




PERSONAL INFORMATION


Emilio Gil



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Full Professor at Universitat Politècnica de Catalunya and **Director of the Research Group** of Agricultural Mechanization Unit - [UMA](#). Prof. Gil is Director of the Syngenta-UPC Chair (www.catedrasyngenta.upc.edu), the first official agreement between university and private company in the area of agriculture at UPC. Member of the coordination board of PhD program on AgroFood Engineering and Biotechnology, academic responsible of Precision Agriculture topic at [Master of Tech4Agri+Food](#) (UPC), he is also professor at PhD program in agriculture and forestry at the University of Turin and has been Director of the International Viticulture Master of the UPC, in collaboration with the University of Sassari (Italy). Prof. Gil has been also **Professor at Cornell University** (2005-2006), being researcher at CALS – College of Agriculture and Life Sciences. Prof. Gil has been vice-Director of organization and economic resources at [EEABB](#) (1997-2000), and vice-director of International relationships (2000-2005) being the first responsible on establishing Erasmuns programs at the EEABB agricultural faculty. His international relationship is wide all around the world. He is expert member of ISO, involved in several working groups linked to agricultural machinery. He is active member also of CEN (Committee Euroepan of Normalization) and member of UNE, the Spanish institution of normalization. Prof. Gil has been nominated expert researcher representative at **EIP-FOCUS group for Precision Farming**, implmented by the European Commission. He is also coordinator at EUPAF – **European Precision Application Task Force**.

Prof. Gil is a very well recongnized authority around the world. With more than 100 invited converences convering four continents, he is or has been advisor of several governments as Chile, Peru, Cyprus, Serbia, and of cours Spain, where he has been member of the advisory group for the development of the mandatory program of inspection of sprayers, linked to the Sustainable Use Directive in Europe. He is the author of the official guideline for the inspections edited by Ministry of Agriculture and responsible of the implementation and organization of the mandatory training courses for inspectors of sprayers. He is also advisor at Ministry of Agriculture for the **implementation of Agriculture 4.0**. Since 2015, Prof. Gil is training coordinator of several training courses organized by [HaDEA](#) – European Health and Digital Executive Agency, within the BTSF program (**Better Training for Safer Food**) where more than 500 official authorities from all EU Member States have been trained. Prof. Gil is also Associated Editor of several prestigiuos intrnational journals as Precision Agriculture, Journal of ASABE, and Spanish Journal of Agricultural Research, and acts as reviwer of a large list of journals since more than 20 years. His relationship with all the stakeholders, especially industry and end users (advisors and farmes) has lead to Prof. Gil to become President of the prestigious FIMA– Feria Internacional de Maquinaria Agricola - Award of New Technologies. Prof. Gil has very close collaboration with Washington State University, Ohio State University, and USDA. Prof. Gil has been advisor of more than 15 PhD related to the topic of Precision Agriculture.

Prof. Gil received several awards. In 2021 prof. Gil was awarded by his work State of the Art and possibilities of Precision Agriculture” (cita del colegio). He has been awarded with the special award to advice the Best PhD in Sciences at Universitat Politecnica de Catalunya (2023). Recently also received the Award for Best App in Rural sector 2023 (Generalitat de Catalunya for the development of [DOSAVIÑA](#)). His PhD was awispa arded as the best PhD at agricultural sector at Fertiberia Award (accessit) (2004). Other important awards are listed here: Award in recognition to the activity regarding Sustainability in Agriculture (2016). Toledo for the activities relatie to sustainable agriculture in Spain; Sensors Best paper award (2015) - Ultrasonic and LIDAR Sensors for Electronic Canopy Characterization in Vineyards: Advances to Improve Pesticide Application Methods Sensors 2011; Best poster award of IUPAC 2014 (www.iupac2014.org); Award for research activity in viticulture sector (2002). Advisor of the best PhD in Sciences at UPC (2023). Recently, Prof. Gil **was awarded with EIMA**

Award (2022) for the development of [OPTIMA smart sprayer](#). Prof. Gil has been awarded becoming Member of the Royal European Academy of Doctors (October 2019). Recently, he has been nominated **President of the Organising Committee of ECPA 2025 – European Conference on Precision Agriculture** (www.ecpa2025.upc.edu), that will be organized at UPC. Prof. Gil was also Director of the Official representative Office of Government of Aragon in Brussels (2016). Prof. Gil is also member of the Coordination Group of Club of Bologna (www.clubofbologna.org). Prof. Gil is President of ECPA 2025 – European Conference on Precision Agriculture (web) that will take place in Barcelona (July 2025). Prof. Gil lead and participate in several important research projects financed by European Commission, all of them focused on precision agriculture, digital resources, new technologies, and new technologies for education:

