



Fernando Manzano Muñoz

Nationality: Spanish

Phone: (+34) 679019545

Date of birth: 24/11/1982

Gender: Male

Email address: fmanzano@puertos.es

Address: Madrid (Spain)

WORK EXPERIENCE

Senior consultant

Puertos del Estado (Nologin) [04/2018 – Current]

City: Madrid

Country: Spain

Name of unit or department: Physical Environment - **Business or sector:** Professional, scientific and technical activities

Copernicus service: Co-responsible for the IBI region (Iberia-Biscay-Ireland) of CMEMS In Situ TAC. Development and management of data operational chain in the IBI region. Data treatment procedures: acquisition, quality control, NetCDF (OceanSITES - Instac) generation, synchronization with partners from overlapping regions (Ifremer, BSH, HCMR), visualization, comparison, and monitoring tools. Improvements in the procedures and in the design of the data model. Alerts and tracking system supported by a NoSQL database. Development of transversal components. Co-leading the development of the In Situ TAC Website. Development of CMEMSInstac web tool for visualization of charts in Django and on-demand. Completion of the documentation associated with the CMEMS service: monthly and annual reports for Mercator Ocean International.

Physical Environment Area: Coordination of the update and optimization of the virtual servers of the area. Design of the alternative architecture that sends emails and receives data from the measurement networks in real-time. Improvements on SELENE (Software for Quality and Sea Level Filtering). CMEMSIngester: integration of European networks in Puertos del Estado database operationally. Support for the integration of SAMOA2 modules. Dockerization of different applications and management of automatic deployments with Jenkins.

Technologies Python, Django, Java, NetCDF, PHP, Javascript (Leaflet, Highcharts...), Shell (sh, bash), Fortran (f2py), XML, JSON, PostgreSQL, MongoDB, Git (and git-flow), Gitlab (and Github), Jenkins, Docker.

Head of Division

Puertos del Estado [10/2015 – 04/2018]

City: Madrid

Country: Spain

Name of unit or department: Physical Environment - **Business or sector:** Professional, scientific and technical activities

Copernicus service: Co-responsible for the IBI region (Iberia-Biscay-Ireland) of CMEMS In Situ TAC. Development and management of the data operational chain in the IBI region. Data treatment procedures: acquisition, quality control, NetCDF generation, visualization, comparison and monitoring tools. Development of NOSTROMO - the integrated management and monitoring system for the operations. Database engine migration from MySQL to PostgreSQL. Member of the technical board of the In Situ TAC. Completion of the documentation associated with the CMEMS service.

Physical Environment Area: SELENE - Maintenance and improvement of the software of quality control and sea level filtering. Various developments and maintenance of the department's software. Database administration support.

Technologies Python, Django, Java, NetCDF, Fortran (f2py), PHP, Javascript (Highcharts...), XML, JSON, PostgreSQL, MySQL.

Information Technology manager

Puertos del Estado (Fugro Norway) [12/2014 – 05/2015]

City: Madrid

Country: Spain

Name of unit or department: Physical Environment - **Business or sector:** Professional, scientific and technical activities

MyOcean Follow-on project: Co-responsible for the IBI region (Iberia-Biscay-Ireland) of MyOcean2. Development and management of data operations in the IBI region. Data acquisition procedures, quality control, NetCDF generation. Other In Situ TAC cross-cutting tools. Fulfilling of the documentation associated with the MyOcean project.

Physical Environment Area: Rediseño y optimización del algoritmo de detección de tsunamis.

Technologies Java, Python, NetCDF, PHP, Javascript, XML, JSON, INGRES, PostgreSQL, MySQL.

Information Technology manager

Puertos del Estado [09/2012 – 09/2014]

City: Madrid

Country: Spain

Name of unit or department: Physical Environment - **Business or sector:** Professional, scientific and technical activities

MyOcean project: Co-responsible for the IBI region (Iberia-Biscay-Ireland) of MyOcean2. Development and management of the data operational chain in the IBI region. Data acquisition procedures, quality control, NetCDF generation. Other In Situ TAC cross-cutting tools. Fulfilling of the documentation associated with the MyOcean project.

Physical Environment Area: Coordination of the redesign and restructuring of the oceanographic database of the department in Puertos del Estado. