

## Optimal systems engineering and control co-design for water and energy production: A European project

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Received 1 September 2008; Accepted in revised form 21 September 2009

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### ABSTRACT

Fresh water and energy are essential resources, which have become expensive and scarce. Moreover, their production requires nowadays high technologies and multidisciplinary advanced research. In order to combat this problem, the European Commission supports cooperative research activities in the mentioned areas by means of research grants. Open Gain is a cooperation project financed by the European Commission, whose main objective is to develop optimal systems engineering methods with embedded automation for reverse osmosis desalination plants powered by renewable energies. Thus, the present paper describes objectives, the consortium, work packages and dissemination plan of Open Gain as an example of narrow cooperation between Europe and the Mediterranean Partner Countries (MPC).

*Keywords:* Reverse osmosis; Alternative energies; Open Gain; European Commission

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