CV date	19/01/2023

Part A. PERSONAL INFORMATION

First name	María del Carmen		
Family name	Romero Ternero		
Gender	Female	Birth date	
Social Security, Passport, ID number			
e-mail	mcromerot@us.es		
URL Web	http://personal.us.es/mcromerot		
Open Researcher and Contributor ID (ORCID)	0000-0001-6965-9485		

A.1. Current position

Position	Profesora Titular de Universidad (Tenured Professor)		
Initial date	11/12/2018		
Institution	Universidad de Sevilla		
Department/Center	Dpto. Tecnología Electrónica / ETSI Informática		
Country	Spain	Teleph. number	
Key words	Artificial Intelligence, Multiagent Systems, User-Centered Design, Digital Health, Information Security, Organizational modeling		

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

Period	Interruption cause

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Ingeniería en Informática	Sevilla/Spain	1999
Doctora en Informática	Sevilla/Spain	2005
Máster en Organización y Gestión de Empresas	Sevilla/Spain	2008
Experta en Dirección de Servicios TI de Universidades	Castilla La Mancha/Sp	2015
Máster en Ciencias Cognitivas	Málaga/Spain	2021
Program Executive en Ciberseguridad, Riesgos y Seguridad Digital	Garrigues/Spain	2022

Part B. CV SUMMARY

She belongs to TIC150 (Tecnología Electrónica e Informática Industrial) and IBiS205 (Genética Humana y Reproducción) research groups. She has 45 scientific publications (journals and conferences) and participation in 16 research projects in the field of applied Artificial Intelligence (5 transfer projects, one of them as main researcher). She worked on the design of intelligent systems to support decision-making in the industrial field, specifically in the electricity sector. During a postdoctoral stay at the HS of Electronics & Computer Science at the University of Southampton (UK) in 2006 she collaborated on HIPARSYS project with the Intelligence, Agent and Multimedia group that led by Dr. Nick Jennings, where she specialized in the design and development of distributed intelligent systems based on autonomous elements and organizational modelling, entering the paradigm of multi-agent systems and machine learning. During her scientific trajectory she has applied this knowledge not only in projects in the industrial field, for the monitoring and control of distributed elements, but also in the field of Education (C3.4) and in the field of Health & Well-being (C3.3 and C3.2). She has been working on user-centered design in the ARCADE Project (C3.1), specifically in methods of co-design with children (C1.3) and in techniques of usability and user experience (C1.6). Her Master Thesis in Cognitive Sciences researched about emotional computing models. Likewise, since 2018 she actively participates in the AI and Human Development Working Group promoted by the Microsoft Chair - UV Privacy and Digital Transformation for the promotion and application of Responsible AI. She is currently tutoring Montahna's doctoral thesis, on the application of sensing and AI to improve accessibility

for visually impaired people in smart cities (C1.4 and C1.7), and Oprescu's doctoral thesis on the application of affective computing with Internet of Bodies and Responsible AI for the case study of risk prevention in the pregnancy (C1.2, C1.5 and C1.8). She has just begun to supervise other two thesis, one related to design new computational emotional models based in machine learning and other related to AI, IoT and cibersecurity. She has supervised two completed PhD. Currently she is participating in one research project (autonomic), about deep-learning analysis and cyber-physical systems applied to biodiversity in urban and Natural Environments (C.2.1). She submitted previous research proposals to National funding titled Methodology for Data Management in the Context of Heterogeneous Environment and RAI Applications in Health (HERA) and Harmonized Digital Transformation for the Coordination of Domiciliary Social Health Care through Responsible Artificial Intelligence and Integration of heterogeneous data sources (CASIARI).

She teaches subjects on topics related to networks, Internet of Things, infrastructures and government and management of IT. She has extensive experience on working with other disciplines. Since 2013, she leads Sinergia project where multidisciplinary teams are formed for the collaborative works in degrees and masters to promote entrepreneurship.

She has led the enterprise architecture project for digital transformation at the University of Seville during her academic positions as Director of the ICT and as Director of the Digital Strategy (2014-2018). She also, in that same period, she led the implementation of the National Security Scheme in the US as Chief of Information Security Officer, developing the information security policy and its associated regulations, and was a member of the US Personal Data Protection Committee. She is an expert in Information Security at all levels (organizational and technical). She participated in international project about privacy, is teacher in the Expert course for training DPOs in CFP of University of Seville and reviewer for the official certification. She has extensive experience in information technology management, holding various positions of responsibility: Dean of the ETSI Informática (2022-present), Director of the Digital Strategy Secretariat (2016-2018), Director of the ICT Secretariat (2014-2016), Deputy Director of Infrastructure and Equipment of the ETSI Informática (2010-2014), member of the Security Commission and Electronic Administration Commission of the University of Seville (both 2014-2018). She has been responsible for the processes, budget, and human resources of the IT department at University of Seville (2014 - 2018) (CIO). The US provides IT services to a university community with a volume of around 60,000 people and the budget order for which it was responsible was around several million euros. All this evidence her solvency in leadership and management and her capacity. She has extensive experience in public outreach.

