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|--------------------------------------|-------------------------|---------------------|------------|
| <b>Part A. PERSONAL INFORMATION</b>  |                         | <b>CV date</b>      | 24/01/2023 |
| First and Family name                | José L. Gómez Fernández |                     |            |
| Social Security, Passport, ID number | 24.212.784-V            | Age                 | 56         |
| Researcher numbers                   | Researcher ID           | C-4195-2008         |            |
|                                      | Orcid code              | 0000-0003-4190-7613 |            |

### A.1. Current position

|                                |  |        |  |
|--------------------------------|--|--------|--|
| Name of University/Institution | Consejo Superior de Investigaciones Científicas  |        |  |
| Department                     | Instituto de Astrofísica de Andalucía  |        |  |
| Address and Country            | Glorieta de la Astronomía s/n, Granada 18008, Spain  |        |  |
| Phone number                   | +34 958 230604   | E-mail | <a href="mailto:jlgozmez@iaa.es">jlgozmez@iaa.es</a> |
| Current position               | Investigador Científico  | From   | 01/06/2002   |
| Espec. cód. UNESCO             | 210500 – Radio Astronomy   |        |  |
| Palabras clave                 | Active galaxies, relativistic jets, interferometry, magnetohydrodynamics, non-thermal emission |        |  |

### A.2. Education

| PhD/Graduate              | University           | Year |
|---------------------------|----------------------|------|
| B.S. in Physics/Astronomy | Barcelona University | 1989 |
| PhD Physics/Astronomy     | Granada University   | 1993 |

### A.3. Scientific indicators (*JCR articles, h Index, thesis supervised...*)

Indicators for high-impact peer-reviewed publications **ONLY in the first quartil (Q1)**:

**Total number of Q1 publications: 168**      First author publications: 18 (2000 citations)  
**Total number of citations: 15800**      First/second author publications: 37  
**h-index: 59**      Pubs. per year last 5 years: 22 (1500 citations/yr)

*Thesis supervised:*

Supervisor of 8 PhD Thesis: Dr. Iván Agudo (2002), Dr. Mar Roca (2011), Dr. Sol Molina (2014), Dr. Carolina Casadio (2016), Antonio Fuentes (2022), Teresa Toscano (expected 2025), Rohan Dahale (2025), Marianna Foschi (2025).

*Other publications:*

More than 180 proceedings papers (30 refereed), a book chapter, a technical report, 7 outreach publications (including press releases). 332 total publications (192 refereed).

*Sexenios, Quinquenios:*

5 Sexenios, (last one 2014-2019). 6 Quinquenios, 1991 to 2020.

### Part B. CV SUMMARY (*max. 3500 characters, including spaces*)

B.S. in Physics (Barcelona University, 1989), PhD in Physics (Granada University, November 1993). *Fulbright* postdoctoral fellow (Boston University, 1994-1995). Senior postdoctoral researcher in Manchester University and IAA (1996-2001). Staff Scientist (IAA, 2002).

Awarded with the **2020 Breakthrough Prize in Fundamental Physics**, the Diamond Achievement Award of the US National Science Foundation, the Albert Einstein Medal, and Bruno Rossi Prize, among others, as member of the Event Horizon Telescope Collaboration that captured the first image of a black hole.

Awarded with the Bandera de Andalucía de la Investigación, la Ciencia y la Salud 2020, and best outreach article by the Sociedad Española de Física 2020.

Author of 168 papers in high-impact peer-reviewed journals of high impact (first quartil Q1), including a first author paper in *Science*, four co-authored papers in *Nature*, and a "News & Views" paper in *Nature Physics*. These publications add a total of 15800 citations, with an average of 73 citations/paper and a h-index of 59. First author in 18 of these publications,

adding a total of 2000 citations. 37 papers as first or second author. Average of 22 papers per year in the last 5 years.

