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	Tomás		
Family name	Caraballo Garrido		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web:	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	Catedrático de Universidad			
Initial date	27/04/2001			
Institution	Universidad de Sevilla			
Department/Center	EDAN	Facultad de Matemáticas		
Country	España		Teleph. number	
Key words	Dynamical systems; Stochastic ODE and PDE; Non-autonomous and random DE			

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

Period	Position/Institution/Country/Interruption cause
1984-1990	Profesor no numerario Universidad de Sevilla
1990-1992	Profesor Titular de Escuela Universitaria
1992-2001	Profesor Titular de Universidad

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Mathematical Sciences	Universidad de Sevilla	1998
Licenciado (5-years) In Mathematical Sciences	Universidad de Sevilla	1984

(Include all the necessary rows)

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

I got my degree and PhD at the Universidad de Sevilla, defending my PhD thesis in 1988 under the supervision of Prof. José Real Anguas, who was a world recognized expert in the field of stochastic partial differential equations. My first studies focused on the local stability analysis and stabilization of several problems modeled by stochastic partial differential equations with hereditary properties (delays, memory, etc). Next, my interest focused on the new theory of random dynamical systems, where, jointly with my first PhD student, José A. Langa, we started to contribute. Almost at the same time, the theory of non-autonomous dynamical system started to experience new approaches, and new techniques were started to be developed for such systems: the pullback convergence concepts from the random theory. This justifies the beginning of our collaboration with Prof. Kloeden and his team, contributing in this way to the development of these theories which nowadays are still being analyzed intensively, but most importantly, is being applied to many problems in the Applied Sciences. It is worth mentioning that one of my papers on this topic, in which, we characterize the existence of pullback attractors, is one of the most cited papers according to

ISI, and currently, I am amongst the first Spanish mathematicians according to the Highly cited scientists list elaborated by Thomson and Reuters (Clarivate).
With the collaboration of Profesor Real, at the beginning of 2001, we consolidated a research group formed by researchers of the Universidad de Sevilla (called Stochastic Analysis of Differential Systems (AESDIF), with reference FQM-314, and we started a very fruitful collaboration amongst us and including many other recognized researchers in the field. As Principal Investigator, I have been awarded significant research projects, haver supervised 19 PhD and currently I am supervising 3 more, I have chaired several international conferences and numerous One-Day workshops. These activities ensure an important international activity. I have collaborated with more than 150 researchers, being worth mentioning Alexandre N. Carvalho (Universidade de Sao Paulo), David N. Cheban (University of Moldova), Igor D. Chueshov (V. Karazin Kharkov National University), Hans Crauel (Universität Goethe), Peter E. Kloeden (Universität Goethe), J.A. Langa (Universidad de Sevilla), G. Lukaszewicz (University of Warsaw), Rafael Obaya (Universidad de Valladolid), J. C. Robinson (University of Warwick), José Valero (Universidad Miguel Hernández), Juan Carlos Cortés (Universidad Politécnica de Valencia), Boling Guo (China Academy of Science), etc. As a consequence, I have been invited to deliver many plenary and main talks in international conferences, I have taken part in many scientific committees, I am member of several editorial committees of relevant journals (Nonlinear Analysis, Stochastic Analysis and Applications, Mathematics in Computer Simulations, Mediterranean Journal of Mathematics, etc.) and guest editor of many special issues. Moreover, I have been member of many PhD thesis committees and I have also been member of assessment committees for research projects, both at national and international level.
Over the last years, my scientific interest focuses on the stochastic differential equations (ordinary and partial) with or without delays, the asymptotic behavior of dynamical systems perturbed by noisy terms, multivalued dynamical systems and non-autonomous dynamical systems. I have published more than 370 research papers in top journals with high impact factor, 1 book, and and I appear now in the list of Standford (2024) about 2% most influential researchers in the world (appearing in the position 220 amongst 68.528 researchers in the field of General Mathematics). From Scopus one has the following data: Publications: 366; Citations: 7616; h-index: 48. From Web of Science: Publications: 366 (Web of Science Core Collections); Citations: 7354 (without self-citations: 6175), h-index: 47.

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

C.1. Publications *(see instructions)*
I have published more than 200 papers in the last 10 years. Below I include only 10 of them over the last 7 years (some of them have been Highly Cited Papers and/or Hot Papers).