Part C. RELEVANT MERITS

1. Luque, J., Personal, E., Perez, F., **Romero-Ternero, M.C.**, Leon, C. (2023) Low-dimensional representation of monthly electricity demand profiles, Engineering Applications of Artificial Intelligence, Volume 119, 2023, 105728, ISSN 0952-1976, doi:10.1016/j.engappai.2022.105728
2. Gómez-Jemes, L.; Oprescu, A.; Chimenea-Toscano, A.; García-Díaz, L.; **Romero-Ternero, M.C.** (2022). Machine learning to predict pre-eclampsia and intrauterine growth restriction in pregnant women, Electronics, Vol 11, N 19, doi: 10.3390/electronics11193240
3. **M.C. Romero-Ternero**, MC, García-Robles, R., Cagigas-Muñiz, D., Rivera-Romero, O, Romero-Ternero, M.J. (2022). Participant Observation to Apply an Empirical Method of Co-design with Children, Advances in Human-Computer Interaction, doi: 10.1155/2021/1101847.
4. Montanha, A., Oprescu, A., **Romero-Ternero, M.C.** (2022). A Context-Aware Artificial Intelligence-based System to Support Street Crossings For Pedestrians with Visual Impairments, Applied Artificial Intelligence, 36:1, DOI: 10.1080/08839514.2022.2062818
5. Oprescu, A.M., Miró-Amarante, G., García-Díaz, L., Rey, V.E., Chimenea-Toscano, A., Martínez-Martínez, R., **Romero-Ternero, M.C. (coord.)** (2021). Towards a data collection methodology for Responsible Artificial Intelligence in Health: A Prospective and Qualitative Study in Pregnancy, Information Fusion, Special Issue on Advances in Explainable (XAI) and Responsible (RAI) Artificial Intelligence. Accepted, in minor revision.
6. **Romero-Ternero, M.C.**, Cagigas-Muñiz, D., García-Robles, R., Oprescu, A. (2021). Usability and User Experience Study with Children for a Mobile Health App, DOI: 10.2196/preprints.30443
7. Montanha, A., Polidorio, A.M., **Romero-Ternero, M.C.** (2021). New Signal Location Method Based on Signal-Range Data for Proximity Tracing Tools, Journal of Network and Computer Applications, S1084-8045(21)00033-3, doi: 10.1016/j.jnca.2021.103006.
8. A. Oprescu, G. Miró-Amarante, L. García-Díaz, L. Beltrán, V.E. Rey, **M.C. Romero- Ternero**

(coord.) (2020). Artificial Intelligence in Pregnancy: a Scoping Review, IEEE Access, Early access, DOI: 10.1109/ACCESS.2020.30283332, 2 octubre, 2020. **Award to best paper of month (october 2020) at ETSI Informática.**

9. **M.C. Romero-Ternero**, D. Oviedo-Olmedo, A. Carrasco, J. Luque (2019). A Distributed Approach for Estimating Battery State-Of-Charge in Solar Farms, Sensors, 19(22), 4998, DOI:doi.org/10.3390/s19224998. JCR= 3,03, Q1
10. M.D. Hernández, **M.C. Romero-Ternero**, F. Sivianes, A. Carrasco, J. Ropero (2018): A Hybrid Intelligent Multiagent System for the Remote Control of Solar Farms, Applied Artificial Intelligence, DOI: 10.1080/08839514.2018.1530854. JCR=0,98, Q4
11. D. Oviedo, **M.C. Romero-Ternero**, M.D. Hernández, F. Sivianes, A. Carrasco, J.I. Escudero, Multiple intelligences in a MultiAgent System applied to Telecontrol, Expert Systems With Applications, Elsevier, ISSN: 0957-4174, Volume 41, Issue 15, Pages 6688-6700, 2014. JCR=1,85, T1
12. Carrasco, M.D. Hernández, **M.C. Romero-Ternero**, F. Sivianes, D. Oviedo, J.I. Escudero, PeMMAS: A Tool for Studying the Performance of Multi-Agent Systems Developed in JADE , IEEE Transactions on Human-Machine Systems, ISSN: 2168-2291, Volume: 44 , Issue: 1 Page(s): 180 - 189, 2014. JCR=2,55, T1
13. Iñigo-Blasco, P, Diaz-del-Rio, F., **Romero-Ternero, MC**, Cagigas-Muñiz, D., Vicente- Diaz, S (2012). Robotics Software Frameworks for Multi-Agent Robotic Systems Development, Robotics and Autonomous Systems, Elsevier, Volume 60, Issue 6, June 2012, Pages 803–821, ISSN: 0921-8890, publicado online en SciVerse ScienceDirect, DOI: http://dx.doi.org/10.1016/j.robot.2012.02.004. JCR=1,16, Q2, 127 cites
14. Carrasco, A, **Romero-Ternero**, **M.C.,** Sivianes, F, Hernandez, MD, Escudero, JI (2010). Multi-Agent and Embedded System Technologies Applied to Improve the Management of Power Systems , JDCTA: International Journal of Digital Content Technology and its Applications, Vol. 4, No. 1, pp. 79 ~ 85, 2010. SJR (SCImago)=3,645, Q2, 25 cites

