Part A. PERSONAL INFORMATION

First name	María Isabel
Family name	Sánchez Segura
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URL Web	https://sites.google.com/site/maribelsanchezsegura/home https://www.promiseinnovatech.com/members

Open Research and Contributor ID (ORCID)(*)	0000-0002-2339-7851

(*) Mandatory

A.1. Current position

Position	Full professor
Initial date	21/12/2020
Institution	Universidad Carlos III de Madrid
Departament/Center	Computer Science and Engineering / Escuela Politécnica Superior
Country	Spain / Teleph. number / 916249421
Key words	Software Engineering, Digital Transition, Knowledge Management, Digitalization, Governance

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

Period	Position/Institution/Country/Interruption cause
2008 – 2020	Titular de Universidad / Universidad Carlos III de Madrid
2005 – 2008	Titulares de Universidad Interinos / Universidad Carlos III de Madrid
2001 – 2005	Visitantes / Universidad Carlos III de Madrid
2001 – 2001	Ayudantes Fac- o Esc. Tec. Sup./ Universidad Carlos III de Madrid
2000 – 2001	Ayudantes de Escuela Universitaria / Universidad Carlos III de Madrid
1999 – 2000	Asociados / Universidad Carlos III de Madrid

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Computer Science	Universidad Politécnica de Madrid/Spain	2001
Master in Software Engineering	Universidad Politécnica de Madrid/Spain	1999
Degree in Computer Science	Universidad Politécnica de Madrid/Spain	1997

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

Dr. Maria-Isabel Sanchez-Segura is full professor at the Computer Science and Engineering Department at Universidad Carlos III de Madrid.
Maria-Isabel holds a Ph.D. in Computer Science (2001), an M.S. in Software Engineering (1999) and a B.S. in Computer Science (1997), from the Universidad Politecnica of Madrid. She is Knowledge Manager Certified by the Knowledge Management Institute since 2013 and owns a Professional Certificate: Foundations of Data Science from BerkeleyX University since November 2021.

Director of Doctoral and Master Program in Computer Science and Technology at Carlos III University of Madrid from January 2014 to September 2021.

She is IEEE Senior Member since 2014.

She is currently:

- SWEBOK V4 editor of knowledge areas Software Configuration Management and Software Engineering Economics. evolution steering committee.
- And part of the ISO12207 and IEEE828 Review board committee.

She leads the Software Engineering Lab at Carlos III University http://sel.uc3m.es and specifically the research line on Processes and Information Technologies for the Systemic Governance of Intelligent Organizations http://promiseinnovatech.com.

She is currently Director of the IRSST R&D&I Chair for an "Intelligent digital transformation of occupational health and safety", sponsored by the Regional Institute for Occupational Safety and Health (2020-2026).

Her research interests include:

- Digital transformation governance.
- Knowledge Management, Intellectual Capital, Intelligent Organizations
- Value-based software engineering, software engineering economics.
- Software engineering in general; focusing on processes, methodologies, reuse, management and software configuration management, and usability of interactive systems.
- Applied Systems Thinking

Web page:
https://sites.google.com/site/maribelsanchezsegura/home
https://www.promiseinnovatech.com/members

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

C.1. Publications *(see instructions)*

1 Scientific Paper. Sanchez-Segura, Dugarte-Peña, G. L., Medina-Dominguez, F., Amescua Seco, A., & Menchen Viso, R. (2023). Digital transformation in organizational health and safety to mitigate Burnout Syndrome. Frontiers in Public Health, 11, 1080620–1080620. https://doi.org/10.3389/fpubh.2023.1080620

2 Scientific Paper. Sanchez-Segura, Medina-Dominguez, F., Dugarte-Peña, G.-L., de Amescua-Seco, A., & González Cruz, R. (2022). Engineering sustainable digital transformation projects immune to technical debt. Kybernetes. https://doi.org/10.1108/K-06-2022-0875

3 Scientific Paper. Sanchez-Segura, González-Cruz, R., Medina-Dominguez, F., & Dugarte-Peña, G.-L. (2022). Valuable Business Knowledge Asset Discovery by Processing Unstructured Data. Sustainability (Basel, Switzerland), 14(20), 12971. https://doi.org/10.3390/su142012971

4 Scientific Paper. Sanchez-Segura Maria-Isabel; Dugarte-Peña German-Lenin; Amescua-Seco Antonio; Medina-Dominguez Fuensanta. (1/4). 2021. Exploring how the intangible side of an organization impacts its business model. Kybernetes. Emerald Publishing Limited. 50-10, pp.2790-2822. https://doi.org/10.1108/K-05-2020-0302

5 Scientific Paper. Sanchez-Segura Maria-Isabel; Medina-Domínguez Fuensanta; de Amescua Antonio; Dugarte-Peña German-Lenin. (1/4). 2021. Knowledge governance maturity assessment can help software engineers during the design of business digitalization projects. Journal of Software: Evolution and Process. Wiley. 33-4, pp.1-25. https://doi.org/10.1002/smr.2326

