

# Scientific Curriculum Vitae

## Joan García

Family name: García Serrano

Name: Joan

Identity card: 46650832R

Date of birth : 09/06/1966

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### Current Position

Institution: Universitat Politècnica de Catalunya-BarcelonaTech (UPC)

Faculty: School of Civil Engineering

Department: Hydraulic, Maritime and Environmental Engineering

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Speciality (UNESCO Codes): Environmental Engineering (330809), Wastewater Treatment (330810)

Position Category: Full Professor

Start date: November 2008

Administrative situation: Permanent, full time

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### Research interests (key words)

Environmental Engineering, Environmental Biotechnologies, Modelling, Innovation, Wastewater Treatment, Water Reuse, Sludge Treatment, Waste treatment

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### Academic Degrees

Desgree	Center	Date
Biology	Univeristy of Barcelona	1990

Doctorate	Center	Date
Biology	University of Barcelona	1996

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### Previous Professional Activities

Activity	Center	Fechas
Assistant Professor Type 1	Civil Engineering School, UPC	1991 - 1998
Assistant Professor Type 2	Civil Engineering School, UPC	1998 - 2001
Assistant Professor Type 3	Civil Engineering School, UPC	2001 - 2002
Associate Professor	Civil Engineering School, UPC	2002 - 2008

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### Abstract

Joan Garcia (1966) is Full Professor of Environmental Engineering and currently Director of the Department of Hydraulic, Maritime and Environmental Engineering (DEHMA) of the Universitat Politècnica de Catalunya-BarcelonaTech (UPC). He is also leading the research group of "Environmental Engineering and Microbiology" accredited by the Catalan Government (<http://gemma.upc.edu>), which belongs to an associated Unit of the Spanish Research Council (CSIC). This group includes 2 professors, 1 lecturer, 4 research postdocs, 8 PhD students and 2 technicians. Joan obtained his degree in Biology in 1990 at the Universitat de Barcelona (UB) and in 1991 started to work as Assistant Professor in Environmental Engineering in the DEHMA. Joan presented his doctoral dissertation on wastewater treatment engineering in 1996 at the UB, while at the same teaching from the DEHMA at the Civil

Engineering School of the UPC. He has been a postdoc research visitor at University of California at Berkeley (2001), and University of Ghent, Belgium (2005). For his contributions to water resources research and wastewater engineering received in 2008 an award of the Spanish Ministry of Science and Innovation for the Intensification of Research Activity. He has written over 150 articles in scientific as well as technical journals and proceedings. H = 25.

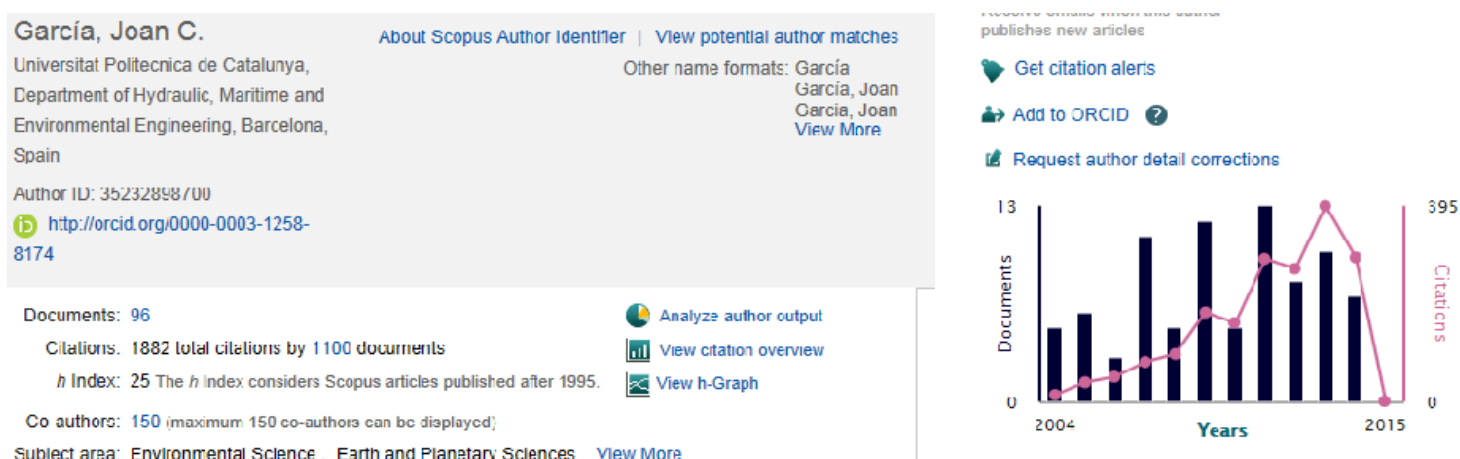
Joan carries out interdisciplinary research on the development and improvement of environmental biotechnologies that mimicking nature and maximizing eco-efficiency allow treatment of wastewaters and other kinds of wastes. In particular research is currently conducted on systems for wastewater treatment and at the same time materials and energy recovery, like constructed wetlands and microalgae photobioreactors. Joan's results in the last 5 years have been published in 44 papers of which the majority located in the first quartile of the corresponding subject area (Environmental Engineering, Water Resources and Environmental Sciences). Joan is currently Managing Editor of the journal "Desalination and Water Treatment" (2009-now) and member of the Editorial Board of the journal "Ecological Engineering" (2007-now) (both ISI journals). In the last years Joan has led 8 competitive projects with a total budgeted >1.5 M €. Nowadays J.García has 4 active projects (3 EU FP7 and 1 National).

