The University of Bologna

91 million Euros from the Seventh Framework Programme and other programs financed by the EU (from 2007 to September, 2013).

44 million Euros from the funds ROP-ERDF and CIPE Technopolis for the project for the period 2011-2013.

Today, the Alma Mater Studiorum is the first Italian university for the attractiveness of European funding for research (projects funded in 2007-2012), 31st in the European ranking of institutions of higher education.

Research Team

Industrial Engineering Department (DIN)

Prof. Cesare Saccani (Full Professor in Mechanical Engineering Plants)

Prof. Ing. Augusto Bianchini, PhD (Assistant Professor in Industrial Plants)

Ing. Marco Pellegrini, PhD (Research Fellow)

Main Research Fields

Renewable Energy

Gas and water filtration

Multiphase flow plant design

Waste Management

Instrumentations and Industrial Automations

Project ideas

Integrated coast zone management: innovative and near zero-impact automatic plant for seabed maintenance, able to limit both sediment depositing nearby seaport and dredging equipment using. *Realization of seabed maintenance plan in Adriatic-Ionian locations*.

Air quality: innovative filter for particulate <PM10 removal from flue gas produced by the combustion of biomass, innovative processes for dioxin emission reduction. *Development of macro-regional strategies for particulate and dioxins emissions monitoring and control*.

Municipal Solid Waste (MSW) Management: innovative plants for an integrated and sustainable management of MSW. Optimization of processes for materials and energy recovery from MSW. *Support in the design and realization of integrated waste management models, including waste treatment and recovery plants*.

Energy efficiency and low-carbon economy: innovative solutions for the integration of renewable energies power plant with traditional energy sources (solar cooling, heat pump, concentrating solar power, solar steam reforming, …). *Models for efficient renewable energies production, storage and transport.*

Methane grid safety: innovative approach for the analysis of risk, design and maintenance to improve the working safety performance of the methane grid. *Development and standardization of best practices*.

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Looking for partners…

Interreg
ADRION
ADRIATIC-IONIAN
European Regional Development Fund - Instrument for Pre-Accession II Fund

Searching for partners interested in enhancing links and sinergies for the innovation through:

Cooperation,

Networking,

Support in technology sharing, transfer and further development, and

Collaboration and realization of pilot actions

in the following fields: maritime areas management, waste management, renewable energies.

Contact and References

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Publications (among others…)

Integrated coast zone management:

https://www.researchgate.net/publication/273060963_Zero_environmental_impact_plant_for_seabed_maintenance

MSW management:

https://www.researchgate.net/publication/255180942_Optimal_strategies_for_the_recovery_of_material_and_energy_from_MSW?ev=prf_pub

Energy efficiency and low-carbon economy:

https://www.researchgate.net/publication/260033921_Thermoelectric_Cells_Cogeneration_from_Biomass_Power_Plant?ev=prf_pub

Air quality:

https://www.researchgate.net/publication/275641426_Advanced_plant_solutions_for_dioxin_emission_reduction_in_industrial_combustion_processes

Main previous European and national projects

Europe-wide Use of Sustainable Energy from Aquifers E-USE(aq): innovation action funded by the Climate-KIC. Started in 2015 (on-going).

Management of the seabed with efficient technology and no-environmental impact: R&D action funded by Emilia-Romagna region, POR-FESR 2007-2013. Started in 2009 (2,5 years).

Analysis of paths for the materials and energy recovery from MSW: research project funded by MIUR (Italy). Started in 2006 (2 years).