

CURRICULUM VITAE

SALVADOR SANCHEZ-CARRILLO

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Personal information

Born and place: April 9, 1972 in Madrid, Spain

Nationality: Spanish

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Department of Biogeochemistry and Microbial Ecology
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Research interests: key words

Biogeochemistry, aquatic ecology, stable isotopes, global change, semi-arid, wetlands, mangroves.

Academic education

- 1997-2000 Ph.D. Geosciences, Universidad Autonoma de Madrid, Madrid, Spain. With High Honour. *Thesis: Hydrology and recent sedimentation in Las Tablas de Daimiel, a floodplain semi-arid wetland (Summa Cum Laude).*
- 1996 Postgraduate degree on Analytical Chemistry. Centro de Especialidades Técnicas Aplicadas, Madrid, Spain. 20 ECTS.
- 1990-1995 B.S. Geosciences, Universidad Complutense de Madrid, Madrid, Spain.

Academic positions

- Since 2011 Group Leader at MNCN-CSIC. Ecosystem biogeochemistry group.
- Since 2011 Senior Researcher. Department of Biogeochemistry and Microbial Ecology, National Museum of Natural Sciences, CSIC, Spain.
- 2011-2014 Chair of the Department of Biogeochemistry and Microbial Ecology, National Museum of Natural Sciences, CSIC, Spain.

2008-2010	Chair of the Department of Systems Ecology, Institute of Natural Resources, CSIC, Madrid, Spain.
2007-2010	Senior Researcher. Department of Systems Ecology, Institute of Natural Resources, CSIC, Madrid, Spain.
2002-2007	Professor. Department of Water Sciences and Environment, Instituto Tecnológico de Sonora (ITSON), Ciudad Obregón, Mexico.
2001-2002	Visiting Professor. Department of Water Sciences and Environment, ITSON, Ciudad Obregón, México.
2001	Postdoc. Department of Geology and Geochemistry, Universidad Autónoma de Madrid, Madrid, Spain.
1997-2000	Center for Environmental Sciences, CSIC, Madrid, Spain. Graduate Research Assistant.

Awards, distinctions and fellowships

1. Spanish National Research Awards (six-year period of research): 3
2. Spanish Research Council Travel Award for a 4-month research stay at ITSON (Mexico), during 2016. The stay was fully funded by PROFAPI and ITSON, which supported the research activities as well.
3. National System of Researchers (SNI); Award-Fellowship by the Mexican National Council of Science and Technology (CONACYT); Researcher Level I (25871). (2002-2007).
4. Excellence Profile for Professorship Award-Fellowship, Mexican Secretary of Public Education (SEP) within PROMEP -Program for the Academic Professorship Improvement-. (2002-2007)
5. Education Council of the Madrid's Community Postdoctoral Fellowship at the Department of Geology, Geochemistry and Agrochemistry of the Autonomous University of Madrid. (2001-2002).
6. Spanish Office for the International Cooperation (AECI) Fellowship (Latin America Program: Joining Young Spanish Doctors to Mexican Universities), Ministry of Foreign Affairs (2001-2003).
7. Extraordinary Award for the best PhD Dissertation by the Sciences Faculty of the Universidad Autónoma de Madrid, Spain. (2001)
8. Center for Environmental Sciences, CSIC, Madrid, Spain. Research Assistant (1997-2000).

Research projects

1. Macrophytes and global change: nitrogen cycle (MACROFITOS- CGL2014-54502-C2-2-P). Ministry of Economy, Industry and Competitiveness, National Plan of

- Research-Development-and-Innovation. 01/01/2015 - 31/12/2018. Funds: 72,600 € IP: S. Sánchez-Carrillo.
2. Long-Term Ecological Research site from Las Tablas de Daimiel wetland (LTER-Daimiel, LTER-Spain) as principal scientist. LTER-Spain and LTER-Europe (European Long-Term Ecosystem Research Network). 01/04/2014-31/12/2020. IP: S. Sánchez-Carrillo.
 3. Global change mitigation by the wetlands of La Mancha Húmeda Biosphere Reserve. Obra Social “La Caixa”. 01/01/2011-31/12/2011.30,000 € IP: S. Sánchez-Carrillo.
 4. Nutrient biogeochemistry using stable isotopes applied to lake metabolism (BIOMET- CGL2009-10408). Ministry of Science and Innovation, National Plan of Research-Development-and-Innovation. 01/01/2010-31/12/2013. Funds: 120,000 € IP: S. Sánchez-Carrillo.
 5. Remote detection of global change effects on ecology and biogeochemistry of macrophyte communities at Las Tablas de Daimiel National Park (001/2008). Ministry of Environment, National Plan of Environmental Research-Spanish National Parks. 20/12/2008-30/06/2013. Funds: 125.000 € IP: S. Sánchez-Carrillo.
 6. Flood pulses effect on carbon biogeochemistry in Mediterranean wetlands. Intramural Project CSIC. 01/08/2007-31/12/2008. Funds: 30,000 € IP: S. Sánchez-Carrillo.
 7. Estimating erosion and sediment yield in the Matape River basin (Sonora, Mexico): Part II. Comisión Estatal del Agua de Sonora, México. 30/06/2005-31/12/2006. Funds: \$40,000 USD. IP: S. Sánchez-Carrillo.
 8. Characterizing Matape River basin for erosion and sediment yield: Part I. Comisión Estatal del Agua de Sonora, Mexico. 15/09/2005-31/12/2005. Funds: \$20,000 USD. IP: S. Sánchez-Carrillo.
 9. Hydrogeomorphology and ecology of Sonora and Sinaloa coastal wetlands (C01-0144). Mexican Secretary of Natural Resources and Environment (SEMARNAT) and The National Council of Science and Technology (CONACYT). 01/2004-12/2006. Funds: \$250,000 USD. IP: S. Sánchez-Carrillo.
 10. Evaporation and heat fluxes in semi-arid water bodies (I-39344-T). The National Council of Science and Technology (CONACYT). 01/2002-6/2003. Funds: \$15,000 USD. IP: S. Sánchez-Carrillo.
 11. Environmental monitoring in Las Tablas de Daimiel National Park. TRAGSA-Organismo Autónomo Parques Nacionales. 01/01/2010-31/12/2012. IP: M. Alvarez-Cobelas (MNCN-CSIC).
 12. Scientific monitoring of the restoration of Lagunas de Cantalejo (Central Spain). Fundación Patrimonio Natural de Castilla y León. 01/01/2009-31/12/2009. IP: S. Cirujano (RJB-CSIC).
 13. Carbon sinks and sources in Las Tablas de Daimiel National Park. Organismo Autónomo de Parques Nacionales 81/2005. 01/01/2006-31/12/2009. IP: M. Alvarez Cobelas (IRN-CSIC).
 14. Nitrate pollution of freshwaters: natural solution (NITRASOL). Ministerio de Educación y Ciencia-CICYT CGL2006-2346-HID. 01/01/2006-31/12/2009. IP: M Alvarez Cobelas (IRN-CSIC).
 15. Ecology and technology of nitrate-rich freshwaters in Campo de Montiel. Consejería de Educación y Ciencia de la Junta de Comunidades de Castilla-La Mancha PAI07-0013-3361. 01/01/2006-31/12/2009. IP: M. Alvarez Cobelas (IRN-CSIC).

