CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	José		
Family name	Rodríguez Quintero		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	Jose.rodriguez@dfaie.uhu.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-1651-5717	

(*) Mandatory

A.1. Current position

Position	Full Professor (Catedrático de Universidad)		
Initial date	05/04/2019		
Institution	Universidad de Huelva		
Department/Center	Ciencias Integradas	Facultad de Ciencias Experimentales Centro de Estudios Avanzados en Física, Matemáticas y Computación	
Country	Spain	Teleph. number	959219787
Key words	Particle Physics, Nonperturbative QCD, hadron phenomenology		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1994-1997 (48 months)	Predoc grant holder FPU / Universidad de Sevilla / Spain
1998-1998 (9 months)	Postdoc Junta de Andalucía / Universidad de Sevilla / Spain
1998-2000 (15 months)	Postdoc – Ramon Areces fellowship / Laboratoire de Physique Théorique (Université de Paris-Sud) / France
2000-2004 (52 months)	Assistant Professor (Profesor Asociado Doctor) / Universidad de Huelva / Spain
2004-2019 (179 months)	Associate Professor (Profesor titular de Universidad) / Universidad de Huelva / Spain
2023-2024 (6 months)	Research Visitor / SPhN – CEA Saclay / France

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD. in Theoretical Physics	Universidad de Sevilla / Spain	12/09/1997
Degree in Physics	Universidad de Sevilla / Spain	31/07/1994

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

I obtained my PhD. degree at the University of Sevilla in 1997, with a thesis dissertation about the “fermion propagation in a first-order electroweak phase transition”. Immediately after, my research interest moved to the Strong interactions and I began a collaboration with the Lattice QCD group in Orsay (Laboratoire de Physique Théorique, CNRS, Paris) where, granted by the Ramón Areces foundation, I pursued my training at the post-doctoral level until December 1999; when I was appointed to a tenure-track position in the University of Huelva (Spain). I served there as Associate Professor since 2004, being the Head of the research group in Subatomic Physics ever since, regularly funded by the Spanish Ministry of Science; and became Full Professor in May 2019. I have thus far supervised 4 PhD. students in Spain and co-supervised 2 in France. I have led 6 research projects (IP) based on the University of Huelva and granted by the Spanish national plan for Particle and Nuclear

Physics (FPN, formerly FPA). From 2018 to 2022, I have been the co-Head of a research project funded by the Andalusian regional government and appointed to the University of Granada. For the last two decades, I collaborated actively with the Particle and Nuclear Physics groups in the University of Paris-Saclay (belonging therewith a member of the international ETM coll.) and CEA-Saclay (PARTONS coll.), of which I became an associate research visitor in 2014; and, recently, with the Theory Division of the Argonne National Laboratoy (Chicago, USA) and with the Institute for Nonperturbative Physics at NJU (Nanjing, China) as an International Collaborator. I also served as the main organizer of 4 international workshops, as member of the local committee of 3 others and of the international advisory committee in 7 more.

My research activities have mainly focused on nonperturbative QCD and hadron physics since I finished my PhD in 1997. Specially, in a first stage and capitalizing on a fruitful collaboration with the Orsay Lattice QCD group, I worked on the analysis of the momentum behavior of the 2- and 3-point QCD Green's functions. As a result, I developed a new method based on Green's functions to evaluate the strong running coupling at large momenta from the low-momentum measurements, as meson masses or decay constants, used for the physical scale setting on the lattice. The results are reported by the PDG compilation as being in excellent agreement with the world average. I also made relevant contributions on the enlightening of the deep IR behaviour of QCD Green's functions and its connection with underlying dynamical mechanisms and phenomenological implications. To achieve this, I benefited from the interplay of lattice QCD and Dyson-Schwinger equations (DSEs) techniques; contributing thereby to change the current understanding of the low-momentum gluon propagator by firmly establishing the emergence of a dynamical gluon mass, and identifying the Schwinger mechanism as its best explanation. The unveiling of key features of the 3-gluon vertex as the low-momentum zero-crossing, also dynamically attached to the mass generation mechanism, or the so-called planar degeneracy are important outcomes of these researches. I have been also involved, leading in some cases, in high-impact works in hadron phenomenology, calculating meson and nucleon form factors on the ground of DSEs, pinpointing pseudoscalar meson parton distribution functions (PDFs and GPDs) and elaborating further on their kinematic extensions, capitalizing on first principles and fundamental symmetries. Thus, I have been one of the proponents of a new approach which combines the overlap representation and the Radon transform to derive fully consistent and kinematically complete GPD models. Capitalizing on this and on DSE-based meson PDFs, I have contributed to deliver testable predictions in electron-ion colliders.