Congress

15. **M.C. Romero-Ternero**, A.M. Oprescu, G. Miró-Amarante, L. García-Díaz, V.E. Rey, A. Chimenea-Toscano, R. Martínez-Martínez (2022). Data collection methodology for Responsible Artificial Intelligence in Health, SophIA Submmit, 23-25 november, Sophia Antipolis, Côte d'Azur (France).
16. A.M. Oprescu, G. Miró-Amarante, L. García-Díaz, V.E. Rey, A. Chimenea-Toscano, R. Martínez-Martínez, **M.C. Romero-Ternero** (2022). A review of Towards a data collection methodology for Responsible Artificial Intelligence in health: A prospective and qualitative study in pregnancy, VII Jornadas Nacionales de Investigación en Ciberseguridad, 27-29 june, Bilbao (Spain).
17. Guerrero, J.I., **Romero-Ternero, M.C.**, Personal, E., Larios Marín, D.F., Guerra, J.A., Leon, C. (2020). Emotional Factor Forecasting based on Driver Modelling in Electric Vehicle Fleets, 22nd International Conference on Enterprise Information Systems, Online Streaming, 8 Mayo, 2020.
18. **Romero-Ternero, MC**, García-Robles, R, Cagigas-Muñiz, D, Rivera-Romero, O (2017). A Mobile App to Manage Children Dental Anxiety: Context and Approach, 9th International Conference on e-Health 2017, Lisbon (Portugal), July 20 to 22, 2017.
19. **Romero-Ternero, MC**, García-Robles, R, Rivera-Romero, O, Cagigas-Muñiz, D (2016). Sinergies in IT for improving QoL, 1st HERO International Conference On Neurocognitive long-term Effects Of Childhood Cancer Treatment, Seville (Spain), Nov 24 to 26, 2016.
20. Rivera-Romero, O, **Romero-Ternero, MC**, Cagigas-Muñiz, D, García-Robles, R (2016). Technologies supporting patients / survivors : resources, achievements, and goals, 1st HERO International Conference On Neurocognitive long-term Effects Of Childhood Cancer Treatment, Seville (Spain), November 24 to 26, 2016.
21. García-Robles, R, Cagigas-Muñiz, D, **Romero-Ternero, MC**, Rivera-Romero, O (2016). How Can Computer Science Help Cancer Survivors Children?, 1st HERO International Conference On Neurocognitive long-term Effects Of Childhood Cancer Treatment, Seville (Spain), November 24 to 26, 2016.
22. Álvarez-Benito, G, Cagigas Muñiz, D, García Robles, R, Rivera, O, **Romero-Ternero, MC** (2014). Sofware Predictivo de Apoyo a la Comunicación para Niños Oncológicos con Disfunción del Lenguaje, Actas del VII Congreso Internacional y XII Nacional de Psicología Clínica, Nº. 43 CE-255, Sevilla (España), 14-16 noviembre 2014.
23. Oviedo, D, **Romero-Ternero, MC**, Carrasco, A, Sivianes, F, Hernandez, MD, Escudero, JI (2013). Simulation and Implementation of a Neural Network in a Multiagent System,

Proceedings of the 8th International Conference on Intelligent Systems and Knowledge Engineering, Vol 3: Practical Applications of Intelligent Systems, ISBN 978-3-642-54926- 7, ShenZhen (China), 20-22 noviembre 2013.