16. Environmental modeling of the Yaqui and San Pedro watersheds using GIS. The National Council of Science and Technology (CONACYT). 01/2001-12/2004. IP: J. Garatuza-Payán (Instituto Tecnológico de Sonora, Mexico).
17. Soil Moisture Experiment 2004 -SMEX04-. North American Monsoon Experiment (NAME). NASA, NOAA, USDA. 01/2004-12/2005. IPs: T.J. Jackson (USDA ARS, US) and C.J. Watts (University of Sonora, Mexico).
18. Studies on land use changes: the afforestation as a multifunctioning alternative in semi-arid environments (166/CH-26). Agricultural Council of the Castilla-La Mancha's Community, Spain. 01/2001-12/2004. IP: A. Sánchez-López (CCMA-CSIC).
19. Monitoring and environmental restoration of Las Tablas de Daimiel National Park. Spanish Ministry of Environment. 01/1999-12/2002. IP: M. Alvarez-Cobelas (CCMA-CSIC).
20. Scientific basis for the conservation of Castilla-La Mancha's wetlands (1FD97-1812). European Regional Development Funds (ERDF Program). 01/1999-12/2001. IP: M. Alvarez-Cobelas (CCMA-CSIC).
21. Physic and chemistry of water bodies at the Regional Southeast Park of the Madrid's Community. Environmental Council of the Madrid's Community, Spain. 01/1998-12/1999. IP: M. Alvarez-Cobelas (CCMA-CSIC).
22. Limnology and botany of Las Tablas de Daimiel National Park. Spanish Ministry of Environment. 01/1995-12/1998. IPs: S. Cirujano (RJB-CSIC) and M. Alvarez-Cobelas (CCMA-CSIC).
23. The Regional Southeast Park of Madrid: criteria for conservation, rehabilitation and management; Subproject 6: Aquatic ecology and pollution (AMB-COR-94/010-06). Research Area of the Education Council of Madrid's Community. 01/1994-12/1997. IPs: A. Sánchez-López and M. Alvarez-Cobelas (CCMA-CSIC).

Publications

Refereed journal, monographs and edited volume papers:

2018

88. Cervantes F.J., Rios-Del Toro E., Valenzuela E.I., López-Lozano N.E., Cortés-Martínez M.G., Sánchez-Rodríguez M.A., Calvario-Martínez O., Sánchez-Carrillo S. (*Submitted*). Anaerobic ammonium oxidation linked to sulfate and ferric iron reduction fuels nitrogen loss in marine sediments. *Biodegradation*.
87. Sánchez-Carrillo S., Garatuza-Payán J., Sánchez-Andrés R., Cervantes F.J., Bartolomé M.C. (*Submitted*). Methane production and oxidation in mangroves: a stable isotope mass balance approach. *Marine and Freshwater Research*.
86. Sánchez-Carrillo S., Álvarez-Cobelas M. 2018. Stable isotopes as tracers in aquatic ecosystems. *Environmental Reviews* 26: 69-81.
85. Angeler, D.G., Alvarez-Cobelas M., Sánchez-Carrillo, S. 2018. Sonifying social-ecological change: a wetland laments agricultural transformation. *Ecology and Society* 23: 20.
84. Sánchez-Carrillo S., Álvarez-Cobelas M., Angeler D.G., Serrano-Grijalva L., Sánchez-Andrés R., Cirujano S., Schmid T.F. 2018. Elevated atmospheric CO₂ increases root exudation of carbon in wetlands: results from the first free-air

- CO₂ enrichment facility (FACE) in a marshland. *Ecosystems* (DOI: 10.1007/s10021-017-0189-x).
83. Puche E., Sánchez-Carrillo S., Álvarez-Cobelas M., Pukacz A., Rodrigo M.A., Rojo C. 2018. Effects of overabundant nitrate and warmer temperatures on charophytes: The roles of plasticity and local adaptation. *Aquatic Botany* 146: 15-22.
 82. Sánchez-Carrillo S., Angeler D.G., Álvarez-Cobelas M., Rojo C. 2018. Abiotic drivers of consumer foodweb structure in lakes. *Freshwater Science* 37: 404-416.
 81. Feilhauer H., Schmid T., Faude U., Sánchez-Carrillo S. Cirujano S. 2018. Are remotely sensed traits suitable for ecological analysis? A case study of long-term drought effects on leaf mass per area of wetland vegetation. *Ecological Indicators* 88: 232-240.
 80. Alvarez-Cobelas M., Sánchez-Carrillo S., Rojo C. 2018. Biogeochemical decoupling: how, where and when? *PeerJ Preprints* 6: e26478v1.
 79. Sánchez-Carrillo S., Alvarez-Cobelas M. (Eds). 2018. *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 78. Sánchez-Carrillo S. 2018. Morfometría y batimetría. In: Sánchez-Carrillo S, Alvarez-Cobelas M. (Eds), *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 77. Sánchez-Carrillo S., Sánchez-Andrés R. 2018. Geología, geomorfología, paisaje vegetal y usos del suelo. In: Sánchez-Carrillo S., Alvarez-Cobelas M. (Eds), *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 76. Sánchez-Carrillo S. 2018. Hidrología e hidrogeología. In: Sánchez-Carrillo S., Alvarez-Cobelas M. (Eds), *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 75. Sánchez-Carrillo S. 2018. Dinámica de nutrientes. In: Sánchez-Carrillo S., Alvarez-Cobelas M. (Eds), *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 74. Alvarez-Cobelas M., Sánchez-Carrillo S., Rojo C. 2018. Síntesis. In: Sánchez-Carrillo S., Alvarez-Cobelas M. (Eds), *Ecología de la Laguna de Somolinos y su entorno: síntesis del conocimiento científico*. Editorial CSIC, Madrid. En prensa.
 73. Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds). 2018. *Ecología acuática de Madrid, parte I*. Editorial CSIC, Madrid. En prensa.
 72. Alvarez-Cobelas M., Sánchez-Carrillo S. 2018. Introducción. In: Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid, parte I*. Editorial CSIC, Madrid. En prensa.
 71. Sánchez-Carrillo S. 2018. El contexto geográfico, geológico y climático. In: Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid, parte I*. Editorial CSIC, Madrid. En prensa.
 70. Sánchez-Carrillo S. 2018. Síntesis hidrológica de Madrid. In: Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid, parte I*. Editorial CSIC, Madrid. En prensa.
 69. Alvarez-Cobelas M., Sánchez-Carrillo S. 2018. Física del agua. In: Alvarez-

- Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid*, parte I. Editorial CSIC, Madrid. En prensa.
68. Alvarez-Cobelas M., Sánchez-Carrillo S. 2018. Química de aguas y sedimentos. In: Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid*, parte I. Editorial CSIC, Madrid. En prensa.
67. Alvarez-Cobelas M., Sánchez-Carrillo S. 2018. Limnología aplicada. In: Alvarez-Cobelas M., Sánchez-Carrillo S. (Eds), *Ecología acuática de Madrid*, parte I. Editorial CSIC, Madrid. En prensa.

