

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	JESSICA		
Family name	DÍAZ FERNÁNDEZ		
Gender (*)	Female	Birth date (dd/mm/yyyy)	10/08/1981
Social Security, Passport, ID number	50466981J		
e-mail	yessica.diaz@upm.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-6738-9370		

(*) Mandatory

A.1. Current position

Position	PROFESOR TITULAR DE UNIVERSIDAD		
Initial date	12/07/2023		
Institution	UNIVERSIDAD POLITÉCNICA DE MADRID (UPM)		
Department/Center	ETSI. SISTEMAS INFORMÁTICOS		
Country	ESPAÑA	Teleph. number	+34 910 67 35 64
Key words	Software Engineering, DevOps, Cloud Computing		

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

Period	Position/Institution/Country/Interruption cause
11/09/2021 – 28/01/2022	Maternity leave (aprox. 5 months)
13/07/2021 – 10/09/2021	Temporary disability during pregnancy (aprox. 2 months)
09/01/2016 – 17/09/2018	Profesora Ayudante Doctora, UPM, España
19/09/2015 – 04/02/2016	Maternity leave (aprox. 5 months)
01/09/2014 – 18/09/2015	Profesora Ayudante Doctora, UPM, España
01/09/2013 – 31/08/2014	Contrato Postdoc Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación, UPM, España
01/03/2013 – 31/08/2013	Contrato Proyectos de Investigación, UPM, España
01/03/2011 – 28/02/2013	Investigadora en Formación Contrato Prácticas, UPM, España
01/03/2009 – 28/02/2011	Investigadora en Formación Beca, UPM, España
01/05/2004 – 28/02/2009	Contrato Proyectos de Investigación, UPM, España
01/04/2003 – 30/06/2004	Beca Proyectos de Investigación, UPM, España

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
(PhD) Doctor Ingeniero en Informática	Universidad Politécnica de Madrid	2016
(MsC) Máster en Tecnologías de la Información (Especialidad Ingeniería del Software) (120 ECTS)	Universidad Politécnica de Madrid	2009
(BsC) Ingeniería en Informática	Universidad de Educación a Distancia	2008
(BsC) Ingeniero Técnico en Informática	Universidad Politécnica de Madrid	2003

(Include all the necessary rows)



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

1. Scientific Contributions: The applicant has published a total of **24 articles in journals and conferences deemed relevant and highly relevant** according to the criteria of the ANECA ACADEMIA program. This includes 6 articles in JCR Q1, 8 in JCR Q2, 4 in Q3, and 7 in GII-GRIN-SCIE (GGS) Conference Rating class 2. Additionally, there are **15 publications of equivalent quality** based on acceptance rate criteria and/or GII-GRIN-SCIE (GGS) Conference Rating class 3, all subject to external review by two or three members of an international scientific committee, comprising 12 long articles and 3 short articles in international conferences and workshops. The applicant has also contributed a book chapter and **participated in 20 conferences** as an author for results dissemination, including 11 international conferences in the software engineering and software architectures domain and 9 national conferences (more than 10 in the last 10 years). In total, the applicant presents **over 60 contributions from their research activities**, leading more than half of them and presenting 20 as a speaker at scientific conferences. Collaborations include work with **international researchers** such as Alexander L. Wolf (h-index=56, Dean of the University of California), Fabio Kon (h-index=41), Xiaofeng Wang (h-index=38), and Paul Ralph (h-index=24). The applicant holds **two SIX-YEAR Research Period (SEXENIO)** from 2009-2015 and from 2016-2021. Her **h-index is 22**, i10 index is 33 (Source: Google Scholar), and **over 1200 citations**.

She is **referee of +50 papers of journals**, **program co-chair** of EASE 2024, participated in the organization of 4 international conferences as a local chair and session chair, served on the Workshop Organizing Committee for WIOT 2022, organized and chaired sessions for several international conferences, and served on **program committees** for international conferences such as ESEM, PROFES, XP Research, and TICEC. The applicant has reviewed conferences of impact GII-GRIN-SCIE class 2 (ECSA, XP, HICSS) and reviewed a project for the Swiss National Science Foundation (SNSF).

2. Contributions to Society - Collaboration with the Private Industry: The applicant has participated in a total of **14 R&D projects from competitive international and national calls** (including Horizon 2020, Framework Programme V, European Space Agency contract (ESTEC), ITEA2 projects, National Plan projects, CDTI projects - CENIT program, Avanza Program, and regional projects), receiving an **ITEA2 Excellence Award** in one project. The applicant has been involved in the development of international project proposals with leading companies in the sector, endorsed by the manager responsible for the Innovation Energy Unit at Indra Software Labs.

3. Contributions to the Training of Young Researchers - Supervision of Doctoral Theses: The applicant has co-supervised, with Mr. Jorge Enrique Pérez Martínez, the thesis titled "DevOps Applied to IoT Systems: Definition and Implementation of Continuous Monitoring and Feedback Processes," authored by Mr. Miguel Ángel López Peña. The thesis defense took place on July 20, 2021, at the ETSI de Sistemas Informáticos of the Universidad Politécnica de Madrid, receiving the grade of SOBRESALIENTE CUM LAUDE. The thesis, with various associated publications including 2 in JCR, is multidisciplinary, covering Architectures and Systems as well as Software Engineering and DevOps, justifying its co-supervision. The results of the doctoral thesis have been successfully applied to an industrial case study developed as an internal project at SATEC, with SATEC working on a production line for system supervision projects. Currently, is supervising a thesis titled "Ubiquity based on Observability & Interoperability in Cloud Native".

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

(1/7 Corresponding Author) Jessica Díaz, Jorge Pérez, Isaque Alves, Fabio Kon, Leonardo Leite, Paulo Meirelles, Carla Rocha, "Harmonizing DevOps taxonomies — A grounded theory study", **Journal of Systems and Software**, Volume 208, **2024**, 111908, ISSN 0164-1212, <https://doi.org/10.1016/j.jss.2023.111908> **JCR 2022: 3.5** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q2 **34/108**)



(1/4 Corresponding Author) **J. Díaz**, J. Pérez, C. Gallardo, A. González-Prieto, "Applying Inter-Rater Reliability and Agreement in collaborative Grounded Theory studies in software engineering", **Journal of Systems and Software**, Volume 195, 2023, 111520, ISSN 0164-1212, <https://doi.org/10.1016/j.jss.2022.111520> **JCR 2022: 3.5** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q2 34/108)

(2/5) D. Lopez-Fernandez, **J. Díaz**, J. Garcia-Martin, J. Perez and A. Gonzalez-Prieto, "DevOps Team Structures: Characterization and Implications," in **IEEE Transactions on Software Engineering**, doi: <https://doi.org/10.1109/TSE.2021.3102982> ISSN: 0098-5589 **JCR 2022: 7.4** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q1 5/108)

(3/6 Corresponding Author) J. Perez, A. Gonzalez-Prieto, **J. Díaz**, D. Lopez-Fernandez, J. Garcia-Martin and A. Yague, "DevOps Research-based Teaching Using Qualitative Research and Inter-Coder Agreement," in **IEEE Transactions on Software Engineering**, doi: <https://doi.org/10.1109/TSE.2021.3092705> ISSN: 0098-5589 **JCR 2022: 7.4** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q1 5/108)

(1/5 Corresponding Author) **Díaz, J.**, López-Fernández, D., Pérez, J., González-Prieto Ángel. Why are many businesses instilling a DevOps culture into their organization? **Empirical Software Engineering Journal** 26, 25 (2021). <https://doi.org/10.1007/s10664-020-09919-3> ISSN: 1382-3256 **JCR 2021: 3,762** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q2 23/110)