Two PhD students supervised by Joan (Enrica Uggetti and Anna Pedescoll) obtained the UPC Extraordinary Doctorate Awards to Ph Dissertations (2013). The PhD student Roger Samsó received the 2014 Catalan Government Award for the best research work on environment (14,000 €).

Joan was Chair of the WETPOL-2009 Congress, held in Barcelona, with 300 participants.

### Bibliometric data

This is a screen print from Scopus database. Note that I also appear as "Joan C" for unknown reasons. I have to request them to change that mistake.



## Research Projects Obtained Competitively

### Research projects (only those led by Joan)

1. Autonomous Reed Bed Installations (ARBI) (September 2013–August 2015; Coordinated project with 7 research groups and SME)  
 Funding Body: EU FP7  
 Budgeted UPC group: 490,000 €  
 Number of researchers: 3 (UPC group)
2. Algal Production and Digestion from Wastewaters (DIPROBIO) (January 2013-December 2016)  
 Funding Body: National Research Plan, Spanish Department of Economy  
 Budgeted: 120,000 €  
 Number of researchers: 5
3. Safeguarding Water Resources in India with Green and Sustainable Technologies (SWINGS) (September 2012–November 2015; Coordinated project with 21 research groups and SME)  
 Funding Body: EU FP7

Budged UPC group: 264,000 €  
Number of researchers: 3 (UPC group)

4. Natural Water Systems and Treatment Technologies to cope with Water Shortages in Urbanised Areas in India (NaWaTech) (July 2012–August 2015; Coordinated project with 13 research groups and SME)

Funding Body: EU FP7

Budged UPC group: 181,000 €

Number of researchers: 3 (UPC group)

5. Biotechnology for Africa's Water Supply (WATERBIOTECH) (January 2011-December 2013; Coordinated project with 20 research groups).

Funding Body: EU FP7

Budged UPC group: 48,471 €

Number of researchers: 4 (UPC group)

6. Design of New Systems of Constructed Wetlands for Removing Conventional and Emerging Contaminants from Wastewaters: Monitoring 2009-2011 (January 2009-March 2012; Coordinated project with 5 research groups).

Funding Body: National Research Plan, Spanish Department of Economy

Budged UPC group: 121,000 €

Number of researchers: 5

7. Sludge Treatment with Reed Beds: Performance Evaluation and Criteria for Design, Operation and Maintenance: Monitoring 2008-2010 (January 2008-December 2010)

Funding Body: Spanish Department of Environment

Budged: 140,364 €

Number of researchers: 7 (UPC group)

8. Integrated System for the Treatment of Wastewater, Urban Runoff and Sludge in Small Communities by Means Constructed Wetlands (January 2009-December 2010; Coordinated project with 2 research groups)

Funding Body: Spanish Department of Environment

Budged UPC group: 196,880 €

Number of researchers: 5 (UPC group)

9. Sludge Treatment with Reed Beds: Performance Evaluation and Criteria for Design, Operation and Maintenance (January 2007-December 2007)

Lead researcher: Joan García

Funding Body: Spanish Department of Environment

Budged: 36,608 €

Number of researchers: 6

10. Design of New Systems of Constructed Wetlands for Removing Conventional and Emerging Contaminants from Wastewaters (December 2005 - December 2008; Coordinated project with 5 research groups).

Funding Body: National Research Plan, Spanish Department of Economy

Budged UPC group: 83,300 €

Number of researchers: 3 (UPC group)

11. Characterization of Biotic and Abiotic Reactions Involved in Organic Matter and Contaminants Removal in Subsurface Flow Constructed Wetlands. Sizing and Design Criteria (October 2002–September 2005; Coordinated project with 3 research groups)

Funding body: National Research Plan, Spanish Department of Economy

Budged UPC group: 46,115

Number of researchers: 4 (UPC group)

**Other projects related with research activities such as support actions, promotion, dissemination, etc. (last 5 years)**

1.E COtechnologies for WAter Treatment and recovery of resources (ECOWAT) (January 2014-December 2016)

Lead researcher: Joan García

Funding body: Spanish Ministry of Economy, Support Action

Budged: 24,000 €  
Number of researchers: 5

2. Support to research groups recognised by the Catalan Government (January 2014-December 2016)  
Lead researcher: Joan García  
Funding body: Catalan Government  
Budged: 18,000 €  
Number of researchers: 14

3. Water. Cat. Catalan R+D Network for Water Technologies (December 2010–December 2012, Coordinated Project with 4 research groups)  
Lead resercher: Joan García  
Funding body: ACC1Ó, Catalan Government  
Budged UPC group: 9,431 €  
Number of researchers: 6 (UPC group)