2016

66. Álvarez-Cobelas M., Sánchez-Carrillo S. 2016. Short-term nutrient fluxes of a groundwater-fed, flow-through lake. *Limnetica* 35: 143-158.
65. Serrano L., Sánchez-Carrillo S., Sánchez-Andrés R. Cirujano S. 2016. Registros de isótopos estables de ^{13}C y ^{15}N en las plantas acuáticas de las lagunas del Guadiana como indicadores de la degradación ambiental. In: S. Soriano, M. Álvarez-Cobelas (Eds), *Limnología de las Lagunas de la Cuenca del Guadiana*. Grupo de Investigación del Agua, Madrid. Serie Limnoiberia nº 10. pp. 259-320.
64. Sánchez-Carrillo S., Sánchez Andrés R., Segovia B., Serrano L. 2016. Geografía, clima, geología, hidrología y usos del suelo en la cuenca del Alto Guadiana y características hidrogeomorfológicas de las principales lagunas. In: S. Soriano, M. Álvarez-Cobelas (Eds), *Limnología de las Lagunas de la Cuenca del Guadiana*. Grupo de Investigación del Agua, Madrid. Serie Limnoiberia nº 10. pp. 13-44.
63. Bartolomé M.C., Cortés A.A., Sánchez-Fortún, A. Garnica-Romo M.G., Sánchez-Carrillo S., Sánchez-Fortún S. 2016. Morphological and physiological changes exhibited by a Cd-resistant *Dictyosphaerium chlorelloides* strain and its cadmium removal capacity. *International Journal of Phytoremediation* 18: 1171-1177.
62. Alatorre L.C., Sánchez-Carrillo S., Miramontes-Beltrán S., Medina R.J., Torres-Olave M.E., Bravo L.C., Wiebe L.C., Granados A., Adams D.K., Sanchez E., Uc M. 2016. Temporal changes of NDVI for qualitative environmental assessment of mangroves: Shrimp farming impact on the health decline of the arid mangroves in the Gulf of California (1990-2010). *Journal of Arid Environments* 125: 98-109.
61. Sánchez-Carrillo S., Álvarez-Cobelas M., Cirujano S., Carrasco M., Díaz-Cambronero A. 2016. La información a largo plazo como herramienta clave para la evaluación de los cambios ambientales en las Tablas de Daimiel: LTER-Daimiel. *Ecosistemas* 25: 4-8.

2015

60. Sánchez-Carrillo S., Morea R., Serrano-Grijalva L., Sánchez-Andrés R., Meco A. 2015. A Free Air CO₂ Enrichment (FACE) facility in a wetland to study the effects of elevated atmospheric carbon dioxide: system description and performance. *Wetlands* 35:193-205.

2013

59. Angeler D.G., Allen C.R., Alvarez-Cobelas M., Rojo C., Rodrigo M.A., Sánchez-Carrillo S. 2013. Inferring the relative resilience of alternative states. *PlosONE* 8-10: e77338.
58. Fernández-Zamudio R., Cirujano S., Sánchez-Carrillo S., Meco A., García-Murillo P. 2013. Clonal reproduction of *Azolla filiculoides* Lam.: implications for invasiveness. *Limnetica* 32: 245-252.
57. Sánchez-Carrillo S., Reddy K.R., Inglett K.S., Álvarez-Cobelas M., Sánchez-Andrés R. 2013. Biogeochemical indicators of nutrient enrichments in wetlands: the microbial response as a sensitive indicator of wetland eutrophication. A.A. Ansari, S. Singh Gill (Eds), *Eutrophication: causes, consequences and control*, Vol. 2, Springer, Dordrecht. pp. 203-222.

2012

56. Álvarez-Cobelas M., Angeler D.G., Sánchez-Carrillo S., Almendros G. 2012. A worldwide view of organic carbon export from catchments, with considerations on the stoichiometry of export. *Biogeochemistry* 275-293.

2011

55. Serrano-Grijalva L., Sánchez-Carrillo S., Angeler D.G., Sánchez-Andrés R., Álvarez-Cobelas M. 2011. Effects of shrimp-farm effluents on the food web structure in subtropical coastal lagoons. *Journal of Experimental Marine Biology and Ecology* 402: 65–74.
54. Alatorre L.C., Sánchez-Andrés R., Cirujano S., Beguería S., Sánchez-Carrillo S. 2011. Identification of mangrove areas by remote sensing: the ROC curve technique applied to the northwestern Mexico coastal zone using Landsat imagery. *Remote Sensing* 3: 1568-1583.
53. Sánchez-Carrillo S., Angeler D.G., Álvarez-Cobelas M., Sánchez-Andrés R. 2011. Freshwater wetland eutrophication. In: A.A. Ansari, S. Singh Gill, G.R. Lanza, W. Rast (Eds), *Eutrophication: causes, consequences and control*. Springer, Dordrecht. pp: 195-210.
52. Álvarez-Cobelas M., Sánchez-Carrillo S., Rubio-Olmo A., Cirujano S. 2011. Effects of waste water on freshwaters in semi-arid regions. In: F.S. García Einschlag (Ed), *Waste water: evaluation and management*. InTech, Rijeka. pp. 219-238.
51. Schmid T., Fellhauer H., Faude U., Cirujano S., Sánchez-Andrés R., Sierra M.J., Rodríguez M., Sánchez-Carrillo S. 2011. Application of imaging spectroscopy to map indicator plant species for wetland degradation in Las Tablas de Daimiel National Park. *Third International Symposium on Recent Advances in Quantitative Remote Sensing*. Universitat de Valencia, Valencia. pp. 181-187.

2010

50. Alvarez-Cobelas M., Sánchez-Andrés R., Sánchez-Carrillo S., Angeler D.G. 2010. Nutrient contents and export from streams in semiarid catchments of Central Spain. *Journal of Arid Environments* 74: 933-945.
49. Sánchez-Andrés R., Sánchez-Carrillo S., Ortiz-Llorente M.J., Alvarez-Cobelas