6 Scientific Paper. Sanchez-Segura Maria-Isabel; Hadzikadic Mirsad; Dugarte-Peña, Germán-Lenin; Medina-Domínguez, Fuensanta. (1/4). 2018. Team Formation Using a Systems Thinking Approach SYSTEMS RESEARCH AND BEHAVIORAL SCIENCE. 35/4, pp.369-385. ISSN 1092-7026. https://doi.org/10.1002/sres.2536

7 Scientific Paper. Sanchez-Segura Maria-Isabel; Medina-Domínguez Fuensanta; Ruiz-Robles Ronald-Alejandro; Dugarte-Peña German-Lenin. (1/4). 2017. Strategic characterization of process assets based on asset quality and business impact. Industrial

Management & Data Systems. 117/8, pp.1720-1737. ISSN 0263-5577. https://doi.org/10.1108/IMDS-10-2016-0422

8 **Scientific Paper.** Sanchez-Segura Maria-Isabel; Dugarte-Peña German-Lenin; Medina-Domínguez Fuensanta; Ruiz-Robles Ronald-Alejandro. (1/4). 2016. A Model of Biomimetic Process Assets to Simulate their Impact on Strategic Goals. Information Systems Frontiers. pp.1-18. ISSN 1387-3326. https://doi.org/10.1007/s10796-016-9702-6

9 **Scientific Paper.** Sanchez-Segura Maria-Isabel; Ruiz-Robles Ronald-Alejandro; Medina-Domínguez Fuensanta. (1/3). 2016. Uncovering hidden process assets: A case study. Information Systems Frontiers. 18/6, pp.1041-1049. ISSN 1387-3326. https://doi.org/10.1007/s10796-016-9622-5

10 **Scientific Paper.** Carvajal Laura; Moreno Ana M.; Sanchez-Segura Maria-Isabel; Seffah Ahmed. (3/4). 2013. Usability through Software Design. IEEE Transactions on Software Engineering. 39/11, pp.1582-1596. ISSN 0098-5589. https://doi.org/10.1109/TSE.2013.29

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

1 Sanchez-Segura Maria-Isabel; Miño Calero Alberto; Dugarte Peña, Germán Lenin; Medina Domínguez, Fuensanta; Amescua, Antonio. A software tool to visualize the impact of intangible assets on business model. 7th Business Systems Laboratory International Symposium "Socio-Economic Ecosystems". 2020. Spain. Participatory - oral communication.

2 Delgado Clavero Alvaro; Gómez Berbís Juan Miguel; Amescua Antonio; Medina Domínguez, Fuensanta; Sanchez-Segura Maria-Isabel. OPTYFY: IndustrialIoT-Based Performance and Production Optimization Based on Semantics. Proceedings of the 5th International Conference, CITI 2019. 2019. Ecuador. Participatory - others.

3 Gómez Berbís Juan Miguel; Chagüendo Benavides Juan Manuel; Amescua Antonio; Sanchez-Segura Maria-Isabel; Medina Domínguez Fuensanta. INDIGO: Industrial IoT Data Management and Control Platform basedon Semantics. IECON'2019 IEEE 45th Annual Conference of the Industrial Electronics Society. 2019. Portugal. Participatory - others.

4 Sanchez-Segura Maria-Isabel; Dugarte-Peña Germán-Lenin; Medina-Domínguez, Fuensanta. System dynamics and agents-based simulation as toolsfor characterizing intangible process assets in organizations. WOSC2017 Conference (World organization of Systems and Cybernetics). 2017. Italy. Participatory - oral communication.

5 Moreno Ana; Sanchez-Segura Maria-Isabel; Peters Lawrence; Araujo Jonathan. Enriching traditional Software Engineering curricula with Software Project Management Knowledge. 38th International Conference on Software Engineering (ICSE) 2016. 2015. United States of America. Participatory - Others.

6 Sanchez-Segura Maria-Isabel; Ruiz-Robles Ronald-Alejandro; Medina-Domínguez, Fuensanta; Amescua, Antonio. Smart Intangible Knowledge Assets Valuation. ECKM 2014, 15th European Conference on Knowledge Management. 2014. Portugal. Participatory - oral communication.

7 Ruiz Robles, Ronald Alejandro; Sanchez-Segura Maria-Isabel; Medina Domínguez, Fuensanta. Intangible Assets Management in the Software Industry. EuroSPI 2014, European System, Software & Service Process Improvement & Innovation. 2014. Luxembourg. Participatory - oral communication.

8 Vasquez-Bravo Diana-Marcela; Sanchez-Segura Maria-Isabel; Medina-Domínguez, Fuensanta; Amescua Antonio. Product patterns for knowledge acquisition: Proposal and empirical validation. WSKS 2013 - 6th World Summit on the Knowledge Society, Aveiro (Portugal), 19-21 June, 2013. 2013. Portugal. Participatory - oral communication.