## Research Contracts

### (only those leaded by Joan)

1. Determination of Optimum Chlorine Dosage for Treatment of Ballast Water (2014)  
Company: Integral Desegn and Development  
Budged: 4,900 €  
Number of researchers: 2

2. Assessment of Reclaimed Waters and Sustainability of the wetland system at Can Cabanyes, Granollers (2014)  
Funding body: Granollers City Council  
Budged: 6,610 €  
Number of researchers: 2

3. Assessment on the Operation and Management of the Constructed Wetland of the Periurban Park SPJ4 located in Granollers, Barcelona (October 2003 – up to now)  
Funding body: Granollers City Council  
Budged: 3,341 €/year  
Number of researchers: 2

4. Enlargement Design Proposal of the Constructed Wetland System Periurban Park SPJ4 located in Granollers, Barcelona (December 2008 – February 2009)  
Funding body: Granollers City Council  
Budged: 3,000 €  
Number of researchers: 2

5. Design Reccomendations for Sludge Treatment with Reed Beds (February 2008–May 2008)  
Funding body: Catalan Water Agency  
Budged: 10,300 €  
Number of researchers: 7

6. Study on Sludge Treatment with Reed Beds: Design and Operation Criteria (October 2007-January 2008)  
Funding body: Catalan Water Agency  
Budged: 10,300 €  
Number of researchers: 7

7. Clogging of Constrcuted Wetland Systems: Relationship with Wastewater Quality (November 2005-April 2006)  
Funding body: "Aigües de Catalunya SA"  
Budged: 10,400 €  
Number of researchers: 4

8. Establishment of Design Criteria of Constructed Wetlands in the Context of Project Construction of a Coast Guard in Ebro Delta (April 2005-June 2005)

Funding body: URS Spain  
Budgeted: 2,600 €  
Number of researchers: 1

9. Final Design of Wastewater Treatment Plant for Cheese Production Company "Formatges Muntanyola" (June 2005-August 2005).

Funding body: "Maria Mariné Basté (Formatges Muntanyola)"  
Budgeted: 1,250 €  
Number of researchers: 1

10. Optimization and Improvement Wastewater Treatment Systems (January 2005-June 2005)

Funding body: "Hormigones Proyectados SA"  
Budgeted: 5,700 €  
Number of researchers: 3

11. Feasibility Assessment of Final Treatment of Wastewaters of the Enterprise "Masa Decor SA" by Means Constructed Wetlands (April 2005-June 2006)

Funding body: "Masa Décor SA"  
Budgeted: 4,100 €  
Number of researchers: 3

12. Technical Assessment for the Operation and Maintenance of the Wastewater Treatment Plants of Riudecanyes, Vilajuiga and Cervià de Ter (September 2002–September 2003)

Funding body: Water Catalan Agency  
Budgeted: 30,000 €  
Number of researchers: 3

## **Publications and Scientific and Technical Reports**

### **Articles in journals included in the ISI database (all Joan's articles)**

1. Samsó, R., Blázquez, J., Agulló, N., Grau, J., Torres, R. and García, J. (2014). Effect of bacteria density and accumulated inert solids on the effluent pollutant concentrations predicted by constructed wetlands model BIO\_PORE. *Ecological Engineering*, in press. Doi: 10.1016/j.ecoleng.2014.09.069

2. Ávila, C., Bayona, J.M., Martín, I., Salas, J.J. and García, J. (2014). Emerging organic contaminant removal in a full-scale constructed wetland system for wastewater treatment and reuse. *Ecological Engineering*, in press. Doi: 10.1016/j.ecoleng.2014.07.056.

3. Garfí, M., Pedescoll, A., Carretero, J., Puigagut, J. and García, J. (2014). Reliability and economic feasibility of online monitoring of constructed wetlands performance. *Desalination and Water Treatment*, in press. Doi: 10.1080/19443994.2013.811443.

4- Ávila, C., Nivala, J., Olsson, L., Kassa, K., Headley, T., Mueller, R.A., Bayona, J.M. and García, J. (2014). Emerging organic contaminants in vertical subsurface flow constructed wetlands: Influence of media size, loading frequency and use of active aeration. *Science of the Total Environment*, 494, 211-217.

5. Morató, J. Codony, R., Sánchez, O., Martín Pérez, L., García, J. and Mas, J. (2014). Key design factors affecting microbial community composition and pathogenic organisms removal in horizontal subsurface flow constructed wetlands. *Science of the Total Environment*, 481, 81-89.

6. Samsó, R. and García, J. (2014). The Cartridge Theory: a high-level description of horizontal-flow wetlands' functioning based on modelling results. *Science of the Total Environment*, 473-474, 651-658.

7. Ávila, C., Matamoros, V., Reyes-Contreras, C., Piña, B., Casado, M., Mita, L., Rivetti, C., Barata, C., Bayona, J.M. and García, J. (2014). Attenuation of emerging contaminants in a hybrid constructed wetlands system under different hydraulic loading rates and their associated toxicological effects in wastewater. *Science of the Total Environment* 470-471, 1272-1280.