1. Xu, Jiaohui; Caraballo, Tomás; Valero, José; Dynamics and Large Deviations for Fractional Stochastic Partial Differential Equations with Lévy Noise. *SIAM J. Math. Anal.* 56 (2024), no. 1, 1016-1067. DOI:10.1137/22M15444440
2. Caraballo, Tomás; Chen, Zhang; Li, Lingyu; Convergence and Approximation of Invariant Measures for Neural Field Lattice Models under Noise Perturbation. *SIAM J. Appl. Dyn. Syst.* 23 (2024), no. 1, 358-382. DOI: 10.1137/23M157137X
3. Caraballo, Tomás; López-de-la-Cruz, Javier; Caraballo-Romero, Verónica; Effects of real random perturbations on Monod and Haldane consumption functions in the chemostat model. *Math. Comput. Simulation* 218 (2024), 482-497. DOI:10.1016/j.matcom.2023.11.035
4. Caraballo, Tomás; Cortés, J.-C.; Navarro-Quiles, A.; Applying the random variable transformation method to solve a class of random linear differential equation with discrete delay. *Appl. Math. Comput.* 356 (2019), DOI:10.1016/j.amc.2019.03.048
5. Zhao, Caidi; Caraballo, Tomás; Asymptotic regularity of trajectory attractor and trajectory statistical solution for the 3D globally modified Navier–Stokes equations. *J. Differential Equations* 266 (2019), no. 11, 7205–7229. DOI:10.1016/j.jde.2018.11.032
6. Caraballo, T.; Langa, J. A.; Obaya, R. Pullback, forward and chaotic dynamics in 1D non-autonomous linear-dissipative equations. *Nonlinearity* 30 (2017), no. 1, 274–299. DOI:10.1088/1361-6544/30/1/274

7. Li, Yangrong; Yang, Shuang; Caraballo, Tomás; Optimization and Convergence of Numerical Attractors for Discrete-Time Quasi-Linear Lattice System. *SIAM J. Numer. Anal.* 61 (2023), no. 2, 905-928. DOI:10.1137/21M1461642
8. Caraballo, Tomás; Guo, Boling; Tuan, Nguyen Huy; Wang, Renhai; Asymptotically autonomous robustness of random attractors for a class of weakly dissipative stochastic wave equations on unbounded domains. *Proc. Roy. Soc. Edinburgh Sect. A* 151 (2021), no. 6, 1700-1730. DOI:10.1017/prm.2020.77
9. Xu, J.; Caraballo, Tomás; Valero, José; Asymptotic behavior of a semilinear problem in heat conduction with long time memory and non-local diffusion. *J. Differential Equations* 327 (2022), 418–447. DOI: 10.1016/j.jde.2022.04.0333
10. Xu, J.; Caraballo, Tomás; Long Time Behavior of Stochastic Nonlocal Partial Differential Equations and Wong–Zakai Approximations. *SIAM J. Math. Anal.* 54 (2022), no. 3, 2792–2844. DOI:10.1137/21M1412645

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)
During the last 10 years, I have been invited to deliver invited talks in conferences, workshops, seminars etc. The average amount of invitation can be around 10-12/year. Below I mention some of them:

- Invited plenary speaker in the yearly series of conferences “Summer Meeting on Differential Equations” held at the ICMC Universidade de São Paulo (Brasil), in Chapters 2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2022-2023-2024 and the online edition 2021.
- Invited plenary speaker in three editions of conference GAFEVOL held in Santiago de Chile in 2018 and 2021 and in Brasilia in 2019.
- Invited plenary speaker in the International Conference on Nonlinear Analysis and Boundary Value Problems, held in Santiago de Compostela, September 2018.
- Invited plenary speaker in the Workshop on Mathematical Methods in Data Analysis and Differential equations held in Universidad Miguel Hernández, November 2021
- Invited plenary speaker in the Workshop 3 days on Evolutions PDEs held in Urbino (Italy), September 2021 and in Agropoli (Italy) September 2024.

