

RESEARCH LINE 2B	
COMPANY	Repsol
PhD THESIS SUPERVISOR (UPM)	Prof. Dr. Juan C. Dueñas <i>Telecommunications Engineering School</i> <i>Telematic Systems Engineering Department</i>
PhD THESIS CO-SUPERVISOR (COMPANY)	Dr. José Antonio Martín Hernández <i>Advisor, Advanced Mathematics</i> <i>Repsol Technology Lab</i>
DESCRIPTION OF THE PhD THESIS PROJECT	Reinforcement Learning for proactive management of industrial networks and services. OBJECTIVES <ul style="list-style-type: none"> - Internet of Things – Industry 4.0: efficient and reliable networks and services. - Proactive management of network and services by predicting models. - Predictive models able to extract both isolated management events and events chains. - Converting predictive models into agent-based simulation models. - Optimization of management operations by means of Reinforcement Learning on simulated networks and services.
TRAINING ACTIVITIES	Methodology of Science -course Instituto de Ciencias de la Educación UPM. Seminars in transversal training Escuela Internacional de Doctorado-UPM (https://blogs.upm.es/eidoctorado/)
SECONDMENT(S)	Queen Mary University of London & Data Centric Engineering Programme. The Alan Turing Institute LIME (Learning-based reactive Internet Engineering) project. Richard G. Clegg, Steve Uhlig, Alan Turing Institute, Queen Mary University, London.
REQUIREMENTS FOR CANDIDATES	MSc in Computer Networks, Data Science, Computer Science or alike Skills: analytical capabilities, problem solving, self-management, initiative, communication Background: maths and statistics, data analytics, Python programming