8. Passos, F., Hernández-Mariné, M., García, J. and Ferrer, I. (2014). Long-term anaerobic digestion of microalgae grown in HRAP for wastewater treatment. Effect of microwave pretreatment. *Water Research* 49, 351-359.
9. Catalán, Pla-Rabés, García, J. and Camarero, Ll. (2014). Air temperature-driven CO<sub>2</sub> consumption by rock weathering at short timescales: evidence from a Holocene lake sediment record. *Geochimica et Cosmochimica Acta*, 136, 67-79.
10. Ávila, C., Garfí, M. and García, J. (2013). Three-stage hybrid constructed wetland system for wastewater treatment and reuse in warm climate regions. *Ecological Engineering* 61, 43-49.
11. Samsó, R. and García, J. (2013). Bacteria distribution and dynamics in constructed wetlands based on modeling results. *Science of the Total Environment* 461-462, 430-440.
12. Passos, F., García, J. and Ferrer, I. (2013). Impact of low temperature pretreatment on the anaerobic digestion of microalgal biomass. *Bioresource Technology* 138, 79-86.
13. Passos, F., Solé, M., García, J. and Ferrer, I. (2013). Biogas production from microalgae grown in wastewater: effect of microwave pre-treatment. *Applied Energy* 108, 168-175.
14. Samsó, R. and García, J. (2013). BIO\_PORE, a mathematical model to simulate biofilm growth and water quality improvement in porous media: application and calibration for constructed wetlands. *Ecological Engineering* 54, 116-127.
15. Mburu, N., Rousseau, D.P.L., van Bruggen, J.A., Thumbi, G., Llorens, E., García, J. and Lens, P. (2013). Simulation of reactive transport in tropical horizontal subsurface flow constructed wetland treating domestic wastewater. *Science of the Total Environment* 449, 309-319.
16. García, J., Salas, J.J., Martín, I. and Vymazal, J. (2013). Research and innovation on ecotechnologies applied to improve wastewater treatment efficiency. *Ecological Engineering* 50, 1-4.
17. Ávila, C., Salas, J.J., Martín, I., Aragón, C. and García, J. (2013). Integrated treatment of combined sewer wastewater and stormwater in a hybrid constructed wetland system in southern Spain and its further reuse. *Ecological Engineering* 50, 13-20.
18. Ávila, C., Reyes, C., Bayona, J.M. and García, J. (2013). Emerging organic contaminant removal depending on primary treatment and operational strategy in horizontal subsurface flow constructed wetlands: influence of redox. *Water Research* 47, 315-325.
19. Pedescoll, A., Knowles, P., Davies, P., García, J. and Puigagut, J. (2012). A comparison of in situ constant and falling head permeameter tests to assess the distribution of clogging within horizontal subsurface flow constructed wetlands. *Water, Air and Soil Pollution* 223, 2263-2275.
20. Garfí, M., Pedescoll, A., Bécares, E., Hijosa-Valsero, M., Sidrach-Cardona, R. and García, J. (2012). Effect of climate and wastewater quality on removal efficiency in two experimental plants of constructed wetlands located in Spain. *Science of the Total Environment* 437, 61-67.
21. Uggetti, E., Ferrer, I., Arias, C., Brix, H. and García, J. (2012). Carbon footprint of sludge treatment reed beds. *Ecological Engineering* 44, 298-302.
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24. Nivala, J., Knowles, P., Dotro, G., García, J. and Wallace, S. (2012). Clogging in subsurface-flow treatment wetlands: Measurement, modeling and management. *Water Research* 46, 1625-1640.
25. Uggetti, E., Ferrer, I., Lind, S., Martikainen, P. and García, J. (2012). Quantification of greenhouse gas emissions from sludge treatment wetlands. *Water Research* 46, 1755-1762.