All the above crystallized in 168 articles recorded in iNSpires (143 in WoS) that I have so far authored, collecting 7030 citations (4824 in WoS), marking an h-index which amounts to 50 (43 in WoS). I delivered 4-5 invited talks a year in international conferences and workshop worldwide, as an average for the last 10 years. I furthermore developed a strong oureach activity, especially becoming author of 4 books of Science, translated into three languages and edited by RBA in cooperation with National Geographic.

Concerning research management and governance, I was first appointed to the Directorship of Research of the University of Huelva in January, 2017 designated Vice-Chancellor of Research in July, 2020 and, finally, elected Rector on 2025. For the last 10 years, I have been also a regular assessor of the Spanish Funding Agency for Research (AEI), involved in the national plan for Particle and Nuclear Physics (FPN) and in the programmes for attraction of young talented researchers (RyC and JdC). I am also member of the CPAN committee for scienfic strategy.

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

C.1. Publications *(10 selected ones)*

1. "*Accessing pion 3D structrue at the US and China Electron-Ion Colliders*", J.M. Morgado, V. Bertone, F. De Soto, M. Defurne, C. Mezrag, H. Moutarde, J. Rodríguez-Quintero, J. Segovia, **Physical Review Letters 128 (2022) 20, 202501**

2. "*Infrared facets of the three-gluon vertex*", A.C. Aguilar, F. De Soto, M.N. Ferreira, J. Papavassiliou, J. Rodríguez-Quintero, **Physics Letters B818, 136352 (2021)**
3. *"Higgs modulation of emergent mass as revealed in kaon and pion parton distributions",* Z-F. Cui, M. Ding, F. Gao, K. Raya, D. Binosi, L. Chang, C.D. Roberts, J. Rodríguez-Quintero, S. Schmidt, **European Physical Journal A (Lett.) 57 (2021) 1, 5** *[Top cited paper in EPJA]*
4. "*Kaon and pion parton distributions*", Z-F. Cui, M. Ding, F. Gao, K. Raya, D. Binosi, L. Chang, C.D. Roberts, J. Rodríguez-Quintero, S. Schmidt, **European Physical Journal C80, 1064 (2020)**
5. "*Effective charge from lattice QCD*", Z-F. Cui, J-L Zhang, D. Binosi, F. De Soto, C. Mezrag, J. Papavassiliou, C.D. Roberts, J. Rodríguez-Quintero, J. Segovia, S. Zafeiropoulos, **Chinese Physics C44, 083102(2020)** *[Top 1% most cited papers in IOP Publishing 2019-2021]*
6. "*Strong running coupling from the gauge sector of Domain Wall QCD with physical quark masses*", S. Zafeiropoulos, Ph. Boucaud, F. De Soto, J. Rodríguez-Quintero, J. Segovia, **Physical Review Letters 122, 162002 (2019)**
7. "*Nucleon-to-Roper electromagnetic transition form factors at large* Q2", C. Chen, Y. Lu, D. Binosi, C.D. Roberts, J. Rodríguez-Quintero, J. Segovia, **Physical Review D99, 034013(2019)**
8. "*Process-independent strong running coupling*", D. Binosi, C. Mezrag, J. Papavassiliou, C. D. Roberts, J. Rodríguez-Quintero, **Physical Review D 96, 054026 (2017)**
9. "*Basic features of the pion valence-quark distribution function*", L. Chang, C. Mezrag, H. Moutarde, C.D. Roberts, J. Rodríguez-Quintero, P. Tandy; **Physics Letters B 737, 23-29 (2014).**
10. "*The strong running coupling at the tau-mass and Z0-mass scale from lattice QCD*", B. Blossier, M. Brinet, F. De Soto, X. Du, V. Morénas, O. Pène, K. Petrov, J. Rodríguez-Quintero; **Physical Review Letters 108, 262002 (2012)**

- *Referee of Articles:* 7 Journals (Physical Review D, Physical Review C, Physical Review Letters, Journal of Physics G, Few Body Systems, Physics Letters B, Journal of High Energy Physics)

