CV Date	14/10/2023

Part A. PERSONAL INFORMATION

First Name	José Luis		
Family Name	Risco Martín		
Sex	Male	Date of Birth	
ID number Social Security, Passport			
URL Web	https://www.ucm.es/jlrisco		
Email Address	jlrisco@ucm.es		
Open Researcher and Contributor ID (ORCID)	0000-0002-3127-6507		

A.1. Current position

Job Title	Catedrático de Universidad		
Starting date	2021		
Institution	Universidad Complutense de Madrid		
Department / Centre	Arquitectura de Computadores y Automática / Facultad de Informática		
Country	Spain	Phone Number	
Keywords	Architecture of computers; Artificial intelligence; Process simulation; System simulations		

A.3. Education

Degree/Master/PhD	University / Country	Year
Doctor por la Universidad Complutense de Madrid dentro del Programa de Arquitectura de Computadores y Automática	Universidad Complutense de Madrid / Spain	2004
Licenciado en Ciencias Físicas Especialidad Cálculo Automático	Universidad Complutense de Madrid / Spain	1998

Part B. CV SUMMARY

Biography: José L. Risco-Martín was born in Don Benito, Extremadura, Spain. He received his M.Sc. and Ph.D. degrees in Physics from Universidad Complutense de Madrid, Spain, in 1998 and 2004, respectively. In 2007 he joined the Department of Computer Architecture and Automation, Universidad Complutense de Madrid, Spain, where he is now a Full Professor. Previously he was Lecturer at Colegio Universitario de Segovia, Spain (from 1998 to 2000) and CES Felipe II, Spain (from 2000 to 2006). He has developed three pos-doctoral research stays at the University of Arizona (UoA, 2006) the École Polytechnique Fédérale de Lausanne (EPFL, 2019), and Carleton University (ARSLab, 2022), respectively. His research interests focus on Cyber-Physical Systems, Computer Simulation and Optimization, with emphasis on Discrete Event Modeling and Simulation, Parallel and Distributed Simulation, Edge and Cloud Computing, Artificial Intelligence in Modeling and Optimization, and Feature Engineering.

Research and knowledge transfer: In these fields, he has co-authored more than 180 publications in prestigious journals, conferences, books and book chapters. He has published more than 50 articles in journals included in the Journal Citation Reports (JCR). From the papers published in conferences, 9 has been classified as Class A in the COmputing, Research and Education (CORE) ranking portal. He has also published 8 articles in non-indexed journals, 15 book chapters, 4 books and more than 100 publications in other conferences. Furthermore, he has given some invited talks, tutorials and seminars. He has participated in more than 17 projects in open public calls, where he has been the principal investigator in two of them. In parallel, he has participated in 10 contracts with the industry, being the principal investigator in two of them. He has elaborated simulation and optimization models for companies like Airbus, Repsol or ENAGAS. He also holds three Spanish patents. He has been CTO of DUNIP Technologies LLC, and co-founder of BrainGuard SL.