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. **Ref:** PID2021NB-122991NB-C21. **Título:** Dinámica Deteminista y Estocástica de modelos de las Ciencias Aplicadas
   Entidad Finaciadora: Ministerio de Ciencia e Innovación
   Convocatoria: Plan Estatal 2017-2023
   IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
   Fechas: Inicio: 01-09-2022 **Fin:** 31-08-2025
   Cantidad financiada: 217.800,00 € **Tipo participación:** Investigador Principal
2. **Ref:** RSE-1832 **Título:** Stochastic Differential Equations: Theory, Numerics and Applications
   Entidad Finaciadora: The Royal Society of Edinburgh
   IP: Xuerong Mao **Entidad Beneficiaria:** Strathclyde University
   Fechas: Inicio: 01-01-2022 **Fin:** 31-12-2023
   Cantidad financiada: 20.000 GBP **Tipo participación:** Investigador
3. **Ref:** P18-FR-4509 **Título:** Dinámica de Modelos de EDP en las Ciencias Aplicadas
   Entidad Finaciadora: FEDER-Junta de Andalucía PAIDI 2020 **Convocatoria:** 2018
   IP: Pedro Marín Rubio **Entidad Beneficiaria:** Universidad de Sevilla
   Fechas: Inicio: 01-01-2020 **Fin:** 31-12-2022
   Cantidad financiada: 135.625,00 € **Tipo participación:** Investigador
4. **Ref:** PGC2018-096540-B-I00 **Título:** Dinámica de Modelos Deteministas y Estocásticos de las Ciencias Aplicadas
   Entidad Finaciadora: Ministerio de Ciencia, Innovación y Universidades
   Convocatoria: Plan Estatal 2017-20 Conoc.

IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 01-01-2019 **Fin:** 31-12-2022
Cantidad financiada: 107.569,00 € **Tipo participación:** Investigador Principal

5. **Ref:** US-1254251 **Título:** Deterministic and stochastic dynamics of models from Neuroscience, Epidemiology, Biology and other branches of the Applied Sciences.
Entidad Finaciadora: Junta de Andalucía (Consejería de Economía y Conocimiento)
Convocatoria: FEDER Andalucía 2014-2020.
IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 01-02-2020 **Fin:** 30-04-2022
Cantidad financiada: 60.000,00 € **Tipo participación:** Investigador Principal
6. **Ref:** MTM2015-063723-P **Título:** Sistemas dinámicos no Autónomos y Estocásticos de las Ciencias Aplicadas
Entidad Finaciadora: Ministerio de Economía y Competitividad
Convocatoria: Plan Estatal 2013-16 Exc. Proyectos I+D.
IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 01-01-2016 **Fin:** 31-12-2019
Cantidad financiada: 80.828,00 € **Tipo participación:** Investigador Principal
7. **Ref:** MTM2014-61312-EXP **Título:** Dinámica fractal de la consciencia: de la Teoría a la Implementación clínica.
Entidad Finaciadora: Ministerio de Economía y Competitividad
Convocatoria: Plan Estatal 2013-16 Excelencia-Explora.
IP: José A. Langa Rosado **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 01-09-2015 **Fin:** 31-12-2017
Cantidad financiada: 30.000,00 € **Tipo participación:** Investigador
8. **Ref:** P12-FQM-1492 **Título:** Análisis y aplicaciones de sistemas dinámicos no autónomos y estocásticos
Entidad Finaciadora: Junta de Andalucía
Convocatoria: Año 2012
IP: José A. Langa Rosado **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 30-01-2014 **Fin:** 16-02-2019
Cantidad financiada: 122.072,75 € **Tipo participación:** Investigador
9. **Ref:** MTM2011-22411 **Título:** Estudio de los sistemas dinámicos no Autónomos y Estocásticos, y aplicaciones.
Entidad Finaciadora: Ministerio de Ciencia e Innovación
Convocatoria: Plan Nacional 2011.
IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 01-01-2012 **Fin:** 31-12-2015
Cantidad financiada: 271.040,00 € **Tipo participación:** Investigador Principal
10. **Ref:** P07-FQM-02468 **Título:** Análisis y aplicaciones de sistemas dinámicos no autónomos y estocásticos
Entidad Finaciadora: Junta de Andalucía
Convocatoria: Año 2012
IP: Tomás Caraballo Garrido **Entidad Beneficiaria:** Universidad de Sevilla
Fechas: Inicio: 30-01-2008 **Fin:** 31-12-2012
Cantidad financiada: 255.000,00 € **Tipo participación:** Investigador Principal