

Part A. PERSONAL INFORMATION

CV date

09/02/2024

First name	Francisco		
Family name	Jurado Melguizo		
Gender (*)	Male	Birth date	
ID number			
e-mail	fjurado@ujaen.es	https://www.ujaen.es	
Open Researcher and Contributor ID (ORCID) (*)			0000-0001-8122-7415

A.1. Current position

Position	Full Professor		
Initial date	15/04/2009		
Institution	University of Jaén		
Department/Center	Electrical Engineering	EPS Linares	
Country	Spain	Phone number	
Key words	Renewable energy, power systems		

A.3. Education

PhD	University	Year
Industrial Engineering	E.T.S. Ingenieros Industriales U.N.E.D	1999

Part B. CV SUMMARY

Six-year periods of research granted: 5. **38 doctoral theses supervised** (28 in the last 10 years). According to Web of Science by Clarivate Analytics: 10,443 total citations, 1,010 average citations/year during the last 5 years, 190 publications in the first quartile (Q1), **h index: 52**. According to Scopus by Elsevier: 12,792 total citations, **h index: 57**. According to Google Scholar: 17,183 total citations, **h index 66**. Researcher among the most influential in the world according to the classification made by **Stanford University** (United States). Regarding his career-long data, the first year of publication of this list in 2017, and in all updates in 2018, 2019, 2020, 2021 and 2022. Sub-field of Energy and sub-field of Electrical & Electronic Engineering position 394 out of 287,766.

* Author of 800 publications, of which 460 papers in journals of the Journal Citation Reports by Clarivate Analytics in the areas of Energy & Fuels and Engineering, Electrical & Electronic. More than 220 publications in international conferences, more than 140 are listed in the ISI Proceedings of the Web of Science. Editor of a research book in the Research Signpost publishing house and 40 book chapters. Author of 6 teaching books, one in the McGraw-Hill publishing house and 2 patents.

* Coordinator in 1 project of the **8th Framework Program of the European Union (Horizon 2020)**, Scientific coordinator in 1 project of the **7th Framework Program of the European Union**, Principal researcher in 6 national projects and 3 regional projects. Coordinator in 3 research networks. Also, he has participated as researcher in 2 European projects, 9 national projects and 2 regional projects.

* **Senior Member** of the Institute of Electrical and Electronic Engineers (IEEE). Member of the EMTP-ATP user group in Europe. Member of the Network of European Excellence of Micro-cogeneration Technologies (European Network of Excellence for micro-CHP technologies). Member of the Spanish Technological Platform of Hydrogen and Fuel Cells. Member of the European Technology Platform on Renewable Heating and Cooling.

* Principal investigator in **research contracts** with companies of the Abengoa Group, (Instalaciones Inabensa, S.A. and with Hynergreen Technologies, S.A.).

* He has supervised **38 doctoral theses**, 22 at the University of Jaén (13 International Theses), 4 at UNED-Madrid (Extraordinary Award in 2007), 4 at the University of Cádiz

(Extraordinary Award in 2010 and 1 International Thesis), 7 at the University of Aswan (Egypt), and 1 at the University of Sétif (Algeria).

* Evaluation of papers in the Journal Citation Reports.

* Evaluator of ANEP projects of Electrical, Electronic and Automatic Engineering, from 2003 to date, Spain; Agency for the Quality of the University System of Castile and Leon, Spain; Agency for the Evaluation of Quality and Accreditation of the Basque University System (UNIBASQ), Spain; Center for Energy Research and Innovation (CIEN), Colombia; National Research Foundation, South Africa; Ministry of Science and Technology, Argentina; Dutch Research Council (NWO), The Netherlands; National Centre of Science and Technology Evaluation, Kazakhstan; King Fahd University of Petroleum & Minerals, Saudi Arabia.

* **Head of Quality Research Group:** Research and Electrical Technology (INYTE), Group Code: TEP-152 (catalog of research groups of the “Junta de Andalucía”). Jaen University. From 2000 to date.