26. Uggetti, E., Ferrer, I., Carretero, J. and García, J. (2012). Performance of sludge treatment wetlands using different plant species and porous media. *Journal of Hazardous Materials* 217-218, 263-270.
27. Hijosa-Valsero, M., Matamoros, V., Sidrach-Cardona, R., Pedescoll, A., Martín-Villacorta, J., García, J., Bayona, J.M. and Bécares, E. (2011). Influence of design, physico-chemical and environmental parameters on pharmaceuticals and fragrances removal by constructed wetlands. *Water Science and Technology* 63, 2527-2534.
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32. García, J. (2011). Advances in pollutant removal processes and fate in natural and constructed wetlands. *Ecological Engineering* 37, 663-665.
33. Pedescoll, A., Corzo, A., Álvarez, E., Puigagut, J. and García, J. (2011). Contaminant removal efficiency depending on primary treatment and operational strategy in horizontal subsurface flow treatment wetlands. *Ecological Engineering* 37, 372-380.
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37. Llorens, E., Saaltink, M., Poch, M and García, J. (2011). Bacterial transformation and biodegradation processes simulation in horizontal subsurface flow constructed wetlands using CWM1-RETRASO". *Bioresource Technology* 102, 928-936.
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49. Tapia, F., Giacoman, G., Herrera, J., Quintal, C., García, J., and Puigagut, J. (2009). Treatment of swine wastewater with subsurface-flow constructed wetlands in Yucatán, Mexico: influence of plant species and contact time. *Water SA* 35, 335-342.
50. Puigagut, J., Salvadó, H. and García, J. (2009). Microfauna community as an indicator of effluent quality and operational parameters in an activated sludge system for treating piggery wastewater. *Water, Air and Soil Pollution* 203, 207-216.
51. Seguí, L., Alfranca, O. and García, J. (2009). Techno-economical evaluation of water reuse for wetland restoration: a case study in a Natural Parc in Catalonia, Northeastern Spain. *Desalination* 246, 179-189.
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63. Caselles-Osorio, A. and García, J. (2007). Impact of continuous and intermittent feeding strategies on the performance of shallow horizontal subsurface-flow constructed wetlands. *Science of the total Environment* 378, 253-262.
64. Puigagut, J., Salvadó, H., García, D., Granés, F. and García, J. (2007). Comparison of microfauna communities in full scale subsurface-flow constructed wetlands used as secondary and tertiary treatment. *Water Research* 41, 1645-1652.
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78. Huang, Y., Latorre, A., Barceló, D., García, J., Aguirre, P., Mujeriego, R. and Bayona, J.M. (2004). Factors affecting linear alkylbenzene removal in subsurface flow constructed wetlands. *Environmental Science and Technology* 38, 2657-2663.
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81. Huang, Y., Ortiz, L., García, J., Aguirre, P., Mujeriego, R., and Bayona, J.M. (2004). Headspace solid-phase microextraction characterization of odorous compounds: application to the constructed wetlands treating urban wastewater. *Water Science and Technology* 49 (9), 121-129.
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83. García, J., Vivar, J., Aromir, M. and Mujeriego, R. (2003). Role of hydraulic retention time and granular medium in microbial removal in tertiary treatment reed beds. *Water Research* 37, 2645-2653.
84. Díaz, R., García, J., Mujeriego, R. and Lucas, M. (2003). A quick and low-cost treatment method for secondary effluent nitrate removal through denitrification. *Environmental Engineering and Science* 20, 693-702.
85. García, J., Hernández-Mariné, M., and Mujeriego, R. (2002). Analysis of key variables controlling phosphorus removal in high rate oxidation ponds provided with clarifiers. *Water SA* 28, 1-8.
86. Bourrouet, A., García, J., Mujeriego, R., and Peñuelas, G. (2001). Faecal bacteria and bacteriophage inactivation in a full-scale UV disinfection system used for wastewater. *Water Science and Technology* 43(10), 187-194.
87. García, J., Mujeriego, R., Obis, J.M. and Bou, J. (2001). Wastewater treatment for small communities in Catalonia (Mediterranean Region). *Water Policy : Official journal of the World Water Council* 3, 341-350.
88. García, J., Mujeriego, R., Bourrouet, A., Peñuelas, G. and Freixes, A. (2000). Wastewater treatment by pond systems: experiences in Catalonia, Spain. *Water Science and Technology* 42(10-11), 35-42.
89. García, J., Mujeriego, R. and Hernández-Mariné, M. (2000). High rate algal pond operating strategies for urban wastewater nitrogen removal. *Journal of Applied Phycology* 12, 331-339.
90. García, J., Hernández-Mariné, M. and Mujeriego, R. (2000). Influence of phytoplankton composition on biomass removal from high-rate oxidation lagoons by means of sedimentation and spontaneous flocculation. *Water Environment Research* 72, 230-237.
91. Cameron, N.G., Birks, H.J.B., Jones, V.J., Berge, F., Catalán, J., Flower, R.J., García, J., Kawecka, B., Koinig, K.A., Marchetto, A., Sanchez-Castillo, P., Schmidt, R., Sisko, M., Solovieva N., and Toro, M. (1999). Surface-sediment and epilithic diatom pH calibration sets for remote European mountain lakes (ALPE) Project and their comparison with the Surface Waters Acidification Program (SWAP) calibration set. *Journal of Paleolimnology* 1, 291-317.

92. Merino, V., García, J., Hernández-Mariné, M. and Fernández, M. (1994). Morphology and ultrastructure of *Gomphoneis rhombica* (Fricke) comb. nov. *Diatom Research* 9, 335-347.

#### **Other articles (last 5 years, titles in the original language, not translated)**

1. Uggetti, E., Puigagut, J., García, J., Hughes-Riley, T., Newton, M.J., Morris, R.H. and Webber, J.B. (2014). Sensores de resonancia magnética para mejorar la operación de humedales construidos. *Automática e Instrumentación* 459, 2-4.

2. Ferrer, I., Passos, F. y García, J. (2013). Producción de biogás a partir de microalgas cultivadas en aguas residuales. *Aguas Residuales.Info*. Publicación en línea:

[http://aguasresiduales.info/main/index.php?md\\_0=4&md\\_1=&id=5832&pag=1](http://aguasresiduales.info/main/index.php?md_0=4&md_1=&id=5832&pag=1)

3. García, J., Passos, F., Ferrer, I. y Mena, J. (2012). Biocombustibles a partir de microalgas cultivadas en aguas residuales. *Automática e Instrumentación* 437, 48-50

4. Aguirre, P., Álvarez, E., Ferrer, I., García, J. (2011). Treatment of piggery wastewater in experimental high rate algal ponds. *Revista Latinoamericana de Biotecnología Ambiental y Algal* 2, 57-66.

