CV date	15/01/23

Part A. PERSONAL INFORMATION

First name	José Antonio		
Family name	Aguado Sánchez		
Gender (*)	Male	Birth date	----
ID number	-----		
e-mail	jaguado@uma.es	https://www.uma.es/departamento-de-ingenieria-electrica/info/113561/jose-antonio-aguado-sanchez/	
ORCID ID(*)		0000-0003-3954-3646	

(*) Mandatory

A.1. Current position

Position	Full Professor		
Initial date	2016		
Institution	Universidad de Málaga		
Departament/Center	Electrical Engineering Department, School of Industrial Eng.		
Country	Spain	Teleph. number	607211026
Key words	Operation and Planning of Smartgrids, Renewable Energy Integration, Electricity Markets		

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
2014-Present	Department Head, Electrical Engineering
2002-2016	Associate Prof
1998-2001	Assistant Prof
1997-2001	Visiting Researcher (Intermittent)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Dr. Ingeniero Industrial	Universidad de Málaga	2001
Ingeniero Industrial	Universidad de Málaga	1997

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

José A. Aguado is an Industrial Engineer (Power System major) from the University of Malaga (1997), Doctor of Industrial Engineering from the University of Malaga (2001), Assistant Professor (1998), University Tenured Professor (2003) and **Full Professor** (2016) at the Department of Electrical Engineering and assigned to the School of Industrial Engineering of the University of Malaga. He actively participates in scientific associations such as IEEE, where he was Vice-President of the IEEE Power and Energy Spanish Section. His expertise lies in Operation and Planning of Electric Energy Systems, Renewable Energy, Energy Storage and Electric Vehicles integration into Smartgrids. Prof. Aguado is also the **FENIE Research Chair** on Energy Transformation at UMA.

During the last 23 years of research, teaching and administrative activities, I have participated in more than 130 publications: **61 journal** articles in scientific journals indexed in the Journal of Citation Report (***h-index* = 30, 3355 citations, GS**), author of **one book by Springer**, editor of one book, editor of two IEEE-sponsored international conference proceedings books, 6 book chapters, and more than 70 international conference publications. Other merits include the

recognition of **5 six-year research periods** (including one research-transfer period), the supervision of **7 doctoral theses** (two of them were FPI students and currently Prof. Aguado is supervising one FPU student) and the participation in more than 66 research projects (European, national and regional level) and contracts (international and national) with a total budget of €4,2 million, of which **55 as Principal Investigator** with a budget of €3,8 M. Likewise, I have carried out various research stays with a total of 18 months in prestigious Universities.

Prof. Aguado has lectured more than **3500 hours** in graduate and postgraduate accredited University at three different universities. Currently, Prof. Aguado is **program coordinator** of the Interuniversity Doctorate Program "Electric Energy Systems" at the University of Malaga.

Likewise, the research activity has had a scientific aspect whose results have materialized in publications in high-impact journals in the area, and project management and research contracts in both national and regional competitive calls. On the other hand, the participation in conferences by invitation in several **international Universities and Institutions**.

In parallel with the scientific activity, I have developed research work aimed at technology transfer through competitive calls such as programs financed by the Center for Industrial Technological Development (CDTI) or the Andalusian Technological Corporation (CTA) with companies with a strong innovative character such as ENEL or Abengoa, in addition to **consulting** projects with companies and **international organizations** of special relevance such as the World Bank or the Asian Development Bank. It is necessary to highlight the strong internationalization of this activity with projects with implementation of prototypes on field in countries such as Sri Lanka, Maldives, Bangladesh, Jordan and Chile.

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

C.1. Publications *(selected publications)*

[1] J. Aguado, A. Paredes Coordinated Privacy-Preserving Trading of Flexibility Products in Multi-Area Local Energy Markets. Applied Energy. Feb 2023. In press.

[2] J. A. Aguado, S. Martín, C. A. Pérez-Molina, W.D. Rosehart. Market Power Mitigation in Transmission Expansion Planning Problems. In press. 2023. IEEE Transactions on Energy Markets, Policy and Regulation.

[3] Mansouri, S. A., Jordehi, A. R., Marzband, M., Tostado-Véliz, M., & Aguado, J. A.. An IoT-enabled hierarchical decentralized framework for multi-energy microgrids market management in the presence of smart prosumers using a deep learning-based forecaster. Applied Energy, 2023, 333, 120560.

[4] de la Torre, S., J. A. Aguado, and E. Sauma. "Optimal scheduling of ancillary services provided by an electric vehicle aggregator." *Energy* 265 (2023): 126147.

[5] C. Contreras, A. Triviño, **J. Aguado**. Distributed Model Predictive Control for voltage coordination of large-scale wind power plants. International Journal of Electric Power and Energy Systems. Volume 143, December 2022, 108436.