Management and Awards: Currently, he is Director at Large of the Society for Modeling and Simulation International (SCS). He is associate editor of SIMULATION: Trans. of Soc. Mod. and Sim. Int. He has organized more than 10 Modeling and Simulation tracks, workshops and conferences like DS-RT, ANSS, SCSC, SummerSim, SpringSim, etc. He has been Program Committee Member in more than 20 different conferences. Regarding the University environment, he has been Vice-Dean of International Relations at CES Felipe II (2004-2006). He has been head of the Department of Computer Architecture and Automation at Universidad Complutense de Madrid, from (2017-2020), and previously sub-head of the same Department (2014-2016). He was coordinating the University Entrance Exam for the Community of Madrid in the area of Industrial Technology in 2017. He has received various awards, like the SCS Outstanding Service Award in 2017, and the HiPEAC Technology Transfer Award in 2018. Finally, he has national recognition for eighteen years of international-quality research. He is ACM Senior Member and SCS Senior Member.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. José L. Risco-Martín; Segundo Esteban; Jesús Chacón; Gonzalo Carazo-Barbero; Eva Besada-Portas; José A. López-Orozco. 2023. Simulation-driven engineering for the management of harmful algal and cyanobacterial blooms. Simulation.
2 **Scientific paper**. José L. Risco-Martín; Kevin Henares; Saurabh Mittal; Luis F. Almendras; Katzalin Olcoz. 2022. A Unified Cloud-Enabled Discrete Event Parallel and Distributed Simulation Architecture. Simulation Modelling Practice and Theory. Elsevier. 118.
3 **Scientific paper**. Luis A. Pargas-Carmona; Júlio A.M. Da Silva; Ângelo M.O. Sant'Anna; José L. Risco-Martín. 2022. An optimization scheme for chiller selection in cooling plants. Journal of Building Engineering.
4 **Scientific paper**. Kevin Henares; José L. Risco Martín; José L. Ayala; Román Hermida. 2022. Efficient micro data centres deployment for mobile healthcare monitoring systems in IoT urban scenarios. Journal of Simulation.
5 **Scientific paper**. Román Cárdenas; Patricia Arroba; José L. Risco-Martín; José M. Moya. 2022. Modeling and simulation of smart grid-aware edge computing federations. Cluster Computing. pp.1-25.
6 **Scientific paper**. Román Cárdenas; Kevin Henares; Patricia Arroba; José L. Risco-Martín; Gabriel A. Wainer. 2022. The DEVStone Metric: Performance Analysis of DEVS Simulation Engines. ACM Transactions on Modeling and Computer Simulation. ACM. 32-3, pp.1-20.
7 **Scientific paper**. José L. Risco-Martín; Saurabh Mittal; Kevin Henares; Román Cardenas; Patricia Arroba. 2022. xDEVS: A toolkit for interoperable modeling and simulation of formal discrete event systems. Software: Practice and Experience. pp.1-42.
8 **Scientific paper**. Román Cárdenas; Patricia Arroba; José L. Risco-Martín. 2021. Bringing AI to the edge: A formal M&S specification to deploy effective IoT architectures. Journal of Simulation.
9 **Scientific paper**. Luis García-Terriza; José L. Risco-Martín; Gemma Reig Roselló; José L. Ayala. 2021. Predictive and diagnosis models of stroke from hemodynamic signal monitoring. Medical & Biological Engineering & Computing.
10 **Scientific paper**. Román Cárdenas; Patricia Arroba; Roberto Blanco; Pedro Malagón; José L. Risco-Martín; José M. Moya. 2020. Mercury: A modeling, simulation, and optimization framework for data stream-oriented IoT applications. Simulation Modelling Practice and Theory. 101, pp.1-21.
11 **Scientific paper**. Adrian Garcia-Garcia; Juan Carlos Saez; José Luis Risco-Martín; Manuel Prieto-Matias. 2020. PBBCache: an open-source parallel simulator for rapid prototyping and evaluation of cache partitioning and cache-clustering policies. Journal of Computational Science. 42.

12 **Book chapter**. José L. Risco Martín; Saurabh Mittal. 2020. Cloud-Based M&S for Cyber-Physical Systems Engineering. Simulation for Cyber-Physical Systems Engineering: A Cloud-Based Context. Springer. pp.3-24.

13 **Book chapter**. Kevin Henares; José L. Risco Martín; Josué Pagán; Carlos González; José L. Ayala; Román Hermida. 2020. Cyber-Physical Systems Design Flow to Manage Multi-channel Acquisition System for Real-Time Migraine Monitoring and Prediction. Simulation for Cyber-Physical Systems Engineering: A Cloud-Based Context. Springer. pp.283-304.

14 **Scientific book or monograph**. José L. Risco-Martín; Saurabh Mittal; Tuncer Ören. 2020. Simulation for Cyber-Physical Systems Engineering: A Cloud-Based Context. Springer. pp.1-453.