- M., Cirujano S. 2010. Do changes in flood pulse duration disturb soil carbon dioxide emissions in semi-arid floodplains? *Biogeochemistry* 101: 257–267.
48. Sánchez-Andrés R., Sánchez-Carrillo S., Alatorre L.C., Alvarez-Cobelas M., Cirujano, S. 2010. Litterfall dynamics and nutrient decomposition of arid mangroves in the Gulf of California: Their role sustaining ecosystem heterotrophy. *Estuarine Coastal and Shelf Science* 89: 191-199.
 47. Angeler D.G., Álvarez-Cobelas M., Rojo C., Sánchez-Carrillo S. 2010. Phytoplankton community similarity in a semiarid floodplain under contrasting hydrological connectivity regimes. *Ecological Research* 25: 513-520.
 46. Sánchez-Carrillo S., Angeler D.G. (Eds). 2010. *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. 293 pp.
 45. Sánchez-Carrillo S., Álvarez-Cobelas M. 2010. Climate and hydrologic trends: climate change versus hydrologic overexploitation as determinants of the fluctuating wetland hydrology. In: S. Sánchez-Carrillo, D.G. Angeler (Eds), *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. pp. 45-84.
 44. Sánchez-Andrés R., Viedma M.O., Sánchez-Carrillo S. 2010. The effects of anthropogenic stressors on wetland loss and habitat quality deterioration in the Upper Guadiana River Basin: a long-term assessment (1970–2000). In: S. Sánchez-Carrillo, D.G. Angeler (Eds), *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. pp. 85-108.
 43. Angeler D.G., Sánchez-Carrillo S. 2010. Synthesis: the past, present and future of Las Tablas de Daimiel. In: S. Sánchez-Carrillo, D.G. Angeler (Eds), *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. pp. 257-278.
 42. Sánchez-Carrillo S., Angeler D.G., Cirujano S., Álvarez-Cobelas M. 2010. The wetland, its catchment settings and socioeconomic relevance: an overview. In: S. Sánchez-Carrillo, D.G. Angeler (Eds), *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. pp. 3-20.
 41. Álvarez-Cobelas M., Sánchez-Carrillo S., Cirujano S., Angeler, D.G. 2010. A story of the wetland water quality deterioration: salinization, pollution, eutrophication and siltation. In: S. Sánchez-Carrillo, D.G. Angeler (Eds), *Ecology of Threatened Semi-Arid Wetlands: Long-term research in Las Tablas de Daimiel*. Springer, Series Wetlands: Ecology, Conservation and Management, Volume 2, Dordrecht. pp. 109-133.

2009

40. Alvarez-Cobelas, M., Sánchez-Carrillo, S., Angeler, D.G. 2009. Phosphorus export from catchments: a global view. *Journal of North American*

- Benthological Society 28: 805-820.
39. Angeler D.G., Alvarez-Cobelas M., Sánchez-Carrillo S. 2009. Evaluating environmental conditions of a temporary pond complex using rotifer emergence from dry soils. *Ecological Indicators* 10: 545-549.
 38. Sánchez-Carrillo, S. 2009. Hydrology and biogeochemistry of Mediterranean temporary ponds. In: P Fraga (Ed), *Mediterranean Temporary Ponds*. Consell Insular de Menorca, Maó. pp. 73-82.
 37. Sánchez-Carrillo S., Sánchez-Andrés R., Alatorre L.C., Angeler D.G., Alvarez-Cobelas M., Arreola-Lizárraga A. 2009. Nutrient fluxes in a semi-arid microtidal mangrove wetland in the Gulf of California. *Estuarine, Coastal and Shelf Science* 82: 654-662.
 36. Fernández A.I., Viedma O., Sánchez-Carrillo S., Alvarez-Cobelas M., Angeler D.G. 2009. Local and landscape effects on temporary pond zooplankton egg banks: conservation implications. *Biodiversity and Conservation* 18: 2373-2386.
 35. Cirujano S., Álvarez-Cobelas M., Sánchez-Carrillo S., Angeler D.G., García-Murillo P. 2009. Wetland management in Spain: a history of controversial conservation. In: R.E. Russo (Ed), *Wetlands: Ecology, Conservation & Restoration*. Nova Science Publishers, Inc., New York. pp. 1-15.

2008

34. Sánchez-Carrillo, S., Álvarez-Yépez, J.C. 2008. Viabilidad de los manglares artificiales como sistemas de tratamiento de los efluentes camaronícolas en Latinoamérica. *Revista Latinoamericana de Recursos Naturales* 4: 17-30.
33. Alvarez-Cobelas M., Angeler D.G., Sánchez-Carrillo S. 2008. Export of nitrogen from catchments: a world-wide analysis. *Environmental Pollution* 156: 261-269.
32. Alvarez-Cobelas M., Sánchez-Carrillo S., Cirujano S., Angeler D.G. 2008. Long-term changes in spatial patterns of emergent vegetation in a mediterranean floodplain: natural vs anthropogenic constraints. *Plant Ecology* 194: 257-271.
31. Angeler D.G., Viedma O., Sánchez-Carrillo S., Alvarez-Cobelas M. 2008. Conservation issues of temporary wetland Branchiopoda (Anostraca, Notostraca: Crustacea) in a semiarid agricultural landscape: what spatial scales are relevant? *Biological Conservation* 141: 1224-1234.
30. Angeler D.G., Viedma O., Cirujano S., Alvarez-Cobelas M., Sánchez-Carrillo S. 2008. Microinvertebrate and plant beta diversity in dry soils of a semiarid agricultural wetland complex. *Marine and Freshwater Research* 59: 418-428.

2007

29. Alvarez-Cobelas M., Sánchez-Carrillo S., Cirujano S. 2007. Strong local effects dictate nutrient patterns in a Mediterranean floodplain wetland. *Wetlands* 27: 326-336.
28. Angeler D.G., Sánchez-Carrillo S., Rodrigo M.A., Rojo C., Alvarez-Cobelas M. 2007. Does seston size structure reflect fish-mediated effects on water quality in a degraded semiarid wetland? *Environmental Monitoring and Assessment* 125: 9-17.
27. Sánchez-Carrillo S., Alatorre L.C., Sánchez-Andrés R., Garatuza-Payán J. 2007.

- Eutrophication and sedimentation patterns in complete exploitation of water resources scenarios: an example from Northwestern semi-arid Mexico. *Environmental Monitoring and Assessment* 132: 377-393.
26. Valenzuela-Siu M., Arreola-Lizárraga J.A., Sánchez-Carrillo S., Padilla-Arredondo G. 2007. Nutrient fluxes and net metabolism in Lobos coastal lagoon, Mexico. *Hidrobiologica* 17: 193-202.
 25. Sánchez-Andrés R., Sánchez-Carrillo S., Garatuza-Payán J., Alatorre L.C. 2007. Biofísica, socioeconomía y degradación del suelo en la Cuenca del Río Mátape: hacia un uso sostenible de los recursos naturales del Noroeste de México. Publison, Hermosillo. 265 pp.
 24. Angeler D.G., Boulton A.J., Jenkins K.M., Sánchez B., Alvarez-Cobelas M., Sánchez-Carrillo S. 2007. Alternative states and temporary wetlands: research opportunities for understanding effects of anthropogenic stress and natural disturbance. In: P.A. Clarkson (Ed), *Environmental Research Advances*. Nova Science Publishers, Inc., New York. pp. 5-17.

2006

23. Sánchez-Andrés R., Sánchez-Carrillo S., Sánchez A., Benítez M. 2006. Soil tillage induces differential morphometric responses and growth patterns in afforestation with *Quercus ilex*. *Soil and Tillage Research* 90: 50-62.

