

Part A. PERSONAL INFORMATION

CV date 06/09/2023

First and Family name	María Elena Gómez Martínez		
Social Security, Passport, ID number	25168718W	Age	49
Researcher numbers	Researcher ID		
	ORCID code	0000-0002-7753-3345	

A.1. Current position

Name of University/Institution	Universidad Complutense de Madrid		
Department	Department of Software Systems and Computation		
Address and Country	C/ Profesor José García Santesmases, 9, Ciudad Universitaria, 28040 - Madrid		
Phone number	91 394 7578	E-mail	mariaelena.gomez@ucm.es
Current position	Associate Professor	From	03/02/2023
Espec. cod UNESCO	120323 120324 120317 120103		
Palabras clave	Software Engineering, Formal methods, Petri nets, Software Architectures, Non-Functional Properties		

A.2. Education

PhD	University	Year
Computer Engineer	Universidad de Zaragoza	1999
PhD in Computer Science	Universidad de Zaragoza	2014

A.3. JCR articles, h Index, thesis supervised...

6-year research: 1 (Awarded in the last call)
Cited by: 348 (Source: Google Scholar)
JCR articles: 5
h-index: 10 (Source: Google Scholar)
Master thesis supervised: 9

Part B. CV SUMMARY (max. 3500 characters, including spaces)

She received her M.Sc. and Ph.D. degrees in Computer Engineering from the Universidad de Zaragoza. Her Ph.D. dissertation, awarded with "Cum Laude", was related to the study of software performance assessment at architectural level based on software performance engineering principles with stochastic Petri nets. Her research interests include software performance, stochastic modelling of quantitative and qualitative properties applied to software architectures. She is researcher with more than 20 years' experience in National and European R&D projects including academic and industrial environments (CDTI, AVANZA, FP6, FP7, Artemis, H2020). She worked as pre- and post-doctoral researcher at the Babel group at the Facultad de Informática, Universidad Politécnica de Madrid. She worked as post researcher at the Center for Open Middleware and the University of East London. She was a researcher and a project director at Fundación ONCE-Ilunion (formerly known as Technosite). As Project Coordinator of Simplext Project, she was awarded by Vodafone Foundation and finalist of ENISE awards, organized by INTECO. Before that, she was maintenance responsible of Remote Energy Control System at the Spanish High-Speed Railway (AVE Madrid-Zaragoza-Barcelona) and project manager and analyst for banking software applications. In addition, she was computer court expert in Saragossa Court and freelance European Proposal writer in the H2020 programme. Concerning teaching, she taught at the Universidad de Zaragoza, the Universitat Oberta de Catalunya, the Universidad Autónoma de Madrid, Universidad Politécnica de Madrid, the University of East London (United Kingdom), the Colleague of International Studies, and as external professor at the Universidad Internacional de La Rioja. She was an assistant professor at Universidad Autónoma de Madrid researching at the MISO Group. Currently, she works as associate professor at Universidad Complutense de Madrid.

Part C. RELEVANT MERITS

C.1. Publications (including books)