C.2. Conferences and meetings

1 Román Cárdenas; Patricia Arroba; José L. Risco-Martín. A new family of xDEVS simulators for enhanced performance. 2023 Annual Modeling and Simulation Conference (ANNSIM'23). 2023. Portugal.

2 Samuel Ferrero-Losada; Eva Besada-Portas; José L. Risco-Martín; José A. López-Orozco. DEVS-based modeling and simulation of data-driven exploration algorithms of lentic water bodies with an ASV. 2023 Annual Modeling and Simulation Conference (ANNSIM'23). 2023. Portugal.

3 Antonio F. Rodríguez-Liria; Román Cárdenas; Patricia Arroba; José M. Moya; José L. Risco-Martín; Gabriel Wainer. Decision Support Framework for Automating the Optimization of Edge Computing Federations. 2023 Annual Modeling and Simulation Conference (ANNSIM'23). 2023. Portugal.

4 Gonzalo Carazo-Barbero; Eva Besada-Portas; José L. Risco-Martín; José A. López-Orozco. EA-based ASV Trajectory Planner for Detecting Cyanobacterial Blooms in Freshwater. 2023 Genetic and Evolutionary Computation Conference (GECCO '23). 2023. Portugal.

5 Luis García Terriza; José L. Risco-Martín; José L. Ayala; Gemma Reig Roselló. Intelligence-based Recommendation System for Critical Stroke Management in Intensive Care Units. BIOINFORMATICS 2023. 2023. Portugal.

6 Beatriz Herguedas-Pinedo; José L. Risco-Martín; Segundo Esteban; José A. López-Orozco; Eva Besada-Portas. Predictive modeling and simulation system for the management of harmful cyanobacteria blooms. 2023 Annual Modeling and Simulation Conference (ANNSIM'23). 2023. Portugal.

7 Juan B Bordón-Ruiz; Eva Besada-Portas; José A López-Orozco; José L Risco-Martín. DEVS-Based Simulation for Search and Rescue Missions Involving Multiple UAVS. 2021 Annual Modeling and Simulation Conference (ANNSIM'21). 2021.

8 Juan Bautista Bordón-Ruiz; Eva Besada-Portas; José Luis Risco-Martín; José Antonio López-Orozco. DEVS-based Evaluation of UAVs-based Target-search Strategies in Realistically-modeled Missions. 2021 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS'21). 2021.

9 Román Cárdenas; Kevin Henares; Patricia Arroba; Gabriel Wainer; José L. Risco-Martín. A DEVS Simulation Algorithm Based on Shared Memory for Enhancing Performance. 2020 Winter Simulation Conference (WSC'20). 2020.

C.3. Research projects and contracts

1 **Project**. Digitalización y control de cianobacterias aplicado a la gestión de la calidad de embalses, incluidos los sistemas de captación y depuración de aguas. Ministerio de Ciencia e Innovación. Eva Besada Portas. 2022-2024. 678.960 €.

2 **Project**. Hacia un sistema Integral para la Alerta y GEStión de BLOOMs de cianobacterias en aguas continentales. Comunidad Autónoma de Madrid. Eva Besada Portas. 2021-2024. 672.320 €.

3 **Project**. Micro-centro de datos refrigerado por inmersión con dos fases para aplicaciones biomédicas. Ministerio de Ciencia e Innovación. José M. Moya. 2020-2022. 40.293 €.

4 **Project**. ConvergenciA Big dAta-Hpc: de Los sensores a las Aplicaciones. Consejería de Educación e Investigación (CAM). Francisco Tirado. 2019-2022. 869.400 €.