2005

22. Sanchez-Andres R., Sánchez-Carrillo S., Sánchez A., Benitez M. 2005. Efectos del manejo del suelo en la infiltración en una reforestación con *Quercus ilex* L. en un área semiárida de agricultura de temporal. *Revista Latinoamericana de Recursos Naturales* 1: 3-19.
21. Angeler D.G., Sánchez-Carrillo S., Rodrigo M.A., Viedma O., Alvarez-Cobelas M. 2005. On the importance of water depth, macrophytes and fish in wetland picocyanobacteria regulation. *Hydrobiologia* 549: 23-32.
20. Sánchez-Carrillo S., Sánchez-Andrés R., Garatuza-Payán J., Alatorre L.C. 2005. Coupling reservoir sedimentation rates with sediment yield predictions in a semi-arid ungauged watershed. In: *IAHS-SPECIAL ISSUE ON SEDIMENT BUDGET*. International Association of Hydrological Sciences, Wallingford. N-24. 7 pp.
19. Garatuza-Payán J., Sánchez-Andrés R., Sánchez-Carrillo S., Navarro J.M. 2005. Using remote sensing to investigate erosion rate variability in a semi-arid watershed, due to changes in vegetation cover. In: *IAHS-RED BOOK-SPECIAL ISSUE ON SEDIMENT BUDGET*, Vol. 2, IAHS Publ. 292. International Association of Hydrological Sciences, Wallingford. pp. 144-151.

2004

18. Sánchez-Carrillo S., Angeler D.G., Sánchez Andrés R., Alvarez Cobelas M., Garatuza-Payán J. 2004. Evapotranspiration in wetlands: relationships between inundation and the macrophyte cover:open water ratio. *Advances in Water Resources* 27: 643-655.

2003

17. Angeler D.G., Chow-Fraser P., Hanson M.A., Sánchez-Carrillo S., Zimmer K.D. 2003. Biomanipulation: a useful tool for freshwater wetland mitigation? *Freshwater Biology* 48: 2203-2213.
16. Angeler D.G., Sánchez-Carrillo S., Alvarez-Cobelas M., Cirujano S., Medina L. 2003. Exotic crayfish and its effects on water quality: preliminary implications for the alternative stable equilibria in Mediterranean wetlands. *Journal of Mediterranean Ecology* 4: 13-21.

2002

15. Angeler D.G., Alvarez-Cobelas M., Sánchez-Carrillo S., Rodrigo M.A. 2002. Assessment of exotic fish impacts on water quality and zooplankton in a semiarid floodplain wetland. *Aquatic Sciences* 64: 76-86.
14. Angeler D.G., Rodrigo M.A., Sánchez-Carrillo S., Alvarez-Cobelas M. 2002. Effects of hydrologically confined fishes on bacterioplankton and autotrophic picoplankton in a semi-arid marsh. *Aquatic Microbial Ecology* 29: 307-312.

2001

13. Sánchez-Carrillo S., Alvarez-Cobelas M., Angeler D.G. 2001. Sedimentation in the semi-arid freshwater wetland Las Tablas de Daimiel (Spain). *Wetlands* 21: 67-79.
12. Sánchez-Carrillo S., Alvarez-Cobelas M. 2001. Nutrient dynamics and eutrophication patterns in a semiarid wetland: the effects of fluctuating hydrology. *Water, Air and Soil Pollution* 131: 97-118.
11. Sánchez-Carrillo S. 2001. Los oceanógrafos españoles en el exilio: la Familia De Buen y sus aportaciones a la ciencia española y mexicana. In: A. Sánchez Andrés, S. Figueroa (Eds), De Madrid a México, El exilio español y su impacto sobre el pensamiento, la ciencia y el sistema educativo mexicano. Universidad Michoacana de San Nicolás de Hidalgo-Consejería de Educación y Cultura de la Comunidad de Madrid, Morelia. pp. 161-207.
10. Alvarez-Cobelas M., Cirujano S., Sánchez-Carrillo S. 2001. Hydrological and botanical man-made changes in the Spanish wetland of Las Tablas de Daimiel. *Biological Conservation* 97: 89-98.
9. Sánchez-Carrillo S., Alvarez-Cobelas M., Angeler D.G., Benítez-Gilabert M. 2001. A simple method for estimating water loss by transpiration in wetlands. *Hydrological Sciences Journal* 46: 537-552.
8. Angeler D.G., Sánchez-Carrillo S., García G., Alvarez-Cobelas M. 2001. Effects of *Procambarus clarkii* (Cambaridae, Decapoda) on water quality and sediment characteristics in a semiarid floodplain wetland. *Hydrobiología* 464: 89-98.

2000

7. Sánchez-Carrillo S., Alvarez-Cobelas M., Cirujano S., Rojo C. 2000. Rainfall-driven changes in the biomass of a semi-arid wetland. *Verhandlungen der Internationalen Vereinigung für Limnologie* 27: 1690-1694.
6. Angeler D.G., Alvarez-Cobelas M., Rojo C., Sánchez-Carrillo S. 2000. The significance of water inputs and trophic relationships to plankton biomass in a

- semi-arid freshwater wetland (Central Spain). *Journal of Plankton Research* 22: 2075-2093.
5. Sánchez-Carrillo S., Alvarez-Cobelas M., Angeler D.G., Vizcaíno-Muñoz C. 2000. Tasas de acreción y características de los sedimentos actuales en Las Tablas de Daimiel (Ciudad Real). *Estudios Geológicos* 56: 239-250.
 4. Alvarez Cobelas M., Riobos P., Sánchez-Carrillo S., Himi Y., García-Avilés J., Hidalgo J. 2000. Estudio físico-químico de los ambientes estancados del Parque Regional del Sureste de la Comunidad Autónoma de Madrid. *Consejería de Medio Ambiente de la Comunidad de Madrid, Madrid*. 67 pp.

1998

3. Sánchez-Carrillo S. 1998. Geología y Geomorfología del Parque Nacional de Las Tablas de Daimiel. In: *Parque Nacional de Las Tablas de Daimiel*. Esfagnos, Toledo. pp. 22-46.
2. Alvarez-Cobelas M. Sánchez-Carrillo S. 1998. Clima. In: *Parque Nacional de Las Tablas de Daimiel*. Esfagnos, Toledo. pp. 68-80.
1. Sánchez-Carrillo S. Hidrología y Sedimentología del Parque Nacional de las Tablas de Daimiel. 1998. In: Alvarez-Cobelas M. (Ed), *Investigadores Predoctorales del CSIC*. CSIC, Madrid. pp. 141-146.

