CURRICULUM VITAE (CVA)

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

Part A. PERSONAL INFORMATION

		CV date	05/10/2022
First name	María Teresa		
Family name	Gómez López		

(*) Mandatory

A.1. Current position

Position	Full Professor (Catedrática de Universidad)
Initial date	18/01/2022
Institution	Universidad de Sevilla
Department/Center	ETS Ingeniería Informática — Lenguajes y Sistemas Informáticos
Country	Spain
Key words	Artificial Intelligence, Busines Processes, Data Management

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
2018-2022	Associate professor (TU)
2009-2018	Assistant profesor (PCD)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Ingeniera en Informática	Universidad de Sevilla	2001
Doctora en Informática	Universidad de Sevilla	2007

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

María Teresa Gómez studied Computer Engineering between 1996 and 2001, and she has been a PhD from the Universidad de Sevilla since 2007. After finishing her degree, she worked at a computer consulting firm, until in 2002 where she became a research staff at the Consejo Superior de Investigaciones Científicas (CSIC) for two years. At the end of 2002, she began to combine her work at the CSIC with teaching as an associate professor in the Department of Languages and Computer Systems. In March 2003, she became a full-time Collaborating Professor in this department. Currently she is Profesora Titular de Universidad.

She held the department secretary for 4 years and since 2017 is Deputy Director for International Relations and External Practices in the Higher Technical School of Computer Engineering.

Her line of research begins with the management and storage of complex data in Constraint Databases. The main field of application of these data were the diagnosis based on models, where she developed her thesis and her first works. This line of research has led to the current one, focused on the verification, diagnosis and prognosis of data managed in business processes, resulting in the supervision of a thesis presented in 2012. During the supervision of this thesis, it was detected the need to conduct the modelling of processes and their execution to the data it handled, resulting in the supervision of another thesis in the field of business processes in 2014. In 2018, another thesis about decision-making in business processes was defended.

As a summary the main highlights of the research activity:

- She has 4 'sexenios', 3 of **research (2004-2009, 2010-2015, 2016-2021)**, 1 of transfer (2009-2014), 5 autonomic complements, and 5 teaching quinquennium.
- 28 publications on indexed journals in JCR: 14 in Q1, 9 in Q2, 2 in Q3, and 3 in Q4
- 7 articles in prestigious conferences with very relevant positions, in indexes such as 4 SCIE-Class 2 (1 ICIS, 2 SPLC, 1 COOPIS), and 5 SCIE-Class 3 (2 DEXA, 3 ISD).
- 21 papers in international conferences and workshops that appear in CORE with B or C rate, other 18 international and 14 nationals with peer review.
- She maintains stable collaborations with several international research groups, having papers with more than 15 researchers of external organizations.
- She is the leader of IDEA research group (PAIDI: TIC-258, idea.us.es) and Principal Investigator (PI) of two national projects belonging to MINECO, and participant of four national and regional R&D projects obtained in competitive calls.
- She has been the leader of more than 10 technology transfer contracts with companies and has two tools with intellectual property registration.
- She has carried out two postdoctoral stays, with Prof. Stefanie Rinderle-ma (Univ. of Vienna) and Louise Travé-Massuyès (LAAS-CNRS of Toulouse).
- She has directed three doctoral theses with an international mention.
- Invited as Keynote speaker at the IV Workshop on Data & Artifact Centric BPM, 5th International Workshop on Decision Mining & Modeling for Business Processes, the X BPM National Congress in Madrid, at the 28th IBIMA Conference, and at the biannual
- Teacher at the International Summer School on Fault Diagnosis of Complex Systems in 2013, 2015, 2017 and 2019, and in the Summer School In Entrepreneurship and Cybersecurity at The University of Virginia Wise (2019).

