temporal processes, entropy measures, information and complexity, and risk analysis among others.

He has made scientific contributions in several large areas: spatial processes analysis with missing data, spatial sampling design based on different criteria (complexity, entropy, correlation, etc.), spatio-temporal prediction, estimation of long-range dependence, analysis of multifractal complexity, modelling complex systems in reliability, modelling the menmristor variability using univariate and multivariate techniques, and survival analysis in cancer patients. These contributions are the result of the collaboration with different teams and researchers such as: J.M. Angulo, M.C. Bueso, M.D. Ruiz-Medina, W. González-Manteiga, M. Febrero-Bande, K.V. Mardia, G. Qian, M.P. Frías, F.J. Esquivel, J.E. Ruiz-Castro, J.B. Roldan, A.M. Aguilera, A.E. Madrid, D. Redondo-Sánchez y M. Rodríguez-Barranco, among others.

He has been the tutor of a doctoral thesis. Four JCR articles have been derived from this thesis.

He belongs to the Institute of Mathematics of the University of Granada (IMAG), currently awarded as a María de Maeztu Unit of Excellence.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(see instructions)*

(4/7) D. Redondo-Sánchez, M. Rodríguez-Barranco (CA), A. Ameijide, F. J. Alonso, P. Fernández-Navarro, J. J. Jiménez-Moleón, and M. J. Sánchez. Cancer Incidence Estimation from Mortality Data: A Validation Study within a Population-Based Cancer Registry. Population Health Metrics, 2021, Volume 19, 18. https://doi.org/10.1186/s12963-021-00248-1.

(4/4) J.M. Angulo (CA), F.J. Esquivel, A.E. Madrid and F.J. Alonso. Information and complexity analysis of spatial data. Spatial Statistics, 2021, Volume 42, 100462. https://doi.org/10.1016/j.spasta.2020.100462 NºCites:2.

(10/16) A.N. Mikhaylov (CA), D.V. Guseinov, A.I. Belov, …, B. Spagnolo. Stochastic resonance in a metal-oxide memristive device. Chaos, Solitons & Fractals, Volume 144, 2021, 110723, ISSN 0960-0779 (online fist). https://doi.org/10.1016/j.chaos.2021.110723. NºCites:12.

(1/4) F. J. Alonso, D. Maldonado, A.M. Aguilera, J.B. Roldán (CA). Memristor variability and stochastic physical properties modeling from a multivariate time series approach. Chaos, Solitons & Fractals, Volume 143, 2021, 110461, ISSN 0960-0779 (online fist). https://doi.org/10.1016/j.chaos.2020.110461. NºCites:3.

(4/9) N. Rodriguez (CA), D. Maldonado, F.J. Romero, … J.B. Roldan. Resistive Switching and Charge Transport in Laser-Fabricated Graphene Oxide Memristors: A Time Series and Quantum Point Contact Modeling Approach. Materials, Volume 12(22), 2019, 3734 (online fist). https://doi.org/10.3390/ma12223734. NºCites:6.

(5/9) E. Pérez (CA), D. Maldonado, C. Acal, …, J.B. Roldán. Analysis of the statistics of device-to-device and cycle-to-cycle variability in TiN/Ti/Al:HfO2/TiN RRAMs. Microelectronics Engineering, Volume 214, June 2019, 104-109 (online fist). https://doi.org/10.1016/j.mee.2019.05.004. NºCites:27.

(2/5) J.B. Roldán (CA), F.J. Alonso , A.M. Aguilera, D. Maldonado, M. Lanza. Time series statistical analysis: A powerful tool to evaluate the variability of resistive switching memories.

Journal of Applied Physics, Volume 125, Issue 17, May 2019, 174504 (online fist). https://doi.org/10.1063/1.5079409. NºCites:15.

(3/3) J. E. Ruiz-Castro (CA), M. Dawabsha, F. J. Alonso. Discrete-time Markovian arrival processes to model multi-state complex systems with loss of units and an indeterminate variable number of repairpersons. Reliability Engineering and System Safety, Volume 174, February 2018, 114-127. https://doi.org/10.1016/j.ress.2018.02.019. NºCites:5.

(2/3) F. J. Esquivel, F. J. Alonso, J. M. Angulo (CA). Multifractal complexity analysis in space-time based on the generalized dimensions derivatives. Spatial Statistics, Volume 22, Part 2, November 2017, 469-480, (online first 1 September 2017). https://doi.org/10.1016/j.spasta.2017.07.014. NºCites:6.

(1/3) F. J. Alonso (CA), M. C. Bueso, J. M. Angulo. Dependence Assessment Based on Generalized Relative Complexity: Application to Sampling Network Design. Methodology and Computing in Applied Probability, Volume 18, Issue 3, 921-933, September 2016, (online first 28 March 2016). http://dx.doi.org/10.1007/s11009-016-9495-6. NºCites:3.

C.2. Congresses

Roldan, J.B., Maldonado, D., Alonso, F.J., Roldan, A,M, Hui, F., Shi, Y., Jiménez-Molinos, F., Aguilera, A.M., Lanza, M. (2021) Time series modeling of the cycle-to-cycle variability in h-BN based memristors. IEEE International Reliability Physics Symposium, IRPS 2021, Monterrey 21-24 March, 9405100 (virtual conference, oral communication).

