CURRICULUM VITAE
(máximum 4 pages)

Date CV	10/10/2023

Part A. PERSONAL INFORMATION

First name	Hilde		
Family name	Pérez		
Gender	F	Birth date	
ID number			
email	hilde.perez@unileon.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-7112-1983		

A.1. Current position

Position	Full Professor of Mechanical Engineering		
Institution	University of León		
Department/ Center	Department of Mechanical, Computer and Aeroespace Engineering		
Country	Spain	Teleph.number	+34 630869223
Key words	Modelling, Simulation, Machining Processes, Manufacturing Engineering, Industry 5.0		

A.2. Education

PhD, Licensed, Graduate	University	Year
PhD in Mechanical Engineering	Universidad Politécnica de Madrid	2012
MS Degree in Mechanical Engineering	Universidad de Oviedo. Spain	2004
BS Degree in Industrial Electronics and Automation	Universidad de León. Spain	1991

Parte B. SUMMARY

Hilde Pérez García is a Full Professor at the University of León, holding a Ph.D. in Industrial Engineering from the Polytechnic University of Madrid, with the distinction of the Extraordinary Doctorate Award (2012).

She is Head of the Research Group of Intelligent Systems for Manufacturing in the University of León, and is also member of the Manufacturing Engineering Research Group in the Polytechnic University of Madrid. In this field, works in the analysis of the capacity when multiple systems (machines, human operators, collaborative robots and AGVs) operate collaboratively from the cloud simultaneously.

She has been Head of the Department of Mechanical, Computer, and Aerospace Engineering at the University of León from 2015 to 2023.

She has participated in different national projects funded through competitive calls from the Interministerial Commission of Science and Technology. At present, she is leading a project funded by the Ministry of Economy and Competitiveness and is involved in two Erasmus+ projects from the European Commission.

She is the author of 67 indexed publications, with 32 of them in the top third of JCR ranking. She has presented over 40 contributions at international conferences, nine of which have resulted in publications in Procedia Engineering or specialized non-indexed journals.

She has been involved in R&D projects with companies related to the research thematic areas. In terms of international collaborations, she conducted two research stays as a visiting researcher in 2015 and 2016 at the Fraunhofer IPK center affiliated with Technische Universität Berlin, in the Department of Microproduction Technologies, and three stays at the Department of Mechanical Engineering at the University of La Frontera (Chile) in 2016, 2017, and 2018.

In 2015, she received an Erasmus+ Training grant for university faculty mobility. In 2016, she was awarded a Salvador Madariaga grant for senior researchers' mobility stays in foreign centers, by the Ministry of Education, Culture, and Sport.

Since 2017, she has been teaching as a guest professor at the School of Mechanical Engineering at the University of Xiangtan (Hunan - China), as part of the cooperation program between both universities.

In 2019, she was selected to participate in the Homeward Bound project. This is an innovative global leadership initiative, set against the backdrop of Antarctica, with the goal of increasing women's influence and impact on decision-making that shapes our planet. In November 2023, she will join the largest women's expedition to Antarctica.

- RECOGNIZED RESEARCH ACTIVITIES PERIODS: 3 Tiers
- h INDEX 14 – SCOPUS

Part C. RELEVANT MERITS

C.1. Publications

Rubén Álvarez; Javier Díez-González; Paula Verde; Rubén Ferrero-Guillén; Hilde Pérez. *Combined sensor selection and node location optimization for reducing the localization uncertainties in wireless sensor networks*. Ad Hoc Networks, 139,103036. Elsevier, 2023

Díez-González, J., Álvarez, R., Verde, P., Ferrero-Guillén, R., Perez, H. *Analysis of reliable deployment of TDOA local positioning architectures*. Neurocomputing, 2022, 484, pp. 149–160.

Ferrero-Guillén, R., Díez-González, J., Alija, J.M., Martínez-Gutiérrez, A., Verde, P., Perez, H. *Optimal Wing and Horizontal Tail Plane Design for Maximizing the Aircraft Performance in Cruise Flight.* Cybernetics and Systems, 2022.

Riego, V., Castejón-Limas, M., Sánchez-González, L., Fernández-Robles, L., Pérez, H., Diez-González, J., Guerrero-Higueras, A. *Strong classification system for wear identification on milling processes using computer vision and ensemble learning.* Neurocomputing 2021, Volume 456, Pages 678 – 6847.