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

1. *International Conference on the Structure of Baryons*. Sevilla (Spain), 7-11 November, 2022. Participation: Invited oral presentation.
2. *The XVth Quark Confinement and the Hadron Spectrum Conference*. Stavanger (Norway), 1-6 August, 2022. Participation: Oral presentation.
3. *FunQCD22: from first principles to effective theories*. Valencia (Spain), 13-17 June, 2022. Participation: Invited oral presentation.
4. *XXIX International Workshop on Deep-Inelastic Scattering and Related Subjects.* Santiago de Compostela (Spain), 2-6 May, 2022. Participation: Oral presentation.
5. *XIX International Conference on Hadron Spectroscopy and Structure.* Mexico City (Mexico), 26-31 July, 2021. Participation: Invited oral (online) presentation.
6. *Workshop on Hadron Structure at High-energy, High-luminosity Facilities.* Nanjing (China), 25-27 October, 2021. Participation: Invited oral (online) presentation.
7. *FunQCD22: from first principles to effective theories*. Valencia (Spain), 29 March-1 April, 2021. Participation: Invited oral presentation.
8. *Perceiving the Emergence of Hadron mass through AMBER@TH*. CERN, Geneva (Switherland), 30 March – 1 April, 2020. Participation: Invited oral (online) presentation.
9. Pion and Kaon Structure Functions at the EIC. Stony Brook (USA), 2-5 June, 2020. Participation:
10. *Nonperturbative QFT in Eculidien and Mikowski.* Coimbra (Portugal), 10-12 September, 2019. Participation: Invited oral presentation.
11. *Emergent mass and its consequences in the Standard Model (TNT-V).* Trento (Italy), 17-21 September, 2018. Participation: Invited oral presentation.

12. *From Correlations Functions to QCD Phenomenology.* Bad Honnef (Germany), 3-6 March, 2018. Participation: Invited oral presentation.
13. *XXI International Workshop on the Physics of Excited Nucleons (Nstar),* South Carolina (USA), 20-23 August, 2017. Oral presentation.
14. *The third Sino-Americas Workshop and School on the Bound-State Problem in Continuum QCD.* Nankai (China), 16-20 October, 2017. Participation: Invited oral presentation.
15. XXXVII International Symposium on Lattice Field Theories. Granada (Spain), 18-24 June 2017. Participation: Oral presentation.

- ***Advisory or Local Committee of Conferences and Workshops.*** 14 that took place in 5 countries: **Mexico** (2013,2015,2017); **Spain** (2012,2014,2016,2017,2018,2022); **Italy** (2011); **Brazil** (2014,2016); **China** (2015,2017).

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

1.**Title:** Fenomenología en Física de Partículas y Astropartículas (**Ref:** PID2019-107844GB-C22).
Head researchers: José Rodríguez Quintero, Mario Gomez Santamaría. **Role:** IP
Funding agency: Ministerio de Ciencia e Innovación.
Extension: 01/06/2019-31/12/2022 **Funds:** 71200.00 euros
2. Title: Fenomenología en Física de Partículas y Astropartículas (**Ref:** FPA2017-86380-P).
Head researchers: José Rodríguez Quintero, Mario Gomez Santamaría. **Role:** IP
Funding agency: Ministerio de Ciencia e Innovación.
Extension: 01/01/2018-31/12/2019 **Funds:** 12000.00 euros
3. Title: Fenomenología en Física de Partículas y Astropartículas (**Ref:** FPA2014-53631-C2-2-P).
Head researchers: José Rodríguez Quintero, Mario Gomez Santamaría. **Role:** IP
Funding agency: Ministerio de Economía y Competitividad.
Extension: 01/01/2015-31/12/2017 **Funds:** 49610.00 euros
4. Title: Fenomenología en Física de Partículas y Astropartículas (**Ref:** FPA2011-23781).
Head researcher: José Rodríguez Quintero. **Role:** IP
Funding agency: Ministerio de Ciencia e Innovación.
Extension: 01/01/2012-31/12/2014 **Funds:** 53240.00 euros
5. Title: Fenomenología en Física de Partículas y Astropartículas (**Ref:** FPA2009-10773)
Head researcher: José Rodríguez Quintero. **Role:** IP
Funding agency: Ministerio de Ciencia e Innovación.
Extension: 01/01/2010-31/12/2011 **Funds:** 19200 euros
6. Title: Efectos no perturbativos en colisionadores de alta energía y aplicaciones cosmológicas del Modelo Estándar y sus extensiones (Ref: FPA2006-13825);
Head researcher : José Rodríguez Quintero. **Role:** IP
Funding agency: Ministerio de Ciencia y Teconología.
Extension: 01/10/2006-30/09/2009 **Funds:** 37480.96 euros
7. Title: Centro nacional para Física de Partículas, Astropartículas y Nuclear (**Ref:** CPAN CSD2007-00042)
Main researcher: Antonio Pich Zardoya **Role:** Researcher
Funding agency: Ministerio de Ciencia e Innovación.
Extension: 01/10/2007-31/12/2014 **Funds:** 1000000 euros
8. Title: Flavianet: Entering the high precision era of flavour physics throug the alliance of lattice simulations, effective field theories and experiment (**Ref:** MRTN CT-2006-035482-2)
Main researcher: Antonio Pich Zardoya **Role:** Researcher
Funding agency: U.E. (FP6)
Extension: 01/10/2006-30/09/2014 **Funds:** 3700000 euros

C.4. Contracts, technological or transfer merits,