* He has held the positions of Full Professor, Associate Professor at the Universities of Jaén and Granada. Secretary of the Department of Electrical, Mechanical and Mining Engineering of the University of Granada. Head of the Electrical Engineering Department of the University of Jaén.

* One of the practices for attracting talent has consisted in obtaining the following contracts: 1 “Juan de la Cierva”, 6 “María Zambrano”, 3 “Margarita Salas”, 1 postdoctoral contract by “Junta de Andalucía”, 3 grants for University Teacher Training (FPU).

Part C. RELEVANT MERITS

C.1. Publications

1. M. Bayat, M.M. Koushki, A.A. Ghadimi, M. Tostado-Véliz, F. Jurado

Title: Comprehensive enhanced Newton Raphson approach for power flow analysis in droop-controlled islanded AC microgrids

Journal: International Journal of Electrical Power and Energy Systems, 143, 108493

DOI: 10.1016/j.ijepes.2022.108493

December: July 2022

2. M.Tostado-Véliz, S. Kamel, F. Aymen, A. Rezaee, F. Jurado

Title: A Stochastic-IGDT model for energy management in isolated microgrids considering failures and demand response

Journal: Applied Energy, 317, 119162

DOI: 10.1016/j.apenergy.2022.119162

Date: July 2022

3. M. Tostado-Véliz, S. Gurung, F. Jurado

Title: Efficient solution of many-objective home energy management systems

Journal: International Journal of Electrical Power and Energy Systems, 136, 107666

DOI: 10.1016/j.ijepes.2021.107666

Date: March 2022

4. M Tostado-Véliz, R. León-Japa, F. Jurado

Title: Optimal electrification of off-grid smart homes considering flexible demand and vehicle-to-home capabilities

Journal: Applied Energy, 298, 117184

DOI: 10.1016/j.apenergy.2021.117184

Date: September 2021

5. M. Ortega, E. Lanagran, M.V. Ortega, F. Jurado

Title: Design and integration of Z-source converters for energy management with series operation: Applied to DC microgrid

Journal: International Journal of Electrical Power & Energy Systems

DOI: 10.1016/j.ijepes.2021.106781

Date: June 2021

6. M. Tostado, D. Icaza, F. Jurado

Title: A novel methodology for optimal sizing photovoltaic-battery systems in smart homes considering grid outages and demand response

Journal: Renewable Energy 170:884-896

DOI: 10.1016/j.renene.2021.02.006

Date: June 2021

7. J. C. Hernández, M. Gomez, F. Sánchez, F. Jurado
 Title: Optimization of battery/supercapacitor-based PV household-prosumers providing self consumption and frequency containment reserve as influenced by temporal data
 Journal: The Journal of Energy Storage 36,102366
 DOI: 10.1016/j.est.2021.102366 Date: April 2021
8. M. Tostado, S. Kamel, F. Jurado
 Title: Power flow approach based on the S-iteration process
 Journal: IEEE Transactions on Power Systems 35 (6): 4148 - 4158
 DOI: 10.1109/TPWRS.2020.2989270 Date: November 2020
9. M. Tostado, S. Kamel, F. Jurado
 Title: A robust power flow algorithm based on Bulirsch-Stoer method
 Journal: IEEE Transactions on Power Systems, 34 (4): 3081 - 3089
 DOI: 10.1109/TPWRS.2019.2900513 Date: July 2019
10. M. Ortega, M.V. Ortega, F. Jurado, J. Carpio, D. Vera
 Title: Bidirectional DC–DC converter with high gain based on impedance source
 Journal: IET Power Electronics 12 (8) pp. 2069-2078
 DOI: 10.1049/iet-pel.2018.5385 Date: July 2019