Articles

- [1] E. Gómez-Martínez, E. Guerra, J. de Lara, A. Garmendia. (2023). Lifted structural invariant analysis of Petri net product lines. Journal of Logical and Algebraic Methods in Programming, vol 130. (JCR 2021: 1.088; Computer Science: Q3; Logic: Q1).
<https://doi.org/10.1016/j.jlamp.2022.100824>
- [2] E. Gómez-Martínez, J. de Lara, E. Guerra. Extensible Structural Analysis of Petri Net Product Lines. In: Koutny M., Kordon F., Pomello L. (eds) Transactions on Petri Nets and Other Models of Concurrency XV. Lecture Notes in Computer Science, vol 12530. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-63079-2_2.
- [3] E. Gómez-Martínez, R. J. Rodríguez, C. Benac-Earle, L. Etxeberria, and M. Illarramendi. A methodology for model-based verification of safety contracts and performance requirements. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, vol. 232, Issue 3, pages 227-247, 2018. (JCR 2018: 1.313; Q3 Engineering, Multidisciplinary). ISSN: 1748006X.
<https://doi.org/10.1177/1748006X16667328>
- [4] B. Gallina, E. Gómez-Martínez, C. Benac-Earle. Promoting MBA in the rail sector by deriving process-related evidence via MDSafeCer. Computer Standards & Interfaces, vol 54, pages 119-128, 2017 (JCR 2017: 1.465; Q2 Computer Science). ISSN: 0920-5489 <http://dx.doi.org/10.1016/j.csi.2016.11.007>
- [5] G. Zhang, P. Falcarin, E. Gómez-Martínez, C. Tartary, S. Islam, B. De Sutter, J. D'Annoville. Attack Simulation based Software Protection Assessment Method with Petri Net. International Journal on Cyber Situational Awareness, Vol. 1, No. 1, pages 152-181, 2016. ISSN 2057-2182 <https://doi.org/10.22619/IJCSA.2016.100108>
- [6] E. Gómez-Martínez, M. Linaje, F. Sánchez-Figueroa, A. Iglesias-Pérez, J. C. Preciado, R. González- Cabero and J. Merseguer. A Semantic Approach for Designing Assistive Software Recommender Systems. Journal of Systems and Software (JSS), vol. 104, pages 166-178. 2015. (JCR 2015: 1.424; Q1 Computer Science; Software Engineering). ISSN: 0164-1212. <https://doi.org/10.1016/j.jss.2015.03.009>
- [7] E. Gómez-Martínez, R. González-Cabero and J. Merseguer. Performance Assessment of an Architecture with Adaptative Interfaces for People with Special Needs. Journal of Empirical Software Engineering (EMSE), vol. 19 pages 1967-2018. 2014. (JCR 2014: 2.161; Q1 Computer Science; Software Engineering). <https://doi.org/10.1007/s10664-013-9297-1>
- [8] H. Saggion, E. Gómez-Martínez, E. Etayo, A. Anula, L. Bourg. Text Simplification in Simplext: Making Text More Accessible. Revista de la Sociedad Española de Procesamiento de Lenguaje Natural (SEPLN). Vol. 47 pages 341-342, 2011. (SJR 2014: 0.270; Q2 Language and Linguistics).
<http://journal.sepln.org/sepln/ojs/ojs/index.php/pln/article/view/1000>

Conference papers

- [1] E. Gómez-Martínez, E. Guerra, E., J. de Lara (2022). Analysing Product Lines of Concurrent Systems with Coloured Petri Nets. 34th International Conference on Software Engineering and Knowledge Engineering (SEKE 2022). Índice de calidad: Clase 2.
- [2] E. Gómez-Martínez, J.I. Requeno. (2022), Adaptative Systems Based on Continuous Observation of Petri Net Product Lines. Poster. Workshop of Petri Nets and Software Engineering, co-located with 43rd International Conference on Application and Theory of Petri Nets and Concurrency (PNSE 2022).
- [3] E. Gómez-Martínez, M. Marroyo, Silvia T. Acuña. Towards the integration of the GDPR in the Unified Software Development Process. 33rd International Conference on Software Engineering and Knowledge Engineering (SEKE 2021). Pages 199-204.
- [4] A. Garmendia, M. Wimmer, E. Guerra, E. Gómez-Martínez, J. de Lara. Automated variability injection for graphical modelling languages. International Conference on Generative Programming and Component Engineering (GPCE 2020). Pages: 15-21
- [5] V. Grande, C. Benac Earle, C. Manresa-Yee, E. Gómez-Martínez, L.M. Castro, P. Pons, R. Corobán. Everybody Rock Your Equity: Experiences of Organizing a Women in Computing Event with Role Models for Diversity and Inclusion. Workshop on Digital Transformation for an Inclusive Society, co-located with the 18th IFIP Conference on e-

