

Expression of Interest-UPM Supervisor

Marie Skłodowska Curie Action–Postdoctoral Fellowship 2026 (MSCA-PF-2026)

Supervisor Name	Juan Ignacio Godino Llorente
Email	ignacio.godino@upm.es
Department /Institute / Centre Name/Location	Señales, Sistemas y Radiocomunicaciones. ETSI Telecomunicación
Research Area	Information Science and Engineering (ENG) Mathematics (MAT) Physics (PHY)
Research team/group	The ByO research group has 25 years of experience, which is shown through numerous publications in high impact scientific journals, participation in international fora and the involvement in different research projects at national and international level to be a world leader in the research and development of automatic systems for the screening of pathologies using biometrics, signal processing and artificial intelligence. The group has a large background in applications such as ECG, PCG, medical image processing, accessibility for disabled people, voice and speech processing, and eye movements processing. The impact of the research group is demonstrated in view of the large number of citations of the PI (h-index of 41). Currently the group is formed by three full professors, two associate professors, one postdoc, and four predoctoral students. See http://www.byo.upm.es for more details.
Keywords	Screening of Parkinson's; videoculographic signals, eye movements; decisión support systems, artificial intelligence
Research Focus	Decision support systems for the assessment of Parkinson's Disease using videoculographic sequences. To date, there are no known early, reliable and non-invasive markers of Parkinson's disease , and neuropathological diagnosis is still the gold standard for its confirmation. In this regard, literature has identified that certain motor and non-motor biometric traits are affected even in presymptomatic stages. However, they have not been widely used for the design of automated systems to support diagnosis and evaluation. Other biometrics are yet to be discovered. The project aims to develop new motor biomarkers based on oculography for the design of automatic systems for screening, differential detection, evaluation and prediction of the Parkinson's disease , using techniques based on digital signal processing and artificial intelligence. To do this, a multimodal and multiscale analysis will be carried out, placing emphasis on a novel non-invasive and non-contact approach based on the processing of oculographic sequences . The proposed approach supposes a radical change in the technological paradigm used in the evaluation of the disease.
Applications: documents to be submitted and deadlines	Please send to the supervisor: CV, Letter of motivation and References.