Expression of Interest

Contact Person/Scientist in Charge

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Universitat Politècnica de València (UPV)

Department / Institute / Centre

- **Name:** Research Centre on Production Management and Engineering - Universitat Politècnica de València
- **Address:** Campus de Vera; Camino de Vera, s/n; Valencia (46022)
- **Province:** Valencia

Research Area

- Mathematics (MAT)

Brief description of the institution:

Universitat Politècnica de València (UPV) is the single Spanish Technical University that features in the main University world rankings. It is within the top 5 Spanish Universities with the highest revenue from both public research and knowledge transfer activities, and a national leader in patent license income and start up creation. Constituted in 1971, it comprises nearly 30.000 students, over 2500 academics, and 17 university research centres of excellence.

UPV has a relevant experience in the participation in international research programmes, with over 100 FP7 projects and 40 H2020 projects in the period 2014-2015. UPV researchers are also actively involved all H2020 life program stages, from workprogramme drafting discussions, to project coordination. It is also taking part in several major partnering initiatives (JTIs, PPPs, KICs…).

Brief description of the Centre/Research Group (including URL if applicable):

The Research Centre on Production Management and Engineering (CIGIP) activities are oriented towards the generation of new knowledge and innovative solutions in the field of Industrial Engineering. We are a multidisciplinary team of 30 members including professors, associate professors, full researchers and fellows with university degrees in Industrial Engineering, Industrial Organization Engineering, Computer Engineering and Advanced Engineering on Production, Logistics and Supply Chain. Our facilities are located in the Polytechnic City of Innovation (Vera Campus) and in the Centre for Innovation and Research (Alcoy Campus) with five R&D laboratories, an extensive computer resources and a wide bibliographic repository to support our research activities.

The CIGIP is structured in five Research Units: Collaboration and Interoperability in the Supply Chain, Engineering and Performance Management in Organizations, Productivity Analysis and Improvement, Sales and Operations Planning Systems and Supply Chain Strategy and Engineering.

The CIGIP has participated in 98 competitive research projects with public funding and in 130 projects in companies of different sectors with private funding. More information at www.cigip.org

Project description:

Algorithms for Optimizing the Supply Chain Operations

The ER will contribute on the development of optimization algorithms for supporting supply chains in the computation of production plans, replenishment plans and delivery plans to achieve shorter delivery times, better speed and consistency of schedules, higher use of productive resources and energy savings. Different algorithm approaches will be considered: multi-agent negotiation based algorithms, mathematical programming in deterministic and fuzzy context, constraint programming, hybrid optimization, system dynamics, and discrete events simulation. Different programming languages can be considered for algorithms implementation, nevertheless the preferred are Julia (http://julialang.org/) and Python (https://www.python.org/).

Applications

- Curriculum Vitae in Europass format

- Letter of motivation

- Degree diploma

- Academic records