9 Medina-Domínguez Fuensanta; Sanchez-Segura Maria-Isabel; Mora-Soto José-Arturo; Amescua, Antonio. Project Planning Add-In based on Knowledge Reuse with Product Patterns. PATTERNS 2013: The Fifth International Conferences on Pervasive

Patterns and Applications, May 27 - June 1 2013 - Valencia (Spain). 2013. Spain. Participatory - oral communication.

10 Sanchez-Segura Maria-Isabel; Ruiz-Robles Ronald-Alejandro; Mora-Soto José-Arturo. Enhancing Process Asset Assessment. SEPG Europe 2012 Conference. 2012. Spain. Participatory - Others.

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 **Contract**. Cátedra IRSST: I+D+i para una transformación digital inteligente de la Seguridad y Salud laboral INSTITUTO REGIONAL DE SEGURIDAD Y SALUD EN EL TRABAJO. Sanchez-Segura Maria-Isabel. (Universidad Carlos III de Madrid). 16/06/2020-16/06/2026. 360.000 €.

2 **Project** CULTURATI - CUSTOMIZED GAMES AND ROUTES FOR CULTURAL HERITAGE AND ARTS awarded by EUROPEAN COMMISSION RESEARCH EXECUTIVE AGENCY. JUAN MIGUEL GOMEZ-BERBIS (Universidad Carlos III de Madrid) 2023 - 2026

3 **Project**. HUBS 2018 / MadridFlightOnChip, MadridFlightOnChip. CAM-DIR.GENERAL INVESTIGACION. JUAN LLORENS. (Universidad Carlos III de Madrid). 11/01/2019-10/01/2022. 473.419,39 €.

4 **Project**. RTI2018-099915-B-I00, Ingeniería Inversa Continua para Lineas de Productos de Software. AGENCIA ESTATAL DE INVESTIGACION (AEI). JUAN LLORENS. (Universidad Carlos III de Madrid). 01/01/2019-31/12/2021. 47.069 €.

5 **Project**. 2018/00565/001, (ITEA 3) OPTIMUM - OPTimised Industrial IoT and Distributed Control Platform for Manufactuing and Material Handling. SOTEC CONSULTING, S.L.. GÓMEZ BERBÍS, JUAN MIGUEL. 01/11/2018-30/10/2020. 133.785 €.

6 **Project**. 1530479, Decision Risk and Management Science. National Science Foundation (NSF). CLEOTILDE GONZALEZ. (Carnegie Mellon University). 01/01/2015-31/12/2019. 483.000 €.

7 **Project**. RTC-2016-5463-4, Plataforma Cloud de Servicios Integrales y Subasta de Portes Basada en IoT Aplicada al Transporte. MINISTERIO DE ASUNTOS ECONOMICOS Y TRANSFORMACION DIGITAL. GÓMEZ BERBÍS, JUAN MIGUEL. (Universidad Carlos III de Madrid). 01/06/2016-30/06/2019. 111.973 €.

8 **Project**. TIN2011-27244, Plataforma tecnológica y metodológica para la transferencia sostenible del conocimiento organizativo, su capitalización y el aseguramiento de la innovación. MINISTERIO DE CIENCIA E INNOVACION. Sanchez-Segura Maria-Isabel. (Universidad Carlos III de Madrid). 01/01/2012-31/12/2014. 25.410 €.

9 **Contract**. Collaborative health: Prevención de enfermedades infecciosas basada en el análisis inteligente en redes sociales y participación ciudadana DANTIA TECNOLOGIA S.L.. GÓMEZ BERBÍS, JUAN MIGUEL. (Universidad Carlos III de Madrid). 01/04/2019-01/10/2020. 45.000 €.

10 **Contract**. Ajuste del modelo de valoración y gestión estratégica del capital intelectual everis-intellect. EVERIS SPAIN, S.L.U.. Sanchez-Segura Maria-Isabel. (Universidad Carlos III de Madrid). 01/01/2013-01/05/2013. 5.564,7 €.

C.4. Contracts, technological or transfer merits
Industrial or intellectual property activities related with the project proposed.

- Sanchez-Segura Maria-Isabel; Medina Domínguez, Fuensanta. M-005559/2023. Asiento registral 16/2023/6039. Servicio de identificación y priorización de procesos potencialmente digitalizables para promover la productividad y sostenibilidad de los negocios. España. Universidad Carlos III de Madrid.

- Sanchez-Segura Maria-Isabel; Medina Domínguez, Fuensanta; Mora Soto, José Arturo; Beatriz Mora Fernández. M-001670/2010. Marco metodológico y plataforma tecnológica para el despliegue de la Gestión de la Configuración del Software 16/2012/2393 España. 22/02/2010. Universidad Carlos III de Madrid.