- Business, e-Services and e-Society (DTIS 2019)
- [6] E. Gómez-Martínez, J. de Lara, E. Guerra. Towards Extensible Structural Analysis of Petri Net Product Lines. Workshop of Petri Nets and Software Engineering co-located with 40th International Conference on Application and Theory of Petri Nets and Concurrency (PNSE 2019). Pages 37-46
 - [7] E. Gómez-Martínez, F. Pérez-Blanco, J. de Lara, J. M. Vara and E. Marcos. Formal support of Process Chain Networks using Model-driven Engineering and Petri nets. 34th ACM/SIGAPP Symposium on Applied Computing (SAC 2019).
 - [8] B. Gallina, E. Gómez-Martínez, C. Benac. Evaluación de Requisitos de Seguridad con MBASafe conforme a la norma EN 50128. XVII Jornadas de Programación y Lenguajes (PROLE 2017)
 - [9] J.P. Salazar-Sánchez, E. Gómez-Martínez, M. del Miguel. Performance Analysis of Persistence Technologies for Cloud Repositories of Models. Jornadas de Ingeniería del Software y Bases de Datos (JISBD 2016).
 - [10] G. Zhang, P. Falcarin, E. Gómez-Martínez, C. Tartary, S. Islam, B. De Sutter, J. D'Annville. Attack Simulation Based Software Protection Assessment Method for Protection Optimisation. Cyber Security Conference (2016). Awarded with Best Paper of the conference.
 - [11] B. Gallina, E. Gómez-Martínez, C. Benac. Deriving Safety Case Fragments for Assessing MBASafe's Compliance with EN 50128. In Procs. of 16th Int. SPICE Conference (SPICE 2016) Communications in Computer and Information Science. Vol 609, pages 3-16. Springer (2016).
 - [12] E. Gómez-Martínez, R. J. Rodríguez, L. Etxeberria, M. Illarramendi, and C. Benac. Model-based Verification of Safety Contracts. Proceedings of the 1st International Workshop on Safety and Formal Methods (SaFoMe) co-located with SEFM, 2014. Lecture Notes in Computer Science Vol. 8938, pages 101-115 Springer. (2014)
 - [13] R.J. Rodríguez and E. Gómez-Martínez. Model-based Safety Assessment using OCL and Petri Nets. In Procs. Of 40th Euromicro Conference on Software Engineering and Advanced Applications. Track on Embedded Software Engineering. Pages 56-59 IEEE. (SEAA 2014)
 - [14] Murua, I. González, E. Gómez-Martínez. Cloud-based Assistive Technology Services. 3rd Workshop on Software Services: Semantic-based Software Services (WoSS'11). Szczecin, Poland, September 18-21, 2011
 - [15] E. Gómez-Martínez and J. Merseguer. Performance modelling and analysis of the Universal Control Hub. Proceedings of 7th European Performance Engineering Workshop (EPEW 2010). Lecture Notes in Computer Science. Vol. 6342. Pages 160-174. Springer-Verlag. 2010. ISBN: 978-3-642-15783-7.
 - [16] E. Gómez-Martínez and J. Merseguer. Performance analysis of mobile agent tracking approaches. Proceedings of the 7th International Workshop on Software and Performance (WOSP 2007). Pages 181-188. ACM 2010. ISBN: 1-59593-297-6.
 - [17] E. Gómez-Martínez and J. Merseguer. Impact of SOAP Implementations in the Performance of a Web Service-based Application. Full paper. Proceedings of the Workshop on Middleware and Performance WOMP 2006. Lectures Notes in Computer Science. Vol. 4331. Pages 884-896. Springer-Verlag. 2006. ISBN: 3-540-49860-5

C.2. Projects

- Foundations for augmented trustworthy low-code software development (FINESSE). Referencia: PID2021-122270OB-I00 (Ministerio de Ciencia, Innovación y Universidades). IP: Juan de Lara Jaramillo y Esther Guerra Sánchez (UAM). Presupuesto: 181.500
- Models for the masses: engineering adaptive software by and for the people in a highly connected world (MASSIVE). Reference: RTI2018-095255-B-I00. (Ministerio de Ciencia, Innovación y Universidades). Principal Investigator: Juan de Lara Jaramillo (UAM). Budget: 101.519
- FORMAL models and Technologies for Emerging applications (FORTE-CM). Reference: P2018/TCS-4314 (Regional Government of Madrid). Principal Investigator: Manuel Nuñez García (UCM). Budget: 731.400
- Desarrollo de sistemas confiables mediante modelos y herramientas avanzadas (SICOMORo-CM). Reference: S2013/3006 (Regional Government of Madrid). Principal Investigator: Manuel Nuñez García (UCM). Participation: Researcher. Budget: €635.088,65