(2/4 Corresponding Author) R. López-Viana, **J. Díaz**, V. H. Díaz and J. -F. Martínez, "Continuous Delivery of Customized SaaS Edge Applications in Highly Distributed IoT Systems," in **IEEE Internet of Things Journal**, vol. 7, no. 10, pp. 10189-10199, Oct. 2020, doi: <https://doi.org/10.1109/JIOT.2020.3009633> ISSN: 2327-4662 **JCR 2020: 9.471** (COMPUTER SCIENCE, INFORMATION SYSTEMS Q1 6/162)

(2/4) M. A. López-Peña, **J. Díaz**, J. E. Pérez and H. Humanes, "DevOps for IoT Systems: Fast and Continuous Monitoring Feedback of System Availability," in **IEEE Internet of Things Journal**, vol. 7, no. 10, pp. 10695-10707, Oct. 2020, doi: <https://doi.org/10.1109/JIOT.2020.3012763> ISSN: 2327-4662 **JCR 2020: 9.471** (COMPUTER SCIENCE, INFORMATION SYSTEMS Q1 6/162) **Citas: 10**

(2/4 Corresponding Author) J. Pérez, **J. Díaz**, J. Garcia-Martin, B. Tabuenca, Systematic literature reviews in software engineering—enhancement of the study selection process using Cohen’s Kappa statistic, **Journal of Systems and Software**, Volume 168, 2020 <https://doi.org/10.1016/j.jss.2020.110657> ISSN 0164-1212 **JCR 2020: 2.829** (COMPUTER SCIENCE, THEORY & METHODS Q1 27/110)

(1/5 Corresponding Author) **J. Díaz**, J. E. Pérez, M. A. Lopez-Peña, G. A. Mena and A. Yagüe, "Self-Service Cybersecurity Monitoring as Enabler for DevSecOps," in **IEEE Access**, vol. 7, pp. 100283-100295, 2019, doi: <https://doi.org/10.1109/ACCESS.2019.2930000> ISSN: 2169-3536 **JCR 2019: 3.745** (COMPUTER SCIENCE, INFORMATION SYSTEMS Q1 35/156)

(1/3 Corresponding Author) **Díaz, J.**, Pérez J., Garbajosa J. *Agile Product-Line Architecting in Practice: A Case Study in Smart Grids*. **Information and Software Technology Journal**. Volume 56, Issue 7, Pages 727–748. DOI: <http://dx.doi.org/10.1016/j.infsof.2014.01.014> Elsevier (2014) ISSN: 0950-5849 **JCR 2014: 1.046** (COMPUTER SCIENCE, SOFTWARE ENGINEERING Q2 46/104)

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

Participations as speaker in 11 international conferences:

- DevOps in Practice – A Preliminary Analysis of Two Multinational Companies. In Product-Focused Software Process Improvement PROFES 2019, Barcelona, Spain November 27-29, 2019
- DevOps in Practice – An Exploratory Case Study. Fostering More Industry-Academic Research in XP (FIAREX) part of the 19th International Conference on Agile Software Development XP'18, Oporto, Portugal 25 May 2018

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



SIOTCOM — Sistemas IoT Conscientes de la Sostenibilidad y Dirigidos por Comunidades Sociales
FUNDING ENTITY: Ministerio de Ciencia e Innovación PID2020-118969RB-I00 **FROM:** 01/01/2021 **TO:** 31/08/2024 **MIEMBRO DEL EQUIPO INVESTIGADOR.** Responsible for tasks: DevOps practices - Deployment of IoT systems. Associated Publications: (1) <https://doi.org/10.1007/s00607-022-01104-2> (2) <https://doi.org/10.1109/JIOT.2020.3009633>, and (3) <https://doi.org/10.1109/JIOT.2020.3012763>.

