

CV date	21/05/2026
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Part A. PERSONAL INFORMATION

First name	Eleonora
Family name	Viezza
Gender	Female
URL Web	www.psft.eu
Open Researcher and Contributor ID (ORCID)	0000-0001-6419-6848

A.1. Current position

Position	Profesora Titular		
Initial date	28/12/2020		
Institution	Universidad de Sevilla		
Department/Center	Department of Atomic, Molecular and Nuclear Physics		
Country	Spain	Telephone number	
Key words	Plasma physics, nuclear fusion, tokamaks, magnetohydrodynamics, plasma transport, particle detectors in a plasma, spectroscopy		

A.2. Previous professional status

Period	Position / Institution /Country / Interruption cause
2013-2016	Postdoctoral researcher at the Max Planck Institute for Plasma Physics
2016-2017	Juan de la Cierva grantee at the University of Seville
2017-2019	Marie Skłodowska Curie Fellow at the University of Seville
2020	Profesora Contratada Doctora at the University of Seville

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD Physics	Ludwig-Maximilian-University Munich	2013

Part B. CV SUMMARY (maximum of 5000 caracteres, including spaces)

In Jan. 2010 I started my PhD thesis at the **Max Planck Institute for Plasma Physics (IPP)** under the supervision of Prof. H. Zohm. I defended my PhD thesis “*Radial electric field studies in the plasma edge of ASDEX Upgrade*” with “**magna cum laude**” in Feb. 2013 at the Ludwig Maximilian University Munich. During my PhD thesis, I have published 19 peer-reviewed publications, 5 of them as first-author. After my PhD, I started a postdoc position at IPP and received a **EUROfusion Research fellowship** (2014-2015).

In 2016, I moved to the **University of Seville (US)** and entered the world of academia. I was awarded with a **Juan de la Cierva** (2016-2017) and a **Marie Skłodowska Curie grant** (2017-2019) which I carried out at the **Department of Atomic, Molecular and Nuclear Physics of the US**. In 2019, I became associate professor. Currently, I am Profesora Titular de Universidad at US. Since 2021, I am also the assistant dean of the Faculty of Physics and responsible for international mobility.

I give lectures at the US in the Undergraduate Course, the Master Erasmus Mundus in Nuclear Physics and the Inter-University Master on Experimental Nuclear Physics. I am continuing my research lines on pedestal physics in various tokamaks and am leading a new research line on edge plasma physics and spectroscopic applications at US. I am co-founder and co-director of the Plasma Science and Fusion Technology Group (www.psft.eu, 33 team members) at the University of Seville and co-PI of the SMART tokamak. Currently I am supervising 3 postdoctoral researchers, 7 PhD, 3 Master and 2 Bachelor students.

I have a large number of **well-established international collaborations** including IPP, the Princeton Plasma Physics Laboratory, the DIII-D tokamak in San Diego, MIT in Boston, the University of Oxford, the Joint European Tokamak (JET) in Culham, the Aalto University in Finland, CIEMAT in Madrid, the NIFS institute in Japan. Since 2011, in the frame of EUROfusion, I have been **scientific coordinator** of various experiments at the tokamaks ASDEX Upgrade, JET, TCV and MAST-U, leading large experimental teams with up to 50 scientists. Currently, I am the **responsible officer** for the active spectroscopy diagnostics at ASDEX Upgrade and one of four scientific leaders on ELM-free regimes within the EUROfusion WPTE campaign that covers experiments at JET, AUG, MAST-U and TCV. In 2018 I have received one of the prestigious **European Research Council (ERC) Starting Grants (2019-2024)** to further develop my research lines at the US. I was awarded with two **ERC Consolidator Grants** in 2023 and 2025.

As of May 2026, I have published more than 200 publications (13 as first and corresponding author) and presented 21 invited talks (4 of them as plenary) at international conferences. In my publication list, I would like to highlight 2 Nature Physics, 2 Physical Review Letters, 3 Nuclear Fusion Letters, 87 Nuclear Fusion, 64 Plasma Physics Controlled Fusion.