Fernández-Robles, L., Sánchez-González, L., Díez-González, J., Castejón-Limas, M., Pérez, H. *Use of image processing to monitor tool wear in micro milling.* Neurocomputing 2021, 452, pp. 333–340.

Martínez-gutiérrez, A., Díez-González, J., Ferrero-guillén, R., Verde, P., Álvarez, R., Pérez, H. *Digital twin for automatic transportation in industry 4.0*. Sensors, 2021, 21(10), 3344.

Verde, P., Díez-González, J., Ferrero-guillén, R., Martínez-gutiérrez, A., Pérez, H. *Memetic chains for improving the local wireless sensor networks localization in urban scenarios.* Sensors 2021, 21(7), 2458.

Ferrero-Guillén, R., Díez-González, J., Verde, P., Álvarez, R., Perez, H. *Table organization optimization in schools for preserving the social distance during the covid-19 pandemic*. Applied Sciences (Switzerland), 2020, 10(23), pp. 1–17, 8392.

Díez-González, J., Verde, P., Ferrero-Guillén, R., Álvarez, R., Pérez, H. *Hybrid memetic algorithm for the node location problem in local positioning systems.* Sensors (Switzerland), 2020, 20(19), pp. 1–26, 5475.

Díez-González, J.; Álvarez, R.; Prieto-Fernández, N; Perez, H. *Local Wireless Sensor Networks Positioning Reliability Under Sensor Failure*. Sensors 2020, 20, 1426.

Álvarez, R.; Díez-González, J.; Strisciuglio, N.; Perez, H. *Multi-objective optimization for asynchronous positioning systems based on a complete characterization of ranging errors in 3D complex environments*. IEEE Access (volumen 8), 2020, 43046-43056.

Álvarez, R.; Díez-González, J.; Sánchez-González, L.; Perez, H. *Combined Noise and Clock CRLB Error Model for the Optimization of Node Location in Time Positioning Systems*. IEEE Access (volumen 8), 2020, 31910 – 31919.

Díez-González, J.; Álvarez, R.; González-Bárcena, D.; Sánchez-González, L.; Castejón-Limas, M.; Perez, H. *Genetic Algorithm Approach to the 3D Node Localization in TDOA Systems*. Sensors 2019, 19, 3880.

Álvarez, R.; Díez-González, J.; Alonso, E.; Fernández-Robles, L.; Castejón-Limas, M.; Perez, H. *Accuracy Analysis in Sensor Networks for Asynchronous Positioning Methods*. Sensors 2019, 19, 3024.

Díez-González, J.; Álvarez, R.; Sánchez-González, L.; Fernández-Robles, L.; Pérez, H.; Castejón-Limas, M. *3D Tdoa Problem Solution with Four Receiving Nodes*. Sensors 2019, 19, 2892.

C.2. Congress

- Memory Chains for Optimizing the Table Disposition During the COVID-19 Pandemic. Ferrero-Guillén, R., Díez-González, J., Verde, P., Martínez-Gutiérrez, A., Alija-Pérez, J.-M., Perez, H. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2021, 12940 LNCS, pp. 472–483
- Stable Performance Under Sensor Failure of Local Positioning Systems. Díez-González, J., Álvarez, R., Verde, P., Rubén Ferrero-Guillén, González-Bárcena, D., Pérez, H. Advances in Intelligent Systems and Computing, 2021, 1268 AISC, pp. 499–508
- Genetic Algorithm Optimization of Lift Distribution in Subsonic Low-Range Designs. Ferrero-Guillén, R., Álvarez, R., Díez-González, J., Sánchez-Fernández, Á., Pérez, H. Advances in Intelligent Systems and Computing, 2021, 1268 AISC, pp. 520–529
- Coupling the PAELLA algorithm to predictive models. Castejón-Limas, M., Alaiz-Moreton, H., Fernández-Robles, L., Alfonso-Cendón, J., Fernández-Llamas, C., Sánchez-González, L., Pérez, H. (2018). Advances in Intelligent Systems and Computing, 649, pp. 505-512. DOI: 10.1007/978-3-319-67180-2_49
- Data mining techniques for the estimation of variables in health-related noisy data. Alaiz-Moreton, H., Fernández-Robles, L., Alfonso-Cendón, J., Castejón-Limas, M., Sánchez-González, L., Pérez, H. (2018). Advances in Intelligent Systems and Computing, 649, pp. 482-491. DOI: 10.1007/978-3-319-67180-2_47
- Design and implementation of a vision system on an innovative single point micro-machining device for tool tip localization. López-Estrada, L., Fajardo-Pruna, M., Sánchez-González, L., Pérez, H., Vizán, A. (2018). Advances in Intelligent Systems and Computing, 649, pp. 219-228. DOI: 10.1007/978-3-319-67180-2_21