CROWDSAVING — Arquitectura Adaptativa para Crowd-Sensing de Comunidades Eficientes. **FUNDING ENTITY:** Ministerio de Economía y Competitividad TIN2016-79726-C2-1-R **FROM:** 30/12/2016 **TO:** 29/12/2019 **MIEMBRO DEL EQUIPO INVESTIGADOR.** Responsible for tasks: T1.1 Requirements for crowd-sensing architectures in changing environments. T2.2 Architectural framework components definition. T2.3 Evaluation of the architecture. T5.1 Integration of software architectural framework with user/social behavior energy models and monitoring services.

CPSELabs — CPS Engineering Labs- expediting and accelerating the realization of cyber-physical systems. **FUNDING ENTITY:** Comisión Europea 644400 (Horizon 2020). **FROM:** 01/01/2015 **TO:** 31/01/2018. Associated Publications: (1) "Software Architectures for Healthcare Cyber-Physical Systems: A Systematic Literature Review." Published in the Journal of Software-Evolution and Process, available at <https://doi.org/10.1002/smr.1930> . (JCR Q3). (2) "An Open Tool for Assisting in Technical Debt Management." In Proceedings of the 43rd Euromicro Conference on Software Engineering and Advanced Applications (SEAA). (3) "Conceptualizing a Framework for Cyber-Physical Systems of Systems Development and Deployment." In Proceedings of the 10th European Conference on Software Architecture.

MESC — Plataforma para la monitorización y evaluación de la eficiencia de los sistemas de distribución en smart cities. **FUNDING ENTITY:** Ministerio de Economía y Competitividad DPI2013-47450-C2-2-R. **FROM:** 01/01/2014 **TO:** 31/12/2016. **MIEMBRO DEL EQUIPO INVESTIGADOR.** Execution of tasks and dissemination of results: T1: Design of a reference architecture for a platform to facilitate the assessment of efficiency for distribution systems in Smart Cities. T2: Evaluation of the defined reference architecture. T4: Development of new methods for modeling and monitoring distribution systems. T6: Testing the developed methodology in real distribution systems at different scales.

INNOSEP – INcorporating inNOvation in Software Engineering Processes. **FUNDING ENTITY:** MICINN TIN2009-13849 PLAN NACIONAL I+D+I **FROM:** 01/01/2010 **TO:** 31/12/2012 **MIEMBRO DEL EQUIPO INVESTIGADOR.** Execution of tasks (supporting methodologies and tools) and dissemination of results. Results: (1) Software registration of the INNTool tool, whose contribution to the scientific community has been published in the article "A Framework for Positioning and Assessing Innovation Capability from an Organizational Perspective" at the HICSS conference (GII-GRIN-SCIE (GGs) Conference Rating (class 2)). (2) Software registration of the FPLA tool, whose contribution to the scientific community has been published in several articles: "Change-Impact driven Agile Architecting" at the HICSS conference (GII-GRIN-SCIE (GGs) Conference Rating class 2) and "Change Impact Analysis in Product-Line Architecture" at the ECSA conference (GII-GRIN-SCIE (GGs) Conference Rating class 3).

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

REGISTRO SOFTWARE: FLEXIBLE-PLA (FPLA) TOOL. **AUTHORS:** JENNIFER PEREZ; **JESSICA DIAZ;** JUAN GARBAJOSA; DAVID MUSAT; RAUL PUERTA. EXPEDIENTE 12/RTPI-009885/2011. NUMERO DE ASIENTO REGISTRAL: 16/2012/ 8465. DATE: 27/07/2012

REGISTRO SOFTWARE: REGISTRO SOFTWARE: INNO MODELING TOOL. **AUTHORS:** JUAN GARBAJOSA; **JESSICA DIAZ;** AGUSTIN YAGUE; JENNIFER PEREZ; LILIBETH RODRIGUEZ. EXPEDIENTE 09/RTPI-03896/2013 NUMERO DE ASIENTO REGISTRAL: 16 / 2013 / 7027. DATE 17/10/2013