[6] Y. Smeers, S. Martin and **J. A. Aguado**, "Co-optimization of Energy and Reserve With Incentives to Wind Generation," in *IEEE Transactions on Power Systems*, vol. 37, no. 3, pp. 2063-2074, May 2022,

[7] Leiva J., **Aguado J.**, Paredes A., Arboleya P. *Data-Driven Flexibility Prediction in Low Voltage Power Networks*. International Journal of Electric Power and Energy Systems. Volume 123, December 2020.

[8] J.M. González, **J. Aguado**, López, P. S. Martin. *Hybrid Battery-Ultracapacitor Storage System Sizing for Renewable Energy Network Integration*. IET Renewable Power Generation, Volume: 14, Issue: 13, Jun. 2020

[9] Ivanova A., Chassin D., **Aguado J.A.**, Crawford C., Djilali N.. Techno-economic feasibility of a photovoltaic-equipped plug-in electric vehicle public parking lot with coordinated charging. IET Energy Systems Integration. March 2020.
[10] S. de la Torre, JM González-González, , **J. A. Aguado**. S Martin. Optimal Battery Sizing considering Degradation for Renewable Energy Integration. IET Renewable Power Generation. Volume 13, Issue 4, 18 March 2019, p. 572 – 577.
[11] **J. A. Aguado**, A. J. Sánchez-Racero and S. de la Torre, "*Optimal Operation of Electric Railways With Renewable Energy and Electric Storage Systems*," IEEE Transactions on Smart Grid, vol. 9, no. 2, pp. 993-1001, March 2018.
[12] **Aguado J. A.**, de la Torre S.,Triviño-Cabrera A. *Battery Energy Storage Systems in Transmission Network Expansion Planning*. *Electric Power System Research*. Vol 145. pp. 63-72. 2017
[13] J. Leiva, A. Palacios and **J. A. Aguado**. *Smart Metering Trends, Implications and Necessities: A Policy Review*. Renewable and Sustainable Energy Reviews. Vol 55. Pp 227-233. 2016
[14] J. Romero-Ruiz, J. Pérez-Ruiz, S. Martín, **J.A. Aguado**, S. de la Torre. *Probabilistic Congestion Management using EVs in a Smart Grid with intermittent Renewable Generation*. Electric Power Systems Research, Vol. 137, August 2016, pp. 155-162.
[15] S. de la Torre, A. J. Sánchez-Racero, **J. A. Aguado**, M. Reyes and O. Martínez, Optimal Sizing of Energy Storage for Regenerative Braking in Electric Railway Systems. *IEEE Transactions on Power Systems*, vol. 30, no. 3, pp. 1492-1500, May 2015.
[16] S. Martin, Y. Smeers and **J. A. Aguado**. A Stochastic Two Settlement Equilibrium Model for Electricity Markets with Wind Generation. *IEEE Transactions on Power Systems*, 30(1):233 – 245, January 2015.
[17] S. de la Torre, A. J. Sánchez-Racero, **J. A. Aguado**, M. Reyes and O. Martínez, Optimal Sizing of Energy Storage for Regenerative Braking in Electric Railway Systems. *IEEE Transactions on Power Systems*, vol. 30, no. 3, pp. 1492-1500, May 2015. DOI: 10.1109/TPWRS.2014.2340911
[18] M. A. López, S. de la Torre, S. Martín, **J. A. Aguado**. Demand-side management in smart grid operation considering electric vehicles load shifting and vehicle-to-grid support. *International Journal of Electrical Power & Energy Systems*. Vol 64. Pp.689-698. 2015.
[19] M. A. López, S. Martín, **J. A. Aguado**, S. de la Torre. V2G strategies for congestion management in microgrids with high penetration of electric vehicles. *Electric Power Systems Research*, Vol. 104, pp. 28-34, 2013.

C.3. Research projects

[1] **J. Aguado** (PI). H2020--innovative Energy Storage TEchnologies Towards increased Renewables integration and Efficient Operation (i-Stentore). Call. HORIZON--CL5--2022D3-01. 2023-2026. Reference: 101096787.
[2] **J. Aguado** (PI). idrECO: Intelligent, Digital and Renewable Energy Communities: Business and market tools for renewable energy communities. Plan Estatal de Investigación Científica, Técnica y de Innovación. TED2021-132339B-C42. 2022-2024.
[3] **J. Aguado** (PI). CENIT: Planificación y gestión automatizada de Comunidades Energéticas Inteligentes. Orden de 25 de junio de 2022, por la que se efectúa la convocatoria correspondiente a 2022 de las ayudas establecidas para el apoyo a Agrupaciones Empresariales Innovadoras, correspondientes en el marco del Plan de Recuperación, Transformación y Resiliencia
[4] **J. Aguado** (PI). Research Chair for Energy Transition. Fenie Energía. Period: 2020-2022. Ref: 807/30.5349.
[5] **J. Aguado** (PI). Gestión de Flexibilidad en Redes de Distribución Eléctrica a través Mercados Locales de Electricidad y Transacciones Peer-to-Peer. Proyectos de Excelencia Junta de Andalucía. Period: 2021-2023. Ref: P20_01164.