Participation in more than 100 international meetings, including 39 invited talks or reviews. Author of more than 140 papers in proceedings, as well as a book chapter, technical report for NRAO (USA), and 7 outreach publications (including multiple press releases). Participation in the SOC of 12 international meetings, 7 of them as chair of the SOC and LOC.

Supervisor of 8 PhD Thesis, six postdocs, and three Master Thesis. Lecturer in several PhD courses in University of Alcalá and University of Granada.

Chair of the International Time Allocation Committee of the space VLBI mission RadioAstron since June 2018. Evaluator of the ANEP for the Spanish Plan Estatal de Excelencia I+D, “Start Grants” and “Consolidator Grants” of the European Union, and research councils of Ireland, South Korea, Hong Kong. External evaluator for Full Professorship at Purdue University (USA) and 5 PhD Thesis. Referee for Nature, Science, Astrophysical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, Astronomical Journal, among others.

Editor in Chief of the international peer reviewed journal “Galaxies”.

Principal Investigator of 7 research grants funded by the Spanish government and participation in other 13 national and international research grants. Research Guarantor of the Instituto de Astrofísica de Andalucía “Severo Ochoa” Center of Excellence Grant.

**Vice-chair of the Science Council of the Event Horizon Telescope Collaboration and coordinator of the EHT Imaging Working Group.** Member of the CTA consortium.

Main research interests include imaging of supermassive black holes and their associated jets. Participation in multiple international monitoring programs of AGN jets at radio, millimeter, optical, X and gamma-rays, including the leadership of one of the Key Science Programs of the space VLBI mission RadioAstron and first Event Horizon Telescope + phased-ALMA observations to image AGN jets at micro-arcsecond angular resolutions. Specialist in relativistic magnetohydrodynamic and non-thermal emission numerical simulations for the interpretation of multi-wavelength observations of relativistic jets.

## Part C. RELEVANT MERITS

### C.1. Publications

Due to the impossibility to list all these papers in a 4 pages CV summary, below is a list of **10 selected publications**:

1. Event Horizon Telescope Collaboration, “First SgrA\* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way”, 2022, ApJ, 930, L11; **and other five accompanying papers in the same ApJ issue focused on the first EHT results.**
2. Event Horizon Telescope Collaboration, “First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole”, 2019, ApJ, 875, 1; **and other five accompanying papers in the same ApJ issue focused on the first EHT results.**
3. Jorstad, S. G., Marscher, A. P., ..., Gómez, J. L., et al. “Rapid quasi-periodic oscillations in the relativistic jet of BL Lacertae”, 2022, *Nature*, 609, 265
4. Gómez, J. L., Traianou, E., et al. “Probing the innermost regions of AGN jets and their magnetic fields with RadioAstron. V. Space and ground millimeter-VLBI imaging of OJ287”, 2022, ApJ, 924, 122
5. Janssen, M., Falcke, H., ... Gómez, J. L., et al. “Event Horizon Telescope observations of the jet launching and collimation in Centaurus A”, 2021, *Nature Astronomy*, 5, 1017
6. Gómez, J. L., Lobanov, A. P., Bruni, G., et al. “Probing the innermost regions of AGN jets and their magnetic fields with RadioAstron. I. Imaging BL Lacertae at 21 microarcsecond resolution”, 2016, ApJ, 817, 96
7. Jorstad, S. G., Marscher, A. P., Lister, M. L., Stirling, A. M., Cawthorne, T. V., Gear, W. K., Gómez, J. L., et al. “Polarimetric observations of 15 active galactic nuclei at high frequencies: jet kinematics from bimonthly monitoring with the Very Long Baseline Array”, 2005, AJ, 130, 1418
8. Marscher, A. P., Jorstad, S. G., Gómez, J. L., Aller, M. F., Teräsranta, H., Lister, M. L.,

Stirling, A. M., “Observational evidence for the accretion-disk origin for a radio jet in an active galaxy”, 2002, *Nature*, 417, 625