C.2. Congresses

1. Ayman Awad, Salah Kamel, F. Jurado
 Title: UPFC Modeling for Power Flow Analysis in MVDC Grids
 IEEE International Conference on Environment and Electrical Engineering, Bari, Italy, September 2021
2. Ayman Awad, Salah Kamel, F. Jurado, Hany M. Hasanien, Ahmed Al-Durra
 Title: A simple modeling of static series synchronous compensator in NEPLAN for power system control. IEEE Conference of the Industrial Electronics Society (IECON), Lisbon, Portugal, October 2019

C.3. Research projects

1. Project reference: 101036900
 Title: Renewable energies for Africa: effective valorization of agri-food wastes (REFLECT AFRICA)
 Coordinators: David Vera Candeas and Francisco Jurado Melguizo
 Financing entity: 8th Framework Programme (Horizon 2020) of the European Union
 Duration (start date - end date): 01/11/2021-01/11/2026
 Financing received (in euros): 6,962,820
2. Project reference: RTI2018-095720-B
 Title: MVDC grids integrating renewable energy technologies, energy storage systems and impedance-source converters
 Principal investigator: Francisco Jurado Melguizo
 Financing entity: National Plan for Scientific and Technological Research and Innovation (2017-2020)
 Duration (start date - end date): 01/01/2019-30/09/2022
 Financing received (in euros): 160,000
3. Project reference: PCI2018-093255
 Title: Opportunities for olive oil value chain enhancement through the by-products valorization (OLIVEN)
 Coordinator: David Vera Candeas
 Financing entity: 7th Framework Program of the European Union
 Duration (start date - end date): 15/12/2018-15/12/2021
 Financing received (in euros): 588,000

4. Project reference: ENE2013-46205

Title: Medium voltage direct current applications in electrical systems

Principal investigator: Francisco Jurado Melguizo

Financing entity: National Plan for Scientific and Technological Research and Innovation (2013-2016)

Duration (start date - end date): 01/10/2013-30/09/2016

Financing received (in euros): 280,000

5. Project reference: ENE2010-19744

Title: Hybrid electrical generation system composed of photovoltaic panels, wind turbine and fuel cell with electrolyser

Principal investigator: Francisco Jurado Melguizo

Financing entity: National Plan for Scientific and Technological Research and Innovation (2008-2011)

Duration (start date - end date): 01/10/2010-30/09/2013

Financing received (in euros): 167,130

6. Project reference: (RESOLIVE) 218453-SME-2

Title: Adaptation of renewable energies technologies for the olive oil industry

Scientific Coordinator: Francisco Jurado Melguizo

Financing entity: 7th Framework Program of the European Union

Duration (start date - end date): 01/01/2009-15/03/2012

Financing received (in euros): 2,037,219

C.4. Contracts, technological or transfer merits

1. Project reference: 113 University of Jaen

Title: Design, development and evaluation of a high efficiency matrix converter prototype for application in distributed generation

Principal investigator: Francisco Jurado Melguizo

Financing entity: Abengoa S.A.

Duration (start date - end date): 01/03/2008-01/01/2010

Financing received (in euros): 75.000

2. Project reference: 1153 University of Jaen

Title: Design of a DC / AC converter that can be used to power the propulsion of a light rail from the electrical energy produced by a fuel cell

Principal investigator: Francisco Jurado Melguizo

Financing entity: Centre for the Development of Industrial Technology (CDTI) and Abengoa

Duration (start date - end date): 01/01/2008-31/12/2011

Financing received (in euros): 250,000

Patents

1. Title registered industrial property: Mitigation distributed generation impact on coordination of direction overcurrent relays using a novel characteristic relay curve

Date of register: 21/11/2018

Nº of patent: CN109638760B

Country of inscription and operating country: China

Inventors/authors/obtainers: Ahmed Korashy, Salah Kamel, Francisco Jurado, Juan Yu, A. Youssef, F. Feng

Others. Awards

* IEEE Region-8 Chapter of the Year Award 2010.

* IEEE Education Society Chapter Achievement Award 2007.

* IEEE Education Society Chapter Achievement Award 2011.

* Premium Award for Best Paper in IET Renewable Power Generation 2014.