[6] **J. Aguado** (PI), J. Pérez (Co-PI). Electric Energy Storage: Optimization Models for SmartGrid Integration. Ministry of Education. Spanish Government. Period: 2016-2019. Ref: ENE2016-80638-R

[7] **J. Aguado** (PI). Optimization Models and Algorithms for Renewable Energy Integration into Railway Energy Infrastructure. Programa Retos-Colaboración (Abengoa-UPM-UMA). Ministry of Industry. Spanish Government. Period: 2016-2018. Ref: RTC-2015-3630-4

[8] **J. Aguado** (PI). Prototype for Alternative Operation of Mobility Assets. Endesa. CDTI. FEDER-Interconecta. Ministry of Industry. Spanish Government. Period: 2016-2018. Ref: 806/30.4778.

[9] **J. Aguado** (PI). Operation Strategies for SmartGrids with high penetration of electric vehicles, energy storage and renewable sources. Ministry of Industry. Spanish Goverment Period: 2012-2015.

[10] **J. Aguado** (PI). Smart Management Hybrid Energy Controller (SMHEC). Corporación Tecnológica de Andalucía (Inabensa-UMA). Junta de Andalucía. Period: 2015-2016.

[11] **J. Aguado** (PI). Gestor Energético para Sistemas de Almacenamiento de energía híbridos aplicados a suministros de servicios de red con optimizador del CAPEX y del OPEX de la instalación (SAVER). Corporación Tecnológica de Andalucía (WinInertia-UMA). Period: 2015-2016. Ref: 806/30.4467.

[12] **J. Aguado** (PI). Vehicle Initiative Consortium for Transport Operation and Road Inductive Applications. CDTI-Feder Interconnecta. Period: 2013-2014. ENDESA. Ref: 806/30.4201

[13] **J. Aguado** (PI). Desarrollo de la primera Red Inteligente para la Gestión Energética del Sector Ferroviario (FerroSmartGrid). CDTI-Feder Interconnecta. INABENSA. Period: 2012-2014. Ref: 806/30.3898.

C.4. Contracts, technological or transfer merits

[1] **J. Aguado** (PI). Accelerating Sustainable Energy Transition in Outer Islands. Asian Development Bank. 2022-2025. Ref: 806/30.5121.

[2] **J. Aguado** (PI). Protection and Coordination Study in Cape Verde. Electra-Mercados Aries. 2021. Ref.

[3] **J. Aguado** (PI). Enhancing the Livelihood of Rural Community of Meghalaya Through Use of Renewable Energy Mini-grids, 2019-2024. Asian Development Bank. Ref: SC 113152 IND.

[4] **J. Aguado** (PI). Desarrollo de Servicios para la Participación de Sistemas de Almacenamiento Eléctricos en Mercados de Energía Eléctrica (Chipre y Grecia). Fundación Universidad Loyola. 2020.

[5] **J. Aguado** (PI). BlockChain and Peer-to-Peer Trading for an Energy Retailer. Endesa Energía. Enel Group. 2018. Ref: 806/30.5485.

[6] **J. Aguado** (PI). Design of an Off-Grid Hybrid (Hydro-Diesel-Storage) System in Palena (Southern Chile). SAESA Chile. 2018. Ref: N/A.

[7] **J. Aguado** (PI). Foreign Consulting Services for Transmission Master Plan System of Sumatera (Indonesia) including Solar and Wind Power plants. AF Mercados-Ministry of Energy (Indonesia). 2017. Ref: 806/30.4867

[8] **J. Aguado** (PI). Effective Deployment of Distributed Small Wind Power Systems in Asia Rural Areas. Effergy- Asian Development Bank. 2014-2017. Ref: 806/30.4345.

[9] **J. Aguado** (PI). SmartGrid Technologies for Islanded Hybrid Energy Systems. Asian Development Bank). 2014. Ref: 806/30.4346.

[10] **J. Aguado** (PI). Grid Impact Study for 240 MW Wind Power Plant in Azerbaijan. AcwaPower. 2020

[11] **J. Aguado (PI).** Grid Impact Study for 220 MWp Solar PV Power Plant in Azerbaijan. MASDAR. 2020