Since 2013, I am an active referee for various high impact journals of my field and various institutions (e.g. U.S. Department of Energy, UKRI EPSRC, Gobierno de Chile, National Science Centre Poland, Academy of Finland, German Research Association DFG). Since 2016, I am an expert for the ITPA Pedestal & Edge Physics Topical Group. I was invited to be member of the programme committee for the EU-US Transport Taskforce Meeting 2018, the European Physical Society Conference in Plasma Physics 2020 and the American Physical Society Division Plasma Physics Conference 2022. I have also participated in various outreach activities, e.g. the European Researcher's Night 2018 and 2021, the MSCA Falling Walls Lab 2018.

Supervisor of **6 PhD theses** (5 University of Seville, 1 Technical University of Munich), **19 master theses** (2017-2025) and **18 bachelor theses** (2018-2025) at the University of Seville. I have supervised 4 Postdocs from 2020-2025. Currently, I am supervising 2 Postdocs, 5 PhD students (1 FPU, 1 PIF, 1 Garantía Juvenil, 1 Junta de Andalucía), 3 Master students and 2 Bachelor students.

Awards and Distinctions:

- 2018 Young Scientist Prize awarded by the "International Union of Pure and Applied Physics"
- 2018 EYRA Young Researchers Award awarded by "Euroscience".
- 2018 Falling Walls Audience Prize awarded by the "Falling Walls Foundation".
- 2019 Invitation as "Young Scientist" to the "69th Lindau Nobel Laureate Meeting", a prestigious conference with more than 40 Nobel Prize winners of physics in the audience.
- 2021 Prize VIII Premio Manuel Losada Villasante a la Excelencia en la Investigación Científica awarded by the Manuel Losada Villasante Foundation and Sociedad Española de Radiodifusión
- 2022 Premio Fundación Princesa de Girona Investigación Científica
- 2022 Premios de Física RSEF-BBVA Investigador Experimental Joven
- 2023 Premio Mujeres a Seguir (MaS) Categoría Ciencia.
- 2024 Seal of Excellence ERC Proof-Of-Concept Grants
- 2024 Disruptores Innovation Award in the category Best Researcher of the Year
- Since 2022 part of Stanford University's list of the World's Top 2% Scientists

Part C. RELEVANT MERITS

C.1. Publications

156 out of 201 peer-reviewed publications (298 out of 424 publications including collaborations) with total citations of 11277 (based on Web of Science) and average of 880 citations/year during the last 5 years (based on Scopus). H-index of 51 based on Scopus, 52 based on Google Scholar, 55 based on Web of Science.

Below 5 most relevant publications published in the last 10 years:

- **Publication 1.** J. Dominguez-Palacios, S. Futatani, M. García Muñoz, A. Jansen van Vuuren, E. Viezzer et al. (5/17). 2025. *Effect of energetic ions on edge-localized modes in tokamak plasmas*. Nature Physics. Nature Publishing. 21, 43-51.
- **Publication 2.** Eleonora Viezzer et al. (1/26). 2023. *Prospects of core-edge integrated no-ELM and small-ELM scenarios for future fusion devices*. Nuclear Materials and Energy. Elsevier Publishing. 34-101308.
- **Publication 3.** Eleonora Viezzer et al. (1/15). 2020. *Dynamics of the pedestal transport during edge localized mode cycles at ASDEX Upgrade*. Plasma Physics Controlled Fusion. IOP Publishing. 62-024009.
- **Publication 4.** Eleonora Viezzer. (1/1). 2018. *Access and sustainment of naturally ELM-free and small-ELM regimes*. Nuclear Fusion. IOP Publishing. 58-115002. Single author paper.
- **Publication 5.** Joaquín Galdon Quiroga et al. (12/14). 2018. Beam-Ion Acceleration during Edge Localized Modes in the ASDEX Upgrade Tokamak Physical Review Letters. APS Physics. 121-025002.

