COMILLAS-ICAI Engineering Research Projects (SPRING & SUMMER 2019)

RP_DEA01 Integration of smart sensors (RFIDs and cameras) on a production line
RP_DEA02 Programming robots using virtual reality
RP_DEA03 Pallet quality control
RP_DEA04 Cutting-edge information and communications technologies for Smart Grids
RP_DEA05 Low-cost sensor characterization for biomedical applications
RP_DIE01 Testing power system protections
RP_DIE02 Analyses of emissions (CO2 & NO2) of medium motor vehicles and the indirect emissions of a typical electric vehicle (CO2) in his/her country of origin.
RP_DIE03 Performance tests of electric machines
RP_DIE05 State-of-the-art on flexibility options for investment in a decarbonized electric power system.
RP_DIM01 Optimization of mechanical and thermal properties of microencapsulated antibiotic bone cements with improved antimicrobial activity
RP_DIM02 Improved bonding strength of acrylic adhesives reinforced with silanised graphene
RP_DIM03 Influence of Graphene nanoplatelets on mechanical properties of epoxy adhesive joints
RP_DIM04 Biogas from anaerobic digestion of organic substrates. Building and operating anaerobic digestors.
RP_DIM05 Chemical functionalization of graphene for improved dispersion in polymeric matrix composites
RP_DIM06 Development of parametric models of the human body
RP_DIM07 Mechanical characterization of GRP and CFRP composites reinforced with graphene nanoplatelets
RP_DIM08 Fire resistant adhesive joints. Study of the mechanical behavior.
RP_DIM09 Development of Nanomaterial based Scaffolds for Bone Tissue Regeneration
RP_DIM10 Numerical simulation of adhesive joints
RP_DIM11 Additive manufacturing of railway cantilever system
RP_DIM12 Numerical simulation of 3D printing process
RP_DIM13 Assessment of the birth-dead FEM technique to simulate the loss of stiffness in wood beams under fire conditions.
RP_DIM14 Numerical analysis of fire spread in highly densely populated areas.
RP_DOI01 Making teaching material for learning Process Statistical Control at class
RP_DOI02 Energy Poverty in the US
RP_DOI03 Impact of management on company valuation
RP_DTC01 Application of Machine Learning techniques to classification problems
RP_DTC02 Application of Machine Learning to unsupervised learning problems
RP_DTC03 Application of Machine Learning to regression problems
RP_DTC04 Assessment of IoT contexts through Bluetooth Low Energy Networks
RP_IIT01 Impact of the generation expansion decisions in the current TEP problem
RP_IIT02 Impact of the hourly representation in the operation of the European transmission network
RP_IIT03 Transition of the transmission network to a 100 % renewable European system
RP_IIT04 Including battery investment decisions into a long-term transmission expansion planning model
RP_IIT05 Prerequisites for the emergence of an hydrogen economy in Spain

**LEGEND**
- DEA Department of Electronics, Control and Communications
- DIE Department of Electrical Engineering
- DIM Department of Mechanical (and Materials) Engineering
- DOI Department of Industrial Organization
- DTC Department of Telematics and Computer Sciences
- IIT Institute for Research in Technology