Other works

24. **Romero Ternero, MC** (2020). Modelos Emocionales para la Toma de Decisiones en Arquitecturas Cognitivo-Afectivas Basadas en Sistemas Multiagente, TFM, Máster Propio en Ciencias Cognitivas de la Universidad de Málaga, 30 octubre. http://t.ly/SIC2
25. Martínez, R., Barro, S., Orozco, G., **Romero-Ternero, M.C. (coord..)** (2020). Inteligencia Artificial y Desarrollo Humano. Propuesta ciudadana para la Comisión de Reconstrucción Social y Económica, Cátedra Microsoft-UV Privacidad y Transformación Digital, http://t.ly/SIC2

C.2. Research projects

1. DAPHNE - Deep-learning Analysis and cyber-PHysical systems applied to biodiversity in urban and Natural Environments (P20_01078). Consejería de Economía, Conocimiento, Empresas y Universidad, Junta Andalucía. From 05/10/2020 to 30/04/2023. 189.000€.
2. Prevención de la Violencia de Género en la Adolescencia a través del Ejercicio Físico y el Deporte: Una Intervención basada en la Teoría de la Autodeterminación (US- 1264911). Consejería de Economía y Conocimiento, Junta de Andalucía. From 01/02/2020 to 30/04/2022. 55.000€.
3. Training Activities to Implement the Data Protection Reform. (TATODPR) (H2020- 769191). Comisión Europea. From: 1/11/2017 to 31/10/2019. 54.029€.
4. CARISMA: Control Automático Remoto de Instalaciones Solares con tecnología Multiagente. Junta de Andalucía, Unión Europea (FEDER - FSE). P08-TIC-3862. from 31/01/2009 to 31/01/2013. 187.583,68€.
5. Interfaz Multimodal Inalámbrica (P08-TIC-03631). Junta de Andalucía - Consejería de Innovación, Ciencia y Empresas. From 31/01/2009 to 31/01/2013. 167.623,68 €.

C.3. Contracts, technological or transfer merits

1. ARCADE: App for Reducing Children's Anxiety in Dentistry Environment. Cátedra Telefónica Inteligencia en la Red. Desde:01-02-2017 Hasta: 01-02-2018. Investigadora principal. IP: Mª Carmen Romero Ternero. 3000€.
2. DAILYMPICS CP: Estudio de viabilidad de un Programa de Coaching Digital Móvil sobre en Actividad Física y Deporte para apoyar y educar sobre vida saludable a pacientes de cáncer de próstata con Salumedia Tecnologías, S.L. (P081-16/E03 - Investigador) Desde: 01-02-2016 Hasta: 28-02-2017. IP: Octavio Rivera Romero. 20.000€.
3. TECNOCAI: Tecnologías eficientes e inteligentes orientadas a la salud y al confort en ambientes interiores. Ministerio de Ciencia e Innovación. P054-09/E16. Contrato de investigación a través de la FIDETIA (Fundación para la Investigación y el Desarrollo de las Tecnologías de la Información en Andalucía). Desde: 01/01/2010 Hasta: 31/12/2011. IP: Isabel Gómez González. 92.800€.
4. Aula virtual basada en inteligencia computacional. Contrato de investigación a través de la FIDETIA (Fundación para la Investigación y el Desarrollo de las Tecnologías de la Información en Andalucía). Desde: 01/01/2010 Hasta: 31/12/2011. IP: Carlos León. 56.260€.

C.4. Patents

5. Romero-Ternero, MC; Oprescu, A.M.; Peralta-Álvarez, Mª Estela; Quintela Vela, F.J..; Ruiz-Martínez, I. WISEApp: Sistema para el Seguimiento Médico del Embarazo a través de Aplicación Móvil, Software registration SE-154-22, Registering date: 21/03/2022
6. Romero Ternero, MC, Díaz Ruiz, S. Sistema y método de resolución centralizada y confiable de direcciones de red en direcciones físicas no vulnerable a ataques de envenenamiento de caché, Patente número P200901708, December 2012.

C.5. Membership of scientific committees and professional associations

ANEP evaluator; Reviewer in scientific committees at international congresses (AICIT, ICNIT, CITS, CITI); Member of the committee for the organization of scientific congresses (CAEPIA, JMAS); Reviewer of international journals (Journal of Networks, Transactions of the Society for Modeling and Simulation International, IEEE Transactions on Education); IEEE and ACM member; AEPIA Member; Evaluator of the Scheme of the Delegate of Data Protection of the Spanish Agency for Data Protection.