- Gómez, J. L., Marscher, A. P., Alberdi, A., Jorstad, S. G., García-Miró, C., “Flashing superluminal components in the jet of the radio galaxy 3C120”, 2000, *Science*, 289, 2317
- Gómez, J. L., Martí, J. M., Marscher, A. P., Ibáñez, J. M., Alberdi, A., “Hydrodynamical models of superluminal sources”, 1997, *ApJ*, 482, L33

## C.2. Research grants

Principal investigator of 10 research grants, and Research Guarantor of the Instituto de Astrofísica de Andalucía “Severo Ochoa” Center of Excellence Grant. Participation in other 12 national or international grants. These include the following **research grants as PI since 2016**:

- Reference: PID2019-108995GB-C21. Title: “Supermassive black holes and relativistic jets”. Funding agency: Ministerio de Ciencia e Innovación. Principal Investigator: José L. Gómez. Dates: 01/06/2020-31/05/2023. Budget: 223.850,00 €
- Reference: P18-FR-1769. Title: “Supermassive black holes and blazar jets”. Funding agency: Junta de Andalucía. Principal Investigator: José L. Gómez. Dates: 01/01/2020-30/06/2023. Budget: 102.473,00 €.
- Reference: 2019AEP112. Title: “Agujeros negros supermasivos y jets relativistas”. Funding agency: Agencia Estatal Consejo Superior de Investigaciones Científicas”. Principal Investigator: José L. Gómez. Dates: 1/1/2019-30/06/2019. Budget: 13.754,66 €
- Reference: AYA2016-80889-P. Title: “Jets relativistas en galaxias activas”. Funding agency: Ministerio de Economía y Competitividad. Principal Investigator: José L. Gómez. Dates: 1/1/2017-31/12/2019. Budget: 135.520,00 €.
- Reference: AYA2013-40825-P. Title: “Jets relativistas en galaxias activas”. Funding agency: Ministerio de Economía y Competitividad. Principal Investigator: José L. Gómez. Dates: 1/1/2014-31/12/2016. Budget: 101.640,00 €.

## C.3. Awards

- As member of the Event Horizon Telescope Collaboration that captured the first image of a black hole: 1) 2019 Diamod Achievement Award of the US National Science Foundation, 2) 2020 Breakthrough Prize in Fundamental Physics, 3) 2020 Einstein Medal, 4) 2020 Bruno Rossi Prize, 5) 2019 American Ingenuity Award in Physical Sciences, 6) 2020 Nelso P. Jackson Aerospace Award, 7) 2021 Group Award by the Royal Astronomical Society
- Premio Bandera de Andalucía de la Investigación, la Ciencia y la Salud 2020
- Premio mejor artículo de enseñanza de la Sociedad Española de Física 2020

## C.4. Organization of international meetings

Participation in the SOC of 11 international meetings, 7 of them as chair of the SOC and LOC, which include:

- Chair of the SOC of the 2022 Event Horizon Telescope Collaboration Meeting, held in Granada from 19 to 22 June, 2022.
- Chair of the SOC of the 2022 Next Generation Event Horizon Telescope (ngEHT) meeting, held in Granada from 22 to 25 June, 2022.
- Chair of the SOC of the 2020 Event Horizon Telescope Collaboration Meeting, held virtually from 7 to 14 December 2020.
- Chair of the SOC and LOC of the meeting “Blazars through Sharp Multi-wavelength Eyes” (<http://jets2016.iaa.es>), held in Malaga, between May 30 and June 3 2016. Editor of the proceedings being published in a special issue of the journal “Galaxies” ([http://www.mdpi.com/journal/galaxies/special\\_issues/galaxies\\_2016](http://www.mdpi.com/journal/galaxies/special_issues/galaxies_2016)).
- Chair of the SOC and LOC of the meeting “The innermost regions of relativistic jets and their magnetic fields” (<http://jets2013.iaa.es>), held en Granada, June 10-14 2013. Co-funded by RadioNet3 Networking Activity Seventh Framework Programm UE. Editor of the proceedings published in EPJ Web of Conferences, volume 61 (2013), containing 91 papers.