Other non-refereed contributions:

8. Sánchez-Carrillo S., Ayala J.L., Alvarez-Cobelas M. 2015. Laboratorio de biogeoquímica: un espacio dedicado al estudio de los ecosistemas. *Naturalmente* 5: 10-15.
7. Sánchez-Carrillo S. 2014. La Laguna de Somolinos: una joya natural al servicio de la humanidad. *La Pizarra de la Sierra Norte* 8: 17-19.
6. Pérez-Olmedilla M., Sánchez-Carrillo S., Rojo C. 2000. Función depuradora de los humedales II: Una revisión bibliográfica sobre el papel del sedimento. *Humedales Mediterráneos* 1: 123-130.
5. Alvarez-Cobelas, M., Cirujano S., Rojo, C. Sánchez Carrillo S., Angeler D.G., Riobos P., Rodrigo M.A. & Ortega E. 2000. Las Tablas de Daimiel: Pasado, presente y futuro de un humedal europeo. *Quercus* 178: 16-24.
4. Alvarez-Cobelas M., P. Riobos, Sánchez-Carrillo S.y Y. Himi. 1998. La calidad de las aguas en el Parque Regional del Sureste de la Comunidad Autónoma de Madrid. *Retema* 11: 17-27.
3. Alvarez-Cobelas M., Sánchez-Carrillo S.y Y. Himi. 1998. Evaluación de los planes de saneamiento en la Comunidad Autónoma de Madrid. Efectos sobre la calidad de las aguas de los ríos. *Tecnoambiente* 84: 5-8.
2. Alvarez-Cobelas M., Y. Himi, Sánchez-Carrillo S.y P. Riobos. 1998. Un estudio del CSIC refleja la grave contaminación del Parque del Sureste. *Quercus* 154: 54-55.
1. Sánchez Carrillo S., Alvarez-Cobelas M. 1998. La contaminación de las aguas por actividades agrícolas: sedimentos y compuestos químicos. *Riegos y Drenajes XXI* 14: 35-39.

Abstracts:

1. S. Sánchez Carrillo. 1998. La contaminación en el humedal de las Tablas de Daimiel (España). I Congreso Ibérico de Limnología (IX Congreso Español de Limnología), Evora, Portugal, June 1998.
2. S. Sánchez Carrillo, M. Alvarez Cobelas y S. Cirujano. 1998. Rainfall-driven changes in the biomass of a semiarid wetland. XXVII SIL Congress (Society International of Limnology), Dublin, Ireland, August 1998.
3. S. Sánchez Carrillo y D.G. Angeler. 2000. Los recursos hídricos como clave para asegurar la supervivencia de Las Tablas de Daimiel. II Congreso Ibérico de Limnología (X Congreso Español de Limnología), Valencia, Spain, June 2000.
4. D.G. Angeler y S. Sánchez Carrillo. 2000. Exclusión de peces exóticos para mejorar la calidad del agua en el P. N. Las Tablas de Daimiel. II Congreso Ibérico de Limnología (X Congreso Español de Limnología), Valencia, Spain, June 2000.
5. M. Alvarez Cobelas, S. Cirujano, L. Medina, S. Sánchez Carrillo, D. Angeler, P. Riobos, C. Rojo, M.A. Rodrigo, E. Ortega. 2000. Las Tablas de Daimiel: ¿ecosistema estresado o nuevo ecosistema?. II Congreso Ibérico de Limnología (X Congreso Español de Limnología), Valencia, Spain, June 2000.
6. M. Alvarez, M.A. Rodrigo, C. Rojo y S. Sánchez Carrillo. 2000. Variations in bacteria and picoplankton biomass with the hidrological regime in a semi-arid wetland. Society of Wetland Scientifics - Millenium Wetland Event, Quebec, Canada, June 2000.
7. D.G. Angeler, M. Alvarez, M.A. Rodrigo y S. Sánchez Carrillo. 2000. Wetland in semi-arid Europe: how to cope with eutrophication. Society of Wetland Scientifics - Millenium Wetland Event, Quebec, Canada, June 2000.
8. S. Sánchez Carrillo. 2001. Un sencillo método para estimar la transpiración en humedales. Unión Geofísica Mexicana, Reunión Anual 2001, Puerto Vallarta, Mexico, October 2001.
9. D.G. Angeler, S. Sánchez Carrillo, M. Alvarez, y M.A. Rodrigo. 2002. ¿Qué factores determinan la dinámica de la comunidad picoplanctonica en un humedal Mediterraneo?. III Congreso Ibérico de Limnología (XI Congreso Español de Limnología), Madrid, Spain, June 2002.
10. S. Sánchez Carrillo, M. Benítez Gilabert y D.G. Angeler. 2002. Una nueva metodología para estimar transpiración en humedales. I Jornadas de Investigación en Ciencias del Agua, Ciudad Obregón, Mexico, March 2002.
11. S. Sánchez Carrillo, M. Álvarez Cobelas y D.G. Angeler. 2002. Carga interna y efectos en la eutrofización de los ecosistemas húmedos fluctuantes. I Jornadas de Investigación en Ciencias del Agua, Ciudad Obregón, Mexico.
12. S. Sánchez Carrillo, D.G. Angeler y M. Álvarez Cobelas. 2002. Características y evolución de la sedimentación de un humedal semiárido sometido a estrés hídrico. I Jornadas de Investigación en Ciencias del Agua, Ciudad Obregón, Mexico, March 2002.
13. S. Sánchez Carrillo, M. Álvarez Cobelas, S. Cirujano y C. Rojo. 2002. Control hidrológico de la biomasa de los humedales semiáridos. I Jornadas de Investigación en Ciencias del Agua, Ciudad Obregón, Mexico, March 2002.
14. S. Sánchez Carrillo, D. Encinas y D.G. Angeler. 2002. Variación de los flujos de calor en un humedal semiárido. I Jornadas de Investigación en Ciencias del Agua, Ciudad Obregón, Mexico, March 2002.