C.2. Congresses

I have participated in over 250 conferences, among which I list the 5 most relevant below:

- **Conference 1.** Plenary talk at the 25th PSI Conference on Plasma Surface Interactions, *Assessment of core-edge integrated scenarios for future fusion power plants*, Online, 2022
- **Conference 2.** Plenary talk at the EU-US Transport Taskforce Meeting, *Recent advances on stationary no-ELM and small-ELM regimes*, Online, 2021
- **Conference 3.** Plenary talk at the International H-mode Workshop, *Access and sustainment of naturally ELM-free and small-ELM regimes*, St. Petersburg Russia, 2017
- **Conference 4.** Invited talk at the European Physical Society Conference, *Dynamics of the edge transport during edge localized mode cycles*, Milan Italy, 2019
- **Conference 5.** Invited talk at the XII Iberian Vacuum conference, *Design and current status of the Small Aspect Ratio Tokamak*, Online, 2021

C.3. Research projects

Most relevant research projects in the last 5 years:

- **Project 1.** Turbulence optimization in magnetized plasmas (TURBO4ENERGY, 101232089). **European Research Council (ERC) Consolidator Grant.** IP Eleonora Viezzer. (Universidad de Sevilla). 2025-2030. Principal Investigator.
- **Project 2.** Subvención excepcional para la financiación del proyecto tokamak SMART. PIs: M. Garcia-Munoz and E. Viezzer (2025-2029)
- **Project 3.** Mastering fluctuations in magnetized plasmas (FLUC4ENERGY, 101126369). **European Research Council (ERC) Consolidator Grant.** IP Eleonora Viezzer. (Universidad de Sevilla). Awarded in 2023.
- **Project 4.** High confinement scenarios at positive and negative triangularity in the SMART spherical tokamak. **EUROfusion Enabling Research Project.** IP Eleonora Viezzer. (Universidad de Sevilla). 2024-2029. Principal Investigator.
- **Project 5.** Taming the particle transport in magnetized plasmas via perturbative fields (3D-FIREFLUC, 805162). **European Research Council (ERC) Starting Grant.** IP Eleonora Viezzer. (Universidad de Sevilla). 01/05/2019-30/04/2024. Principal Investigator.
- **Project 6.** EUROfusion WPTE Experimental Campaign at ASDEX Upgrade, MAST-U, TCV and WEST. **EUROfusion Consortium.** IP Eleonora Viezzer. (Max Planck Institute for Plasma Physics, Culham Center for Fusion Energy, EPFL, CEA). 01/01/2021 - 31/12/2027. Scientific Coordinator.

C.4. Contracts, technological or transfer merits

- **Patent 1.** European Patent No. 24382158.4 filed on February 16, 2024. Ultra-compact high-field spherical tokamak for fusion energy. Inventors: M. García Muñoz and E. Viezzer

- **Contract 1.** Exploration of plasma performance in positive and negative triangularity in spherical tokamaks. **EUROfusion Researcher Grant** for Pilar Cano Megías. (Universidad de Sevilla). 01/01/2025-31/12/2026. Supervisor.
- **Contract 2.** Transport and confinement studies in positive and negative triangularity plasmas: spherical vs conventional tokamaks. **EUROfusion Researcher Grant** for Diego J. Cruz Zabala. (Universidad de Sevilla). 01/06/2023-31/05/2025. Supervisor.
- **Contract 3.** Optimization of fast-ion confinement against edge instabilities for future fusion reactors. **Marie Skłodowska Curie Actions - Individual Fellowship** (MSCA-IF) for Joaquín Galdon Quiroga. (Universidad de Sevilla). 01/09/2022-31/08/2024. Supervisor.
- **Contract 4.** Non-Linear Hybrid Kinetic-MHD Plasma Response to Externally Applied 3D Non-Axisymmetric Fields. **EUROfusion Researcher Grant** for Scott J. Doyle. (Universidad de Sevilla). 01/10/2021-30/09/2023. Supervisor. In 2021 he also obtained a Juan de la Cierva fellowship which he had to turn down in lieu of the EUROfusion grant.
- **Contract 5.** Mastering the energetic particle distribution in a magnetohydrodynamic active plasma. **Marie Skłodowska Curie Actions - Individual Fellowship** (MSCA-IF). (Universidad de Sevilla). 01/09/2017-31/08/2019.
- **Contract 6.** Unraveling the transport mechanisms in the edge pedestal of an H-mode fusion plasma. **Juan de la Cierva - Formación.** (Universidad de Sevilla). 01/04/2016-31/03/2018.
- **Contract 7.** WP14-FRF-IPP/Viezzler, Impact of poloidal impurity asymmetries on edge current and pedestal stability. **EUROfusion Researcher Fellowships Programme. EUROfusion Consortium.** (Max Planck Institute for Plasma Physics). 01/01/2014-31/12/2015.