5. Uggetti, E., Ferrer, I., Castellnou, R., Molist, J. y García, J. (2010). Tratamiento de lodos de depuradora con humedales artificiales. *Infoenviro*, Julio 2010, 1-4.

#### **Books and book chapters (last 5 years)**

1. Uggetti, E., Ferrer, I., Castellnou, R. and García, J. (2010). Constructed wetlands for sludge treatment. A sustainable technology for sludge management. *Universitat Politècnica de Catalunya, Barcelona*, 55 pp.

2. Uggetti, E., Ferrer, I., Llorens, E., Güell, D. and García, J. (2011). Properties of biosolids from sludge treatment wetlands for land application. In: *Water and Nutrient Management in Natural and Constructed Wetlands*, Vymazal, J. Ed, Springer, 9-20. ISBN 978-90-481-9584-8.

3. Uggetti, E., Ferrer, I., Castellnou, R., Molist, J., García, J. (2010) Economic analysis and life cycle approach to compare drying reed beds and conventional treatments for sludge management. In: *Constructed Wetlands for Sludge Treatment*, Uggetti, E., Ferrer, I., Castellnou, R. and García, J. Eds.

### **Stays in Research Centers**

1. BIOMATH, Dept. of Applied Mathematics, Biometrics and Process Control, Faculty of Bioscience Engineering, University of Ghent, Belgium (2005)

Topic: Development of the Project "Wastewater Constructed Wetland Modelling" (Programa de Estancias de Profesores de Universidad en Centros de Enseñanza Superior e Investigación Extranjeros y Españoles)

14 weeks

2. Grupo de Ingeniería y Gestión Ambiental, Universidad de Antioquia, Medellín, Colombia (2004)

Topic: Participation in the Seminar "Lagunares para el Tratamiento de Aguas Residuales"

2 weeks

3. Environmental Engineering and Health Sciences Laboratory, University of California, Berkeley, EEUU (2001)

Topic: Project "Research on Advanced Integrated Pond Systems" (Financement by means a Research Project)

15 weeks

4. Instituto Mexicano de Tecnología del Agua, Cuernavaca, México (1999)

Topic: Course on Design, Construction and Operation of Constructed Wetlands

2 weeks

5. Facultat de Arquitectura, Urbanismo y Arte. Universidad Nacional de Ingeniería, Lima, Perú (1998)

Topic: Postgraduate Course on Constructed Wetlands as Alternative of Wastewater Treatment

1 week

6. Facultat de Arquitectura y Urbanismo. Universidad Nacional de San Agustín, Arequipa, Perú (1998)

Topic: Postgraduate Course on Constructed Wetlands as Alternative of Wastewater Treatment

1 week

7. Environmental Change Research Centre, University College London, Londres, Gran Bretaña (1991)

Topic: Development of the Project "Use of Diatoms as a Tool for Past Climate and Ecosystems Reconstruction" (scholarship of Generalitat de Catalunya)

10 weeks

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## Contributions in Congresses

**(only oral presentations as keynote or invited speaker, titles in the original language, not translated)**

1. García, J. (2014). From wastewater to bioenergy: the sunlight-to-biogas concept. 16<sup>th</sup> International Biotechnology Symposium and Exhibition (IBS 2014). September, Fortaleza, Brasil.

2. García, J. (2014). Constructed wetlands for wastewater treatment. Seminar of the Institute of Ecology. September, Xalapa, Mexico.

3. García, J. (2014). Sludge treatment wetlands: Design, performance and economics. Technical meeting #4: Sludge management in Small Sewage Works. The Wastewater Network. May, Cranfield University, Cranfield, UK.

4. García, J. (2013). Aiguamolls artificials per a la depuració d'efluents líquids. Bases biològiques de funcionament i tipologies. Jornada Tècnica Aiguamolls Artificials per a la Depuració de Lixiviats de l'Horticultura fora de Sòl. IRTA Cabrils, Barcelona.

5. Samsó, R. and García, J. (2013). The Cartridge Theory: a conceptual approach to horizontal-flow wetland's functioning. 5<sup>th</sup> International Symposium on Wetland Pollution Dynamics and Control (WETPOL), October, Nantes, France.

6. Samsó, R. and García, J. (2013). The Cartridge Theory: a conceptual approach to horizontal-flow wetland's functioning. 8<sup>th</sup> Workshop Nutrient Cycling and Retention in Natural and Constructed Wetlands (NCR), Trebon, Czech Republic.

7. García, J. and Samsó, R. (2013). Water reuse for environmental restoration in Granollers. Seminario Técnico GT3 – Sud'Eau-2, September, Granollers, Spain.

8. Ferrer, I., Passos, F., Gutiérrez, R. and García, J. (2013). Depuración de aguas residuales mediante microalgas y producción de biogás. III Solabíaa, April, David, Panamá.

9. García, J. (2013). Projectes europeus: casos d'èxit i de fracàs. Jornada Grup ConnectEU: col.laboració internacional públic-privada en RDI: una eina per impulsar la competitivitat de les empreses. Catalan Institute for Water Research Foundation (ICRA), February, Girona, Spain.

