

## VISITORS TO IBTec in 2018



### **Professor Dr Eloy Irigoyen**

Professor Dr Eloy Irigoyen is a lecturer in the Department of Systems Engineering and Automation, at the Faculty of Engineering of the University of the Basque Country (UPV/EHU), in Bilbao, Spain. He was teaching and researching at the University of Deusto, in Bilbao (Spain), in the year 2000. Previously, he was a lecturer and researcher at the Public University of Navarre, in Pamplona (Spain), since 1993. Graduated PhD with Cum Laude from Public University of Navarre with the thesis “New results on Neural Controllers Tuning in Optimal and Predictive Control Schemes” at the year 2003. Research career officially recognized by the National Accreditation Agency at the year 2011.

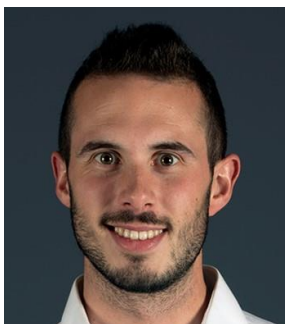
Among other responsibilities, Dr. Eloy Irigoyen teaches Degree and Master, manages student projects, he managed and guided three doctoral theses, and guides currently another three doctoral theses, and manages issues related to the department as well.

He has led and collaborated in several research projects that have been funded by various institutions such as Europe Institutions, Spanish Government, Basque Country Government, and some international corporations as ALCOA Foundation. He is a reviewer for several international Journals with related impact factor. He is co-organizer and belongs to technical committees of international conferences, along the last years.

He leads the research group Intelligent Control at the UPV/EHU. This group gathers its activities in two main areas: Intelligent Control and Biomedical Engineering, including the design of Systems for the Assistance of People with Disabilities. In both lines the group is studying issues related to fundamental research, as well as the implementation of real solutions in various applications related to multiple sectors, from the industrial, to the medical, through the transport, services and assistance to people.

Nowadays, his research activity is aimed at new developments, both in SW and HW, to analyse physiological signals such as ECG, GSR and RSP with the objective of detecting and identifying stressful events in people. Recently, in its current work, the group has obtained good results in the application of Computational Intelligent techniques to enhance the processing of the mentioned signals, and the implementation of such algorithms in low cost platforms.

Currently (between December 2017 and May 2018), he is participating in the Erasmus Mundus Pacific Atlantic Network for Technical Higher Education and Research (PANTHER) programme, which is designed to foster knowledge exchange and collaboration between New Zealand, Australia and Europe. IBTec at Auckland University of Technology (AUT) is currently hosting him.



### **Unai Zalabarria**

Unai received the Bachelor's Degree in Industrial Electronics and Automation Engineering (2014) and the Master in Control Engineering, Automation and Robotics (2016) by the Faculty of Engineering of the University of the Basque Country (UPV/EHU). He was awarded as the best student of his master promotion. He started in research as a member in the Intelligent Control Research Group (GICI) of the UPV/EHU during the master. In 2016, Unai started a PhD as hired PhD-researcher in the UPV/EHU, in the area of Biomedical Engineering.

Currently (between September 2017 and June 2018), he is participating in the Erasmus Mundus Pacific Atlantic Network for Technical Higher Education and Research (PANTHER) programme, which is designed to foster knowledge exchange and collaboration between New Zealand, Australia and Europe. IBTec at Auckland University of Technology (AUT) is currently hosting him. His research involves advanced signal processing on physiological signals like Electrocardiogram, Galvanic Skin Response, Breathing and Plethysmography, parameter extraction and stress and emotions estimation by using intelligent computing techniques such as fuzzy logic and machine learning techniques. His work is aimed at helping people with cerebral palsy, spinal cord injury or special needs.