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

C.1. **Publications** *(see instructions)*

Belén Ramos-Gutiérrez, Ángel Jesús Varela-Vaca, Jóse A. Galindo, **María Teresa Gómez-López**, and David Benavides. Discovering configuration workflows from existing logs using process mining. Empirical Software Engineering, 2020. In press. Impact: JCR 3.156 Rank 19/108, (Computer Science, Software Engineering, **Q1**)

Álvaro Valencia-Parra, Luisa Parody, Ángel Jesús Varela-Vaca, Ismael Caballero, and **María Teresa Gómez-López**. DMN4DQ: When data quality meets DMN. Decision support systems, page 113450, 2020. DOI: https://doi.org/10.1016/j.dss.2020.113450 Impact: JCR 4.721 Rank 23/156, (Computer Science, Information Systems, **Q1**)

Álvaro Valencia-Parra, Ángel Jesús Varela-Vaca, Luisa Parody, and **María Teresa Gómez-López**. Unleashing constraint optimisation problem solving in big data environments. Journal of computational science, 45:101180, 2020. Impact: JCR 2.644 Rank 28/108, (Computer Science Theory & Methods, **Q1**)

Ángel Jesús Varela-Vaca, Luisa Parody, Rafael M. Gasca, and **María Teresa Gómez-López**. Automatic verification and diagnosis of security risk assessments in business process models. **IEEE Access**, 7:26448-26465, 2019. Impact: JCR 4.098 Rank 23/155, (Computer Science, Information Systems, **Q1**)

Damián Fernández-Cerero, Ángel Jesús Varela-Vaca, Alejandro Fernández-Montes, **María Teresa Gómez-López**, and José Antonio Alvárez-Bermejo. Measuring data-centre workflows complexity through process mining: the google cluster case. **The Journal of Supercomputing**, 2019 DOI: 10.1007/s11227-019-02996-2. Impact: JCR 2.157 Rank 35/105, (Computer Science, Theory & Methods, **Q2**)

Miguel Pérez-Álvarez; **María Teresa Gómez-López**; Rik Eshuis; Marco Montali; Rafael M. Gasca. Verifying the Manipulation of Data Objects According to Business Process and Data Models. Knowledge and Information Systems, 2020. Impact 2.397 (Computer Science, **Q1**).

José Miguel Pérez-Álvarez, Alejandro Maté, **María Teresa Gómez-López**, and Juan Trujillo. Tactical business-process-decision support based on KPIs monitoring and validation. Computers in industry, 102:23-39, 201 Impact 1.56, Rank 31/105 (Computer Science, Interdisciplinary Applications, **Q2**).

Luisa Parody, **María Teresa Gómez**, Rafael M. Gasca: Hybrid business process modeling for the optimization of outcome data. **Information & Software Technology** 70: 140-154 (2016). Impact 1.56, Rank 46/104 (Computer Science, Software Engineering, **Q1**).

Diana Borrego, Rafael M. Gasca, **María Teresa Gómez-López:** Automating correctness verification of artifact-centric business process models. **Information & Software Technology** 62: 187-197 (2015). Impact 1.56, Rank 46/104 (Computer Science, Software Engineering, **Q1**).

María Teresa Gómez-López, Rafael M. Gasca, José Miguel Pérez-Álvarez: Compliance Validation and Diagnosis of Business Data Constraints in Business Processes at Runtime, **Information Systems** 48: 26-43 (2015). Impact 1.832, Rank 46/139 (Computer Science, Information Systems, **Q1**).

C.2. Congress

Ángel Jesús Varela-Vaca, Rafael M. Gasca, Jose Antonio Carmona-Fombella, **María Teresa Gómez López:** AMADEUS: towards the AutoMAteD secUrity teSting. SPLC (A) 2020: 11:1-11:12 (**SCIE Class 2**)

María Teresa Gómez López, Luisa Parody, Rafael M. Gasca, Stefanie Rinderle-Ma. Prognosing the Compliance of Declarative Business Processes Using Event Trace Robustness. OTM Conferences 2014: 327-344 (**SCIE Class 2**)

C.3. Research projects

PID2020-112540RB-C44, Aether-US:Una aproximación holística de smart data para el análisis de datos guiado por el contexto: procesos de negocio inteligentes. Duration, from: 01/01/2021 to: 31/12/2024, PI: **María Teresa Gómez López**