Esquivel; F.J., Angulo, J.M., Alonso, F.J. (2020) Relative Complexity Assessment in Multifractal Systems: Application to SpatioTemporal Seismic Dynamics. 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2020) 19-21 December, University of London, UK (virtual conference, oral communication).

Esquivel; F.J., Angulo, J.M., Alonso, F.J. (2018) Relative Complexity in the Multifractal Domain. Study of Space-Time Released Energy Distribution in the Dynamics of Seismic Events. XXXVII Congreso Nacional de Estadística e Investigación Operativa y XI Jornadas de Estadística Pública (SEIO 2018) 29 May - 1 June (oral communication).

Esquivel; F.J., Angulo, J.M., Alonso, F.J. (2017) Spatio-temporal analysis of seismic data using entropy-based complexity measures in the multifractal domain. 10th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2017) 16-18 December, University of London, UK (oral communication).

Esquivel; F.J., Angulo, J.M., Alonso, F.J. (2017) Spatio-Temporal Analysis Based on Multifractal Complexity Measures. Application to Seismic Data. Spatial Statistics 2017: One World: One Health. 4-7 July, Lancaster University, UK (oral communication).

Alonso, F.J., Bueso, M.C., Angulo, J.M. (2015) Spatial Sampling Design based on Complexity Measures. XXXV Congreso Nacional de Estadística e Investigación Operativa y IX Jornadas de Estadística Pública. 26-29 May, Pamplona (Spain) (oral communication).

Alonso, F.J., Bueso, M.C., Angulo, J.M. (2014) Dependence assessment based on generalized relative complexity measures: application to sampling network design. Joint Meeting METMA VII - GRASPA 14. 10-12 September, Torino (Italy) (oral communication).

Bueso, M.C., Angulo, J.M., Alonso, F.J. (2012) Optimality Criteria for Spatial and Spatio-Temporal Sampling Design based on Entropy. 4th Iberian Mathematical Meeting (IMM4). 4-7 October, Valladolid (Spain) (oral communication).

C.3. Research projects

1. Ref.: A-FQM-66-UGR20.
Title: Advanced data science models for resistive memory analysis.
Approved and Financed by: Consejería de Transformación Económica, Industria, Conocimiento y Universidades, Junta de Andalucía – FEDER.
Call: Convocatoria Proyectos I+D+I del Programa Operativo FEDER 2014-2020.
Principal Investigators: Ana María Aguilera del Pino y Juan Eloy Ruiz Castro.
Affiliation: Universidad de Granada. Period: 1/07/2021 - 30/06/2023. Fund: 50.000,00€.
Participation: Investigator.

2. Ref.: PGC2018-098860-B-I00.
Title: Random fields, point processes and multifractal measures in space-time: information analysis approaches, complexity and risk.
Approved and Financed by: Ministerio de Ciencia, Innovación y Universidades.
Call: Proyectos de Investigación del Plan Nacional 2018.
Principal Investigator: José Miguel Angulo Ibáñez.
Affiliation: Universidad de Granada. Period: 1/01/2019 - 31/12/2021. Fund: 26.015,00€.
Participation: Investigator.

3. Ref.: A-FQM-345-UGR18.
Title: Stochatic space-time models: generalizations, inference and risk analysis.
Approved and Financed by: Consejería de Transformación Económica, Industria, Conocimiento y Universidades, Junta de Andalucía – FEDER.
Call: Ayudas a proyectos de I+D+I Programa Operativo FEDER 2014-2020.
Principal Investigator: José Miguel Angulo Ibáñez.
Affiliation: Universidad de Granada. Period: 01/01/2020 - 31/12/2021. Fund: ########€.
Participation: Investigator.

4. Ref.: MTM2012-32666.
Title: Spatio-temporal analysis: Structural complexity, extremal behavior and generalized information measures.
Approved and Financed by: Ministerio de Economía y Competitividad.
Call: Proyectos de Investigación del Plan Nacional 2012.
Principal Investigator: José Miguel Angulo Ibáñez.
Affiliation: Universidad de Granada. Period: 01/01/2013 – 31/12/2015. Fund: 47.385€.
Participation: Investigator.

5. Ref.: MTM2009-13250.
Title: Risk indicators based on the geometrical-probabilistic analysis of generalized threshold exceedances in space-time processes on unstable media.
Approved and Financed by: Ministerio de Ciencia e Innovación.
Call: Proyectos de Investigación del Plan Nacional 2009.
Principal Investigator: José Miguel Angulo Ibáñez.
Affiliation: Universidad de Granada. Period: 01/01/2010 - 31/12/2012. Fund: 34.364€.
Participation: Investigator.

6. Ref.: P08-FQM-03834
Title: Structural and predictive analysis of spatio-temporal extreme events. Applications in Geosciences.
Approved and Financed by: Consejería Innovación, Ciencia y Empresa. Junta de Andalucía.
Call: Proyectos de Excelencia 2008.
Principal Investigator: José Miguel Angulo Ibáñez.
Affiliation: Universidad de Granada. Period: 13/01/2009 – 31/12/2013. Fund: 151.123.68€
Participation: Investigator.

C.4. Contracts, technological or transfer merits