- [RENOVATE \(HE PROJECT\)](#) – Development of an easy-to-use interactive platform to RENOVATE training experiences and networking for farmers in the field of sustainable crop management. Coordinator: Prof. Emilio Gil – 2024-2027 (will start May 2024)
- [ADOPTA](#) - Adoption of new technologies to reduce pesticides. Drones for variable-rate application in olive and vineyard plantations. Ministerio de Ciencia y Tecnología. January 2023 – December 2025.
- [CANOPIES](#) (H2020 EU Project): A Collaborative Paradigm for Human Workers and Multi-Robot Teams in Precision Agriculture Systems. Period: 2020-2024.
- [NOVATERRA](#) (H2020 EU Project): Integrated novel strategies for reducing the use and impact of pesticides, towards sustainable mediterranean vineyards and olive groves. 2020 –2024.
- [ERASMUS + AGRISAT](#) – Innovative curriculum in smart AGRiculture through SATellite and remote sensing data in SEA. 2020-2023.
- [PIVOS](#) – Smart sprayer for a sustainable vineyard and olive plantations. Ministerio de Ciencia e innovación. Coordinator: Prof. Emilio Gil. 2020-2024.
- [INNOSETA](#) (H2020 EU Project) – Coordinator Prof. Gil – Accelerating Innovative practices for Spraying Equipment, Training and Advising in European agriculture through the mobilization of Agricultural Knowledge and Innovation Systems.
- [OPTIMA](#) (H2020 EU Project): Optimized Pest Integrated Management to precisely detect and control plant diseases in perennial crops and open-field vegetables.) September 2018-December 2021.
- [IOF – Internet of Farm](#) – Open Call Use Case Work Plan – SMARTOMIZER
- [ERASMUS+ AGRICULT](#)- Development of a training program for enhancing the use of ICT tools in the implementation of precision Agriculture. 2018-2010. Coordinator: Prof. Gil.

More than 80 scientific papers, here only a small sample (last 10):

- Campos, J., Zhu, H., Jeon, H., Salcedo, R., Ozkan, E., Román, C., & **Gil, E.** 2023. Air-pinch PWM valve to regulate flow rate of hollow-cone nozzles for variable-rate sprayers. *Applied Engineering in Agriculture*. 39(2): 235-244. <https://doi.org/10.13031/aea.15415>
- Campos, J., Zhu, H., Jeon, H., Salcedo, R., Ozkan, E., & **Gil, E.** (2023). Assessment of PWM solenoid valves to manipulate hollow-cone nozzles with different modulation frequencies. *Appl. Eng. Agric.*, 39(2), 235–244. <https://doi.org/10.13031/aea.15415>
- Garcia-Ruiz, F.; Campos, J.; Llop-Casamada, J.; **Gil, E.** 2023. Assessment of map based variable rate strategies for copper reduction in hedge vineyards. *Computers and Electronics in Agriculture*, Volume 207, 2023, 107753. <https://doi.org/10.1016/j.compag.2023.107753>
- Wei, Z.; Xue, X.; Salcedo, R.; Zhang, Z.; **Gil, E.**; Sun, Y.; Li, Q.; Shen, J.; He, Q.; Dou, Q.; et al. Key Technologies for an Orchard Variable-Rate Sprayer: Current Status and Future Prospects. *Agronomy* 2023, 13, 59. <https://doi.org/10.3390/agronomy13010059>
- Xun, L., Campos, J., Salas, B. Fábregas, X.; **Gil, E.** 2023. Advanced spraying systems to improve pesticide saving and reduce spray drift for apple orchards. *Precision Agric* 24, 1526–1546 (2023). <https://doi.org/10.1007/s11119-023-10007-x>
- Salcedo, R.; Zhu, H.; Jeon, H.; Ozkan, E.; Wei, Z.; **Gil, E.** 2022. Characterization of activation pressure, flowrate and spray angle for hollow-cone nozzles controlled by pulse width modulation. *Biosystems Engineering*, 218, 139-152. <https://doi.org/10.1016/j.biosystemseng.2022.04.002>
- Campos, J.; García-Ruiz, F.; **Gil, E.** Assessment of Vineyard Canopy Characteristics from Vigor Maps Obtained Using UAV and Satellite Imagery. *Sensors* 2021, 21, 2363. <https://doi.org/10.3390/s21072363>
- Campos, J.; Gallart, M.; Llop, J.; Ortega, P.; Salcedo, R.; **Gil, E.** On-Farm Evaluation of Prescription Map-Based Variable Rate Application of Pesticides in Vineyards. *Agronomy*, 2020