- Next-Generation Energy-Efficient Secure Software (nGreens-CM). Reference: S2013/ICE-2731 (Regional Government of Madrid). Principal Investigator: Julio Mariño (Universidad Politécnica de Madrid). Participation: Post-Doc Researcher. Budget: €101.949,80
- Advanced Software Protection: Integration, Research and Exploitation (ASPIRE). Reference: FP7 609734. Principal Investigator: Bjorn De Sutter (Universiteit Gent). Participation: Post-Doc Researcher. Budget: €2.949.970.
- Eclipse-Web. Center for Open Middleware. Internal project funded by Universidad Politécnica de Madrid, Banco de Santander, ISBAN and PRODUBAN. Principal Investigator: Miguel de Miguel (Universidad Politécnica de Madrid). Participation: Post-Doc Researcher.
- Testing support for Santander Group's Models. Center for Open Middleware. Internal project funded by Universidad Politécnica de Madrid, Banco de Santander, ISBAN and PRODUBAN. Principal Investigator: Miguel de Miguel (Universidad Politécnica de Madrid). Participation: Post-Doc Researcher.
- Tools and Methods for model-driven development. Center for Open Middleware. Internal project funded by Universidad Politécnica de Madrid, Banco de Santander, ISBAN and PRODUBAN. Principal Investigator: Miguel de Miguel (Universidad Politécnica de Madrid). Participation: Post-Doc Researcher.
- Safety Certification of Software-Intensive Systems with Reusable Components (nSafeCer). Reference: ART Call 2011 295373. Principal Investigator: Hans Hansson (Mälardalen University). Participation: Researcher, Work Package Leader and Dissemination Coordinator. Budget: €7.34 million
- pilot Safety Certification of Software-Intensive Systems with Reusable Components (pSafeCer). Reference: ART Call 2010 269265. Principal Investigator: Hans Hansson (Mälardalen University). Participation: Researcher, Work Package Leader and Dissemination Coordinator. Budget: €4.3 million
- Assistive Technologies and Solutions for All (ATIS4all). European Thematic network granted by the European Commission 270988. Principal Investigator: José Ángel Martínez Usero (Technosite-Fundación ONCE). Participation: Technical Coordinator. Budget: €591.000.
- Automatic System for text simplification (Simplext). Industrial Research tractor project partially funded by the Ministry of Industry, Tourism and Commerce with file number 020302-2010 IST-84. Principal Investigator: Alberto Anula (Universidad Autónoma de Madrid). Participation: Director. Budget: €2.160.000
- Interfaces for RELations between Environment and people with DISabilities (INREDIS). Spanish National Strategic Consortia for Technical Research (CENIT project). Principal Investigator: José Ángel Martínez Usero (Technosite-Fundación ONCE). Participation: Work Package Leader, Researcher. Budget: €23.4 million.

C.5 Accreditations

- Positive evaluation of PhD Assistant professor (Profesor Ayudante Doctor) for public universities conducted by the National Agency for Quality Assessment and Accreditation (ANECA). March 2016.
- Positive evaluation of non-tenured PhD Associate professor (Profesor Contratado Doctor) for public universities conducted by the National Agency for Quality Assessment and Accreditation (ANECA). April 2017.

C.6 Awards

- V Vodafone Innovation Award on ICT, June 2011.
- Finalist in ENISE Awards (category: cloud computing services), October 2011.
- Finalist in Barcelona Digital Innovation Awards (category: SMEs), June 2012

C.8 Memberships of scientific societies

- Board Member of the Professional Association of Computer Engineers of Aragon.
- Board Member of the Society of Spanish Researchers in the United Kingdom
- Member of the Spanish Society of Concurrent and Distributed Computation
- External Collaborator of the Babel Group at the Polytechnic University of Madrid (UPM).
- External Collaborator of the Distributed Computing Group (DisCo) of the Universidad de Zaragoza and of the Instituto Universitario de Investigación en Ingeniería de Aragón (I3A)
- Member of the Association of Computers Engineers of Aragón (AI2Aragón)