15. S. Sánchez Carrillo, J. Garatuza Payán, R. Sánchez Andrés y M. Barajas. 2003. Frecuencia de errores en el cociente de Bowen asociados a la variabilidad hidrológica de los ambientes semiáridos. Unión Geofísica Mexicana, Reunión Anual 2003, Puerto Vallarta, Mexico, October 2003.
16. R. Sánchez Andrés, J. Garatuza Payán y S. Sánchez Carrillo. 2003. Estimación del factor erosividad de la lluvia (R_RUSLE) en una cuenca semiárida a partir del volumen total de precipitación diaria. Unión Geofísica Mexicana, Reunión Anual 2003, Puerto Vallarta, Mexico, October 2003.
17. R. Sánchez Andrés, S. Sánchez Carrillo y J. Garatuza Payan. 2003. Aplicación de la ecuación universal de pérdida de suelo (RUSLE) en la cuenca del Río Yaqui. Sociedad Latinoamericana de Percepción Remota SELPER, Reunión 2003, Puerto Vallarta, Mexico, October 2003.
18. J. Garatuza Payan, R. Sánchez Andrés, S. Sánchez Carrillo y J.M. Navarro. 2003. Evaluación del riesgo de erosión mediante RUSLE y SIG en una cuenca de ambiente semiárido: obtención del factor cobertura vegetal. Sociedad Latinoamericana de Percepción Remota SELPER, Reunión 2003, Puerto Vallarta, Mexico, October 2003.
19. S. Sánchez-Carrillo, R. Sánchez-Andrés, J. Garatuza-Payán, L.C. Alatorre. 2005. Coupling Reservoir Sedimentation Rates With Sediment Yield Predictions In A Semi-Arid Ungauged Watershed. Seventh International Association Of Hydrological Sciences Scientific Assembly, Sediment Budget Session, Foz De Iguazu, Brasil, May 2005.
20. J. Garatuza-Payán, R. Sánchez-Andrés, S. Sánchez-Carrillo, J. M. Navarro. 2005. Using Remote Sensing To Investigate Erosion Rate Variability In a Semi-Arid Watershed, Due To Changes In Vegetation Cover. Seventh International Association Of Hydrological Sciences Scientific Assembly, Sediment Budget Session, Foz De Iguazu, Brasil, May 2005.
21. R. Sánchez-Andrés, S. Sánchez-Carrillo, J. Garatuza-Payán. 2005. Analysis and modelling of the relationships between rainfall intensity, storm duration and sediment yield in a semi-arid unged basin from northwest Mexico. Seventh International Association Of Hydrological Sciences Scientific Assembly, Sediment Budget Session, Foz De Iguazu, Brasil, May 2005.
22. S. Sánchez-Carrillo, R. Sánchez-Andrés, L.C. Alatorre Y G.N. Leyva-García. 2006. Estimación de las tasas de erosión en la cuenca semiárida del río mátape (sonora) mediante ensayos de simulación de lluvia. V Reunión Nacional De Ciencias De La Tierra. Sociedad Geológica Mexicana, Puebla, México, May 2006.
23. S. Sánchez-Carrillo, R. Sánchez-Andrés, D.G. Angeler Y M. Álvarez-Cobelas. 2008. Is Nutrient Outwelling A Common Feature Of Semiarid Mangrove Wetlands?. XIV Congreso De La Asociación Ibérica De Limnología, Huelva, September 2008.
24. S. Sánchez-Carrillo, R. Sánchez-Andrés, S. Cirujano & C. Lacasta. 2009. Do changes on flood pulse frequency disturb soil carbon dioxide emissions in floodplains? 6th International Symposium on Ecosystem Behavior BIOGEOMON'2009, Finland, July 2009.
25. Sánchez-Carrillo, S., Sánchez-Andrés, R., Serrano-Grijalva, L., Ortiz-Llorente, M.J., Morea, R., Meco, A., Rodríguez-Murillo, J.C., Álvarez-Cobelas, M., Cirujano, S., Angeler, D.G. 2010. A Free-Air Enrichment Facility (FACE) for Exposing Wetland

- Ecosystems to Elevated Atmospheric Carbon Dioxide. XV Congreso de la Asociación Ibérica de Limnología, Ponta Delgada, Azores, July 2010.
26. Ruiz-Jiménez C, Sánchez-Carrillo S. 2012. Food web ecology of a small lake in central Spain using stable isotopes. XVI Congreso de la Asociación Ibérica de Limnología, Guimaraes, Portugal, July 2010.
 27. Ruiz-Jiménez C, Sánchez-Carrillo S. 2014. Reach-scale ^{15}N tracer addition experiment to quantify nitrogen dynamics in a nitrate-rich stream. XVII Congreso de la Asociación Ibérica de Limnología, Santander, July 2014.
 28. Ruiz-Jiménez C, Hernández-Del Amo E, Bañeras L, Sánchez-Carrillo S. 2015. Towards an understanding of the N transformation in lakes: a ^{15}N reach-scale enrichment and N cycling functional genes quantification in an oligotrophic lake. ASLO Aquatic Science Meeting, Granada, February 2015.
 29. Sánchez-Carrillo S, Alvarez-Cobelas M. 2016. Cambios extremos y su significado en la evolución a largo plazo de los ecosistemas. Annual Meeting of LTER-Spain, Valsaín (Spain), June 2016.
 30. Alatorre LC, Sánchez-Carrillo S. 2016. Shrimp farming impact on mangrove areas in the Gulf of California (1990-2010): temporal changes on NDVI. XVII International Symposium SELPER, Iguazú (Argentina), November 2016
 31. Sánchez-Carrillo S, Garatuza-Payán J, Sánchez-Andrés R, Vega M, Rivera MA, Encinas DH, Bartolomé C. 2018. Metanogénesis en los manglares áridos del noreste de México mediante un balance isotópico de masas. IX Simposio Internacional del Carbono en México, Programa Mexicano del Carbono, Álamos (Mexico), May 2018.
 32. Puche E, González A, Martínez R., Martínez N, Sánchez-Carrillo S, Álvarez-Cobelas M, Rodrigo MA, Rojo C. 2018. Modulation of the horizontal food web mediated by the response of charophytes to global change stressors: a mesocosm experiment. XIX Congreso de la Asociación Ibérica de Limnología, Coimbra (Portugal), June 2018
 33. Sánchez-Carrillo S, Puche E, Bañeras LI, Rodrigo MA, Rojo C, & Alvarez-Cobelas M. 2018. Global change, macrophytes and aquatic N cycle: an experimental approach. Congreso AQUATROP-2018, Quito (Ecuador), July 2018.
 34. Feilhauer H., Schmid T., Faude U., Sánchez-Carrillo S., Cirujano S. 2018. Spatial patterns of Leaf Mass per Area of wetland vegetation under water stress analyzed with imaging spectroscopy. 10th International Conference on Ecological Informatics. Jena, September 2018.

Invited Lectures

1. The rol of Spanish civil war exiled on the development of aquatic sciences in Mexico. Universidad Michoacana de San Nicolás de Hidalgo at the International Conference: Mexico in the context of the international relationships. November 2001 in Morelia, (Michoacan, Mexico).

2. On the function and structure of coastal wetlands in subtropical regions. Instituto Tecnológico de Sonora organized by the Department of Water Sciences and Environment. April 2003 in Ciudad Obregón (Sonora, Mexico).
3. The future of the scientific research on the Sonoran Coastal wetlands: characterization and monitoring needs to improve management and conservation. X Anniversary of the Center for Biological Research in the Northwest (Centro de Investigaciones Biológicas del Noroeste-CIBNOR). November 2003 in Guaymas (Sonora, Mexico).
4. Some highlights on the ecohydrology of semi-arid wetlands. Instituto Tecnológico Agropecuario 21. March 2004 in BÁCUM (Sonora, Mexico)
5. Climate change effects on the Spanish aquatic ecosystems. Conference on Water and Climate Change organized by ADENEX-Ministry of Environment. October 23, 2007 in Cáceres (Spain).
6. Hydrology and nutrient biogeochemistry of Mediterranean temporary ponds. International Conference on Mediterranean Temporary Ponds. May 5, 2009 in Mahon (Menorca, Spain).
7. From prophecy to prediction: What changes due to climate change will occur in wetlands and what can managers do to alleviate them? International Conference on Wetland Management and Rehabilitation. April 28, 2011 in Almagro (Ciudad Real, Spain).
8. Effects of climate change in Las Tablas de Daimiel: preliminary results from a hard experiment. Conference on Las Tablas de Daimiel today organized by Las Tablas de Daimiel National Park Authority. June 11, 2013 in Daimiel (Ciudad Real, Spain).
9. Remote sensing of the effects of global change in the ecology and biogeochemistry of Las Tablas de Daimiel. Conference on Research in Spanish National Parks organized by the National Park Agency of the Spanish Ministry of Agriculture, Food and Environment. October 3, 2013 in Boí (Lleida, Spain) at the Headquarter of the Aiguestortes i Estany de Sant Maurici National Park.
10. About the functioning of Somolinos Lake: water and nutrients. Conference on Somolinos Lake: values and functions organized jointly by the Somolinos and Campisábalos Municipalities. May 9 2014 in Campisábalos (Guadalajara, Spain).
11. The wetlands and the CO₂ rise: assessing the response of vegetation in a very complex environment. Conference on the Environmental ScienceWeek organized by the Faculty on Environmental Engineering of the Instituto Tecnológico de Sonora. March 18 2016 in Ciudad Obregon (Mexico).