US-1381375, METAMORFOSIS: Marco dE Trasnformación digitAl Mediante Customización soFtware sobre gestiÓn de datos, proceSos de negocio y gobIerno de la Seguridad. Duration, from: 01/01/2022 to: 31/12/2022, PI: **María Teresa Gómez López**

RTI2018-094283-B-C33, ECLIPSE - Enhancing Data Quality and Security for Improving Business Processes and Strategic Decisions in Cyber Physical Systems. Duration, from: 01/01/2019 to: 31/12/2020, PI: **María Teresa Gómez López**

TIN2015-63502-C3-2-R, SEQUOIA-US: SUPPORT INTELLIGENT DECISIONS FOR BUSINESS PROCESSES REQUIREMENTS BASED ON BIG DATA AND MULTIPLE INSTANCES. Duration, from: 01/01/2016 to: 31/12/2018, PI: **María Teresa Gómez López**

C.3. Contracts, technological or transfer merits

Title: INV-CIU-2-2020-8, Modeling and mining of business processes in the logistics-port sector, Duration from: 15/07/2020 to, 31/12/2023 PI: **María Teresa Gómez López.**

Title: Troubleshooting para Sistemas Ciberfísicos (P033-19/E08) Type of contract: I+D, Airbus Space & Defence, Duration, from: 31/05/2019 to: 15/02/2021, PI: **María Teresa Gómez**, Type of participation: PI.

Title: Clear-Sky II: A-24 ONE STEP BEYOND ON AUTOMATED TESTING TECHNOLOGIES (P011-18/E08, P020-17/E08, P095-16/E08, P036-19/E08), Type of contract: I+D, Airbus Space & Defence, Duration, from: 01/07/2016 to: 31/12/2019, PI: **María Teresa Gómez**.

Title: Archiva-e: Procesos para la gestión de archivos interoperables mediante datos en abierto enlazables (P008-14/E08), Type of contract: I+D, Centro para el Desarrollo Tecnológico Industrial (CDTI), Entidades participantes: Emergya y Universidad de Sevilla, Duration, from: 01/07/2011 to: 31/08/2014, PI: **María Teresa Gómez**.

Title: Módulo de Registro y Procesamiento de datos - Sistema de Control y Monitorización de Señales para Generación de Alarmas (P008-12/E08), Type of contract: I+D, Empresa/Administración financiadora: Centro para el Desarrollo Tecnológico Industrial (CDTI), Entities: Clever, Detea, y Universidad de Sevilla, Duration, from: 01/01/2012 to: 28/06/2012, PI **María Teresa Gómez**.

Title: VICTOR: Visual Interface ConTrol of Objects and Rules (P031-11/E08), Type of contract: I+D, Centro para el Desarrollo Tecnológico Industrial (CDTI), Entidades participantes: Clever, Detea, y Universidad de Sevilla, Duration, from: 18/05/2011 to: 18/10/2011, PI: **María Teresa Gómez**.

Title: AGECTA- Aplicación para la Gestión de Expedientes de la Corporación Tecnológica de Andalucía (P051-09/E08), Tipo de contrato: I + D, CTA, Entities: Universidad de Sevilla y la Corporación Tecnológica de Andalucía, Duration: 20/11/2009 hasta: 09/02/2011, PI: **María Teresa Gómez**.

Intellectual property registration: Inventors: Francisco Fernando de la Rosa Troyano, Rafael Martínez Gasca, **María Teresa Gómez López**, Title: Tredar Bpm: Gestión de Procesos de Negocios y Servicios Web, Date: Approval pending, Owner entity: RPI Andalucía

Intellectual property registration, Inventors: María Luisa Parody Núñez, Ángel Jesús Varela Vaca, **María Teresa Gómez López**, Rafael Martínez Gasca, Title: CombiS-BP Editor, Number: RTA-275-13 (201399900807048), Owner entity: RPI Andalucía**.**