10. García, J. (2012). Constructed wetlands and algal cultures as a tool for sustainability in the water sector. Workshop Sustainable water treatment technologies: achievements, perspectives, constraints. Catalan Institute for Water Research Foundation (ICRA), December, Girona, Spain.

11. García, J. (2012). Constructed wetlands and algal cultures as a tool for sustainability in the water sector. Workshop Sustainable water treatment technologies: achievements, perspectives, constraints. 15 Encontro de Engenharia Sanitaria e Ambiental, October, Évora, Portugal.

12. Samsó, R. and García, J. (2012). Towards a theory of constructed wetland functioning and with the help of mathematical models. SWS 2012, European Chapter Meeting, Aarhus University, Denmark.

13. García, J. (2011). Humedales artificiales horizontales: fundamentos, criterios de diseño y características de su explotación y mantenimiento. Jornadas de Saneamiento en el Medio Rural, Diputación de La Coruña, Diciembre, La Coruña, España.
14. García, J. (2011). Tratamiento de fangos de EDAR mediante humedales artificiales. Jornadas de Saneamiento en el Medio Rural, Diputación de La Coruña, Diciembre, La Coruña, España.
15. Samsó R. and García, J. (2011). Functions and values of the created wetland in Can Cabanyes Natural Area (Granollers). Local Info Day: Water in Projects of Environmental Restoration, Marzo, Granollers, Barcelona, España.
16. Nivala, J., Knowles, P., Dotro, G., Nivala, García, J. and Wallace, S. (2011). Clogging in subsurface-flow treatment wetlands: assessment, management and modeling. 3rd International Congress SMALLWAT11, Centro de Nuevas Tecnologías del Agua, Noviembre, Sevilla, España.
17. García, J. (2010). Humedales construidos para la depuración de aguas. II Congreso de Biotecnología Ambiental y Algal. Sociedad Latinoamericana de Biotecnología Ambiental y Algal, Diciembre, Cancún, Mexico.
18. Pedescoll, A. and García, J. (2009). Investigations on clogging in Catalonia. Specialist Workshop on Constructed Wetlands Colgging. Aston University, Birmingham, UK.
19. García, J. (2008). O uso de humdais artificiais na depuración de auguas residuais urbanas. Fundamentos. Experiencias en Catalunya. Xornadas Técnicas sobre Saneamiento Sostible no Medio Rural de Galicia.
20. García, J. (2007). Humedales construidos para la depuración de aguas y la restauración ambiental. Congreso Internacional de Paisaje, Territorio y Desarrollo (GEA XXI), Marzo, Valencia, España.
21. García, J. (2005). La depuración en pequeños municipios. Seminario Tratamiento de Augas Residuais en Zonas Húmidas Construidas, Noviembre, Universidade da Coruña, Santiago de Compostela, España.
22. García, J. (2005). El papel de los humedales en la restauración. Seminario Tratamiento de Augas Residuais en Zonas Húmidas Construidas, Noviembre, Universidade da Coruña, Santiago de Compostela, España.
23. García, J. (2003). Design key factors of horizontal flow constructed wetlands. International Seminar on the Use of Aquatic Macrophytes for Wastewater Treatment in Constructed Wetlands, Mayo, Instituto da Agua, Lisboa Portugal.
24. García, J., Aguirre, P., Álvarez, E., Mujeriego, R., Bayona, J.M. and Ortiz, L. (2002). Design of horizontal subsurface flow constructed wetlands. Congreso Internacional de Tecnologías de Pequeña Escala para la Depuración y Gestión de Aguas Residuales en el Ámbito Mediterráneo, Centro de Nuevas Tecnologías del Agua, Marzo, Sevilla, España.
25. García, J. (2001). Reutilització Planificada d'Aigües Residuals. Jornades Tècniques de Gestió Sostenible de l'Aigua, Octubre, Manresa, España.
26. García, J. (2001). Reutilització Planificada d'Aigües Residuals. Jornades sobre l'Aigua i el Medi, Institut d'Estudis Catalans, Mayo, Barcelona, España.

### **Doctoral Dissertations Supervised**

1. Samsó, R. (Marzo 2014). Numerical Modelling of Constructed Wetlands for Wastewater Treatment.  
Excellent  
School of Civil Engineering, Technical University of Catalonia. This thesis received the 2014 Catalan Government Award for the best research work on environment (14,000 €).
2. Ávila, C. (December 2013). Effect of Design and Operational Factors on the Removal Efficiency of Emerging Organic Contaminants in Constructed Wetlands for Wastewater Treatment.  
Excellent (Codirection with Dr. Josep M. Bayona)  
School of Civil Engineering, Technical University of Catalonia