- Tool wear estimation and visualization using image sensors in micro milling manufacturing. Fernández-Robles, L., Charro, N., Sánchez-González, L., Pérez, H., Castejón-Limas, M., Alfonso-Cendón, J. (2018). Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10870 LNAI, pp. 399-410. DOI: 10.1007/978-3-319-92639-1_33
- Optimization of MLHL-SIM and SIM algorithm using openMP. Sánchez, L., Quintián, H., Pérez, H., Corchado, E. (2016). Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 9868 LNAI, pp. 227-236. DOI: 10.1007/978-3-319-44636-3_21
- Variables Influencing the Calibration of Specific Force Coefficients. Perez, H., Diez, E., Guzman, M., Vizan, A. (2015). Procedia Engineering, 132, pp. 440-447. DOI: 10.1016/j.proeng.2015.12.517
- Analysis of cutting forces in peripheral milling under varying machining conditions. Perez Garcia, H., Diez Cifuentes, E., Perez Garcia, J., Vizan Idoipe, A. (2014). Materials Science Forum, 797, pp. 23-28. DOI: 10.4028/www.scientific.net/MSF.797.23
- Analysis of Machining Strategies for Peripheral Milling, H. Perez, E. Diez, J. Perez, A. Vizan, Procedia Engineering, Volume 63, 2013, Pages 573-581.

C.3. Research projects

- Development of collaborative manufacturing systems on industrial internet platforms. Ministry of Science and Innovation. Main Researcher: Hilde Perez Garcia. PID2019-108277GB-C21. 1/06/2020 -1/06/2023. 127.050 €.
- Development of a data mining and computer vision-based learning system for collaborative manufacturing environments. Ministry of Economy and Competitiveness. Main Researcher: Hilde Pérez García. (Universidad de León). DPI2016-79960-C3-2-P. 31/12/2016-31/12/2019. 48.521 €.
- South Mediterranian Welding Center for Education, Training and Quality Control /SM Weld. Erasmus + Project. Project number: 561786-EPP-1-2015-1-SE-EPPKA2-CBHE-JP. Coordinator ULE: Hilde Perez Garcia. (KTH Royal Institute of Technology (Estocolmo-Suecia)). 01/06/2015-01/05/2019. 1.259.420 €.
- Capacity building for renewable energy planning in Cuban Higher Education Institutions (Comisión Europea). Erasmus + Project. Coordinator ULE: Roberto Baelo. 14/10/2017-14/10/2020.
- European University Alliance on Responsible Consumption and Production - EURECA PRO. Coordinator ULE Industry 4.0: Hilde Pérez. 01/11/2020- 01/11/2023. 544.416 €
- Development, optimization, and control of the micro-filing process. Comisión Interministerial de Ciencia y Tecnología. DPI2009-14535. Investigador Principal: Antonio Vizán Idoipe. (Universidad Politécnica de Madrid). 01/01/2010-01/06/2013. 240.000 €.
- Integration of microfabrication and micromounting technologies. Comisión Interministerial de Ciencia y Tecnología. DPI2005-08932-C02-02. Investigador Principal: Antonio Vizán Idoipe. (Universidad Politécnica de Madrid). 01/12/2005-01/01/2009. 120.000 €.
- Development of a micromachining model through micro-milling with force and tool life prediction for use in adaptive control in the manufacturing of steel microcomponents. Comisión Interministerial de Ciencia y Tecnología. DPI2004-1454. Investigador Principal: Julio Labarga Ordóñez. (Universidad de León). 01/12/2004-01/12/2007. 120.000 €.