## C.5. Supervision of PhD Thesis and postdoctoral contracts

Supervisor of 8 PhD Thesis, six postdoc contracts, and three Master Thesis.

1. Student: Iván Agudo Rodríguez. Universidad de Granada. 20 December 2002. Grade: Sobresaliente Cum Laude
2. Student: Mar Roca Sogorb. University of Valencia. 20 April 2011. Grade: Sobresaliente Cum Laude
3. Student: Sol N. Molina. University of Granada. 27 October 2014. Grade: Sobresaliente Cum Laude
4. Student: Carolina Casadio. University of Granada. 14 April 2016. Grade: Sobresaliente Cum Laude
5. Student: Antonio Fuentes Fernandez. University of Granada. 25 November 2022. Grade: Sobresaliente Cum Laude
6. Students: Teresa Toscano (started her PhD in 2021), Rohan Dahale and Marianna Foschi started in 2022.
7. Postdoctoral supervisor of Dr. Iván Agudo between February 2007 to February 2010, and between February 2011 to August 2013.
8. Postdoctoral supervisor of Dr. Sol Molina between February 2015 to February 2016.
9. Postdoc supervision of Dr. Guang-Yao Zhao since November 2019
10. Postdoc supervision of Dr. Rocco Lico since July 2020
11. Postdoc supervision of Dr. Thalia Traianou since May 2021
12. Postdoc supervision of Dr. Ilje Cho since June 2021

### **C.6. Participation in evaluation committees and scientific groups**

- Vice-Chair of the Science Council of the Event Horizon Telescope Collaboration
- Coordinator of the Imaging Working Group of the Event Horizon Telescope Collaboration
- Chair of the International Time Allocation Committee of the space VLBI mission RadioAstron since June 2018.
- Editor in Chief of the international peer-reviewed journal “Galaxies”.
- Evaluator of the ANEP for research grants of the Spanish Plan Estatal de Excelencia I+D. Evaluator for the “Starting Grants” and “Consolidator Grants” programs of the European Research Council, Korean Astronomy and Space Science Institute, Science Foundation of Ireland, Science Foundation of Hong Kong, and Advanced Study Institute of the NATO. External evaluator for Full Professorship at Purdue University (USA). Member of the evaluation committee for tenure (“Profesor Titular Universitario”) at Murcia University (Spain). External evaluator for JAE-Doc postdoctoral contracts of the CSIC.
- External evaluator in 7 PhD Thesis.
- Referee for Nature, Science, The Astrophysical Journal, The Astronomical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, among others.
- Member of the Cherenkov Telescope Array Collaboration. Member of the Spanish Astronomical Society, European Astronomical Society, and International Astronomical Union.

### **C.7. Outreach, research stays, seminars**

- Presenter of the press release at the ESO headquarters in Garching in May 12, 2022, to reveal the first image of the black hole at the center of our galaxy. Organizer and presenter of the press release at the CSIC headquarters in Madrid to reveal the first image of a black hole taken by the Event Horizon Telescope in April 10, 2019. More than 40 interviews in national TV, radio, newspapers, and more than 10 seminars and public lectures associated with these discoveries in Spain and internationally.
- Author of 8 outreach publications, including a paper in the Spanish edition of Scientific American. Author of several press releases with accompanying publications in Spanish newspapers and national TV channels and radio stations. Participation in the book “Astronomía made in Spain”, edited by the Spanish Astronomical Society.
- Postdoctoral “Fulbright” Fellow in Boston University (USA). More than 20 international research stays in NRAO (USA), Boston University (USA), Manchester University (UK), University of Bologna (Italy), Astro Space Center (Russia), Max-Planck-Institut für Astrophysik (Germany), Max-Planck-Institut für Radioastronomie (Germany), and University College Cork (Ireland), among others.
- 34 seminars in international and national research centers.