3. Uggetti, E. (September 2011). Sewage Sludge Treatment in Constructed Wetlands. Technical, Economic and Environmental Aspects applied to Small Communities of the Mediterranean Region.  
Excellent (Codirection with Dr. Ivet Ferrer)  
School of Civil Engineering, Technical University of Catalonia  
This thesis received the UPC Extraordinary Doctorate Award (2013)
4. Pedescoll, A. (November 2010). Clogging in Horizontal Subsurface Flow Constructed Wetlands. Measures, Design Factors and Prevention Strategies.  
Excellent (Codirection with Dr. Jaume Puigagut)  
School of Agricultural Engineering, Technical University of Catalonia  
This thesis received the UPC Extraordinary Doctorate Award (2013)
5. Puigagut, J. (December 2007). Microfauna Communities in Biological Wastewater Treatment Systems  
Excellent (Codirection with Dr. Humbert Salvadó)  
Faculty of Biology, University of Barcelona
6. Caselles-Osorio, A. (February 2007). Influence of the Characteristics of the Organic Matter on the Efficiency of Horizontal Subsurface-Flow Constructed Wetlands  
Excellent  
School of Agricultural Engineering, Technical University of Catalonia
7. Bourrouet, A. (Febrero 2000). Los Sistemas de Lagunaje para la Depuración de las Aguas Residuales Urbanas: Parámetros de Diseño, de Explotación y de Inactivación bacteriana y Vírica  
Excellent (Codirection with Dr. Rafael Mujeriego)  
Civil Engineering School, Technical University of Catalonia

## **Comitees and International Representations**

### **Member of Journal Editorial Boards**

1. Special Issue Editor of the journal Ecological Engineering 50, Research and innovation on ecotechnologies applied to improve wastewater treatment efficiency (2013).
2. Special Issue Editor of the journal Ecological Engineering 37 (5), Advances in Pollutant Removal Processes and Fate in Natural and Constructed Wetlands (2011).
3. Managing Editor of the journal Desalination and Water Treatment (from September 2009). Included in ISI database.
4. Member of the Editorial Board of Revista Latinoamericana de Biotecnología Ambiental y Algal (from January 2009).
5. Member of the Editorial Board of Ecological Engineering (from August 2007). Included in ISI database.
6. Member of the editorial board of the book Aquarec. (2007). Water Reuse System (Management Manual). European Commission, Brussels. 646 pág. ISBN 92-79-01934-1.

### **Member of Scientific Committees of Conferences**

1. 3rd International Congress "SmallWat11" Tratamiento de Aguas Residuales en Pequeñas Colectividades. (Sevilla, November 2010). Centro de Nuevas Tecnologías del Agua.
2. II Congreso de Biotecnología Ambiental y Algal (Cancún, Mexico, December 2010). Sociedad Latinoamericana de Biotecnología Ambiental y Algal.
3. 12th International Conference on Wetland Systems for Water Pollution Control (Venice, Italy, October 2010). International Water Association.
4. 11th International Conference on Wetland Systems for Water Pollution Control (Indore, India, November 2008). International Water Association.

5. 2nd International Congress "SmallWat07" Tratamiento de Aguas Residuales en Pequeñas Colectividades. (Sevilla, November 2007). Centro de Nuevas Tecnologías del Agua.
6. International Conference on Multiple Roles of Wetlands (Legnaro, June 2007). International Water Association.
7. 10th International Conference on Wetland Systems for Water Pollution Control (Lisboa, September 2006). International Water Association.
8. Jornada Técnica Humedales Construidos para la Depuración de Aguas Residuales (Granollers, Julio 2004). Universidad Politécnica de Catalunya.

### **Experience in Organisation of R+D Activities**

1. Chair of the Organising Committee of the 1st NaWaTech International Workshop (November 2013), Barcelona.
2. Chair of the Organising Committee of Sludge Treatment Wetlands Seminar, Vic, Barcelona, June 2010.
3. Chair of the Organising Committee of the 3rd Wetland Pollutant Dynamics and Control Symposium WETPOL 2009, Barcelona, September 2009.
4. Chair of the Organising Committee of the Jornada Técnica de Humedales Construidos para la Depuración de Aguas Residuales, Granollers, Barcelona, July 2004.
5. Chair of the Organising Committee of the seminar on Lagunares para el tratamiento de aguas residuales. Grupo de Ingeniería y Gestión Ambiental, Universidad de Antioquia, Medellín, Colombia, October 2005.

### **Special Honours and Awards**

1. Academic Director of the AGBAR-UPC graduate in management and operation of water treatment plants (from 2011).
2. Best 2 papers presented in the 12th IWA International Conference on Wetland Systems for Water Pollution Control, October, Venice, Italy. (2010). [Pedescoll, A., Corzo, A., Álvarez, E., Puigagut, J. and García, J. Contaminant removal and clogging development in shallow subsurface flow constructed wetlands: effect of primary treatment and operating strategy] and [Uggetti, E., Ferrer, I., Llorens, E. and Garcia J. Economic analysis and life cycle approach to compare constructed wetlands and conventional treatments for sludge management]
3. Award for the Intensification of Research Activity, I3 Program, Department of Education and Science Department of Innovation, Universities and Companies of the Generalitat de Catalunya. 30,000 €/year for 3 years. (2008-2010).
4. 2 research sections (six-year terms) valued positively (CNEAI, Field Engineering and Architecture): 1994-2001, 2002-2007.
5. Accreditation of "Advanced Research" of the Quality Assurance Agency for the University System of Catalonia (2007).