Advising experience

PhD dissertations:

1. Celia Ruiz Jiménez (2015). The use of stable isotopes to assess food web structure and nitrogen dynamics in freshwaters. PhD on Ecology, Universidad Autónoma de Madrid.

2. Lilia Serrano Grijalva (2015). Global change effects on the structure of the aquatic ecosystems. PhD on Ecology, Universidad Autónoma de Madrid.

Master theses:

1. Luis C. Alatorre. (2004). Efectos del descenso del nivel de agua en la dinámica de nutrientes y la sedimentación en un embalse semiárido con influencia subtropical del Noroeste de México. MEng on Water Resources Management, Instituto Tecnológico de Sonora, Mexico.
2. Francisco J. Leyva. (2007). Balance de materia en un humedal costero del Mar de Cortés. MSc on Natural Resources, Instituto Tecnológico de Sonora, Mexico.
3. Lilia Serrano. (2008). Efectos de la degradación ambiental en la red trófica de los manglares del Mar de Cortés a través del análisis de isótopos estables de C y N. MSc on Natural Resources, Instituto Tecnológico de Sonora, Mexico.
4. Jorge Cordero Elvia (2011). El rol de los procesos microbianos como indicadores de eutrofización en humedales: herramientas para la detección de los efectos del cambio global en los procesos biogeoquímicos. MSc on Global Change, Menéndez Pelayo International University -CSIC.
5. Carlos Menor Salazar (2013). Methane dynamics in wetland sediments under anaerobic conditions. European Master of Inland Water Quality Assessment, Autonomous University of Madrid and Mälardalen University.
6. León R. Gómez Aguilar (2013). Características estructurales de los bosques de manglar del noroeste de México. MSc on Ecology, Autonomous University of Madrid.
7. Angelina Borobia Canadell (2013). Dinámica de nutrientes y metabolismo de los sistemas fluviales efímeros alterados de la meseta central: un caso de estudio en un arroyo de la cuenca del río Alberche (Toledo). MSc on Ecology, Autonomous University of Madrid.
8. Manuel Barajas Villalba (2016). Tasas de evaporación en el embalse de Alvaro Obregón (Sonora, México) por el método del cociente de Bowen y comparación con otros modelos de estimación. MEng on Water Resources Management, Instituto Tecnológico de Sonora, Mexico.

Graduate theses:

1. Roberto Silveyra Muñoz. (2004). Mapping and inventory of the Fuerte delta subtropical coastal wetlands. Civil Engineering at the Instituto Tecnológico de Sonora, Mexico.
2. Francisco J. Leyva Orduño. (2004). Mapping and inventory of the subtropical coastal wetlands at the Fuerte river mouth. Civil Engineering at the Instituto Tecnológico de Sonora, Mexico.
3. Jesús A. Iglesias Carracosa (2013). Efectos del incremento del CO₂ atmosférico en la biogeoquímica del C, N y P de los suelos de las Tablas de Daimiel. Environmental Sciences at the University Rey Juan Carlos I, Madrid, Spain.
4. Adrián Carrero del Tío (2013). Efectos del incremento del CO₂ atmosférico en la actividad fotosintética del carrizo (*Phragmites australis*). Environmental Sciences at the University Rey Juan Carlos I, Madrid, Spain.

5. Francisco B. Segovia Gilsanz (2014). Reconstrucción del área ocupada por los humedales de llanura de inundación en los ríos Cigüela y Záncara. Environmental Sciences at the University Rey Juan Carlos I, Madrid, Spain.

Teaching experience

1. Postgraduate courses:
 - a) *Courses at the Center for Environmental Sciences, CSIC, Madrid, Spain (1996-2001):*
Restoration of degraded ecosystems (1996), Water and soil environmental analyses (1996), Soil decontamination (1997, 1998, 1999), Restoration of degraded landscapes (1998), Environmental agents (1999, 2000), Degradation of natural areas: problems and responses (2001), Environmental modeling (1999, 2000, 2001).
 - b) *Courses at Universidad Carlos III, Madrid, Spain (1997-98):*
Methods for soil protection and recovery (1997, 1998).
 - c) *Courses at Toledo Chamber of Commerce, Toledo, Spain (1998):*
Soil and water degradation, Master of the Environment
 - d) *Courses at ITSON Ciudad Obregón, Sonora, Mexico (2001-2007):*
Master Engineering Program on Management and Planning of Water Resources: Water resources management (2001, 2002, 2003), Modeling the hydrological systems (2002, 2003), Scientific methods (2004)
Master Science Program on Natural Resources:
 - e) *Courses at Menéndez Pelayo International University (UIMP), in Palma de Mallorca, Spain (2009 to 2014):*
Master on Global change (UIMP-CSIC): Global change effects on watershed hydrology and biogeochemistry.
2. Undergraduate courses:
 - a) *Courses at ITSON, Ciudad Obregón, Sonora, Mexico (2002-2007):*
Environmental Engineering Program: Environmental awareness (2002-2007), Geology (2006, 2007), Geomorphology (2006, 2007), Ecology (2007).

Editorial experience

Editor-in-chief of the International Journal “*Revista Latinoamericana de Recursos Naturales*” (2005-2010).

Associate editor of:

- PeerJ (*O’Reilly Media and O’Reilly Alpha Tech Ventures, USA*). Since 2017. IF: 2.2
- The Open Environmental Pollution & Toxicology Journal (*Bentham Science Publishers Ltd, USA*). Since 2008.
- ISRN Ecology and International Scholarly Research Notices (*Hindawi Publishing Corporation, Egypt*). 2010-2017.
- Revista Latinoamericana de Recursos Naturales (*Instituto Tecnológico de Sonora, Mexico*). Since 2005.

Grant evaluation experience

Grant evaluation in national programs of Spain (ANEP, Ministry of Education, Ministry of Science and Innovation, Ministry of Environment), Mexico (CONACYT and SEMARNAT), Argentina (CONICET) and European Union (ERA-Net BIODIVERSA2011)