

Expression of Interest



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

Contact Person/Scientist in Charge

- **Name and surname:** Vicente Botti Navarro
- **Email:** vbotti@dsic.upv.es

Universitat Politècnica de València (UPV)

Department / Institute / Centre

- **Name:** GTI-IA, Departamento de Sistemas Informáticos y Computación (DSIC) - Universitat Politècnica de València
- **Address:** Campus de Vera; Camino de Vera, s/n; Valencia (46022)
- **Province:** Valencia

Research Area

- Information Science and Engineering (ENG)

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 Artificial Intelligence and Information Technology Group (GTI-IA: <http://www.gti-ia.upv.es/>) of the Universitat Politècnica de València (UPV) research areas include agreement technologies, multi-agentsystems, complex networks and big data analysis, intelligent manufacturing systems, simulation, recommender and decision support systems, persuasion technologies, affective agents, and affective-based agreement technologies. The group was a Spanish node of the European network of Agreement Technologies COST. It was also member of the following excellence networks: Agentcities.ES, [Agentcities.NET](#), Agent Link I, II and Agent Link Agent Link III.

GTI-IA has led/participated in successful national and international research projects (65) and in projects with industry or business partners (11). In their context, GTI-IA has been responsible of the development of 7 large applications that include technologies that have been transferred to industrial companies and technology-based firms. Its members actively collaborate with the academic community in the management and organization of international conferences and workshops (ECAI 2004, AAMAS 2104), and have a large number of scientific publications in conferences and high impact journals.

GTI-IA leads the micro-cluster [Social and Economic Computing](#), which brings more than 80 full time researchers from artificial intelligence, neuroeconomic and neuroscience areas.

Members of GTI-IA have supervised 30 Ph.Ds. on different Artificial Intelligence, Multi-agent Systems and Agreement Technologies topics.

Project description:

Technologies for Emotional Virtual Human Organisations (EmoTTech)

The researcher will work under the framework of the Technologies for Emotional Virtual Human Organisations (EmoTTech) project.

The goal of this project is to develop a ground-breaking technology that includes tools and models allowing building complex virtual organisations made of intentional and intelligent entities with realistic behavioural foundations, including emotional responses. In these organisations, the emotions perceived by the constituent entities will influence the cognitive processes of these entities, similarly to the equivalent processes in humans. New computational models will be required in order to reach these goals, as well as new methods for the identification of relevant emotions for decision making in general domains, new intelligent agent software architectures that consider emotions on their structure, new knowledge representation formalisms able to express emotions and new models of trust, negotiation and/or argumentation that are influenced by emotions. A case study inspired on the labour market involving graduate students of the Universitat Politècnica de València will help to validate the results of the research. The impact of the research relies on its generality to be applied in problems of diverse domains such as: economy, human societies, video games, electronic commerce, health sciences or emergency domains. In these domains it is necessary to consider the rational, social and affective characteristics of the individuals

involved. The results of the project will translate into a greater socio-economic welfare for European Union community.

Applications

CV, 1 letter of motivation, 2 recommendation letters