5 **Project**. Monitorización ambulatoria no invasiva de variables biométricas y biofísicas y como método para la predicción de una crisis de migraña.. Ministerio de Economía y Competitividad. José Vivancos Mora. 2018-2019.
6 **Project**. Modeling, Simulation and Processing Techniques for eHealth Applications in the Mobile Cloud Computing Scenario. José L. Risco-Martín. (Universidad Complutense de Madrid). 2017-2019. 16.512 €.
7 **Project**. Metodología de internacionalización de material docente basada en el uso de Markdown y Pandoc. Universidad Complutense de Madrid. 2017-2018.
8 **Project**. Técnicas BigData para el Modelado, Simulación y Optimización de la Ciudad Interconectada. BANCO SANTANDER, S.A.. José L. Ayala. 2017-2018.
9 **Project**. Desarrollo de sistemas adaptativos y bioinspirados para el control glucemico con infusores subcutaneos continuos de insulina y monitores continuos de glucosa. Ministerio de Economía y Competitividad. JUAN LANCHARES DAVILA. 2015-2018. 50.457 €.
10 **Project**. Optimización del uso de energías renovables mediante técnicas de modelado de la generación y demanda energética en SmartGrid. Iberdrola, S.A.. José L. Ayala. 2017-2017.
11 **Project**. Uso de los servicios para.TI@UCM para mejorar la gestión académica en los Departamentos. Universidad Complutense de Madrid. José L. Risco-Martín. 2015-2016.
12 **Project**. Más allá del uso de tecnologías digitales en blooms de cianobacterias: gestión inteligente de cianobacterias mediante el uso de gemelos digitales y computación en el borde. Ministerio de Ciencia e Innovación. José L. Risco Martín. (Universidad Complutense de Madrid). From 2022. 395.945 €.
13 **Contract**. Mission Automation & Autonomy. Trajectory Optimization for ISR missions AIRBUS DEFENSE & SPACE, S.A.U. AIRBUS. José Antonio López Orozco. 2018-01/01/2019. 44.118 €.
14 **Contract**. Development of MIPSfpga 2.0 IMAGINATION TECHNOLOGIES LIMITED. Daniel Chaver. 2016-01/01/2018.
15 **Contract**. Actualización de un módulo de visualización gráfica de la red Repsol-YPF. José L. Risco-Martín. 2007-01/01/2008.
16 **Contract**. Evaluación de técnicas de inteliegencia articificial para la toma de decisiones y optimización de estrategias EADS CONSTRUCCIONES AERONÁUTICAS (EADS CASA). JESUS MANUEL DE LA CRUZ GARCIA. 2006-03/11/2006. 140.000 €.
17 **Contract**. Metodología para los entornos de modelado y simulación distribuidos INDRA SISTEMAS S.A.. Jesús M. de la Cruz. 2005-01/01/2007.
18 **Contract**. Generación y gestión de redes logísticas locales de distribución, almacenamiento y transporte de productos del grupo Repsol; sistema de integración de gestión logística y optimización: módulo 2 Repsol-YPF. Jesús M. de la Cruz. 1999-01/01/2003.

C.4. Activities of technology / knowledge transfer and results exploitation

1 José L. Ayala; José L. Risco-Martín; Josué Pagán Ortíz. M-007702/2017. Método para determinar el nivel de activación del sistema trigémino-vascular Spain. 2018. Universidad Complutense de Madrid.
2 **Patent of invention**. Marta Botella Serrano; JOSÉ MANUEL COLMENAR VERDUGO; ALFREDO CUESTA INFANTE; ANTONIO OSCAR GARNICA ALCAZAR; JOSE IGNACIO HIDALGO PEREZ; JUAN LANCHARES DAVILA; Esther Maqueda Villaizán; JOSE LUIS RISCO MARTIN; José Antonio Rubio García. Método para el modelado del nivel de glucemia mediante programación genética Spain. 2013. Universidad Complutense de Madrid.
3 **Derechos de autor**. EVA BESADA PORTAS; JESUS MANUEL DE LA CRUZ GARCIA; BONIFACIO DE ANDRES Y TORO; ESTRELLA GÓMEZ FERNÁNDEZ; JOSE ANTONIO LOPEZ OROZCO; JOSE LUIS RISCO MARTIN. Sistema Integrado para el Mantenimiento Automático de Cursos (SIMAC) 16/2007/5292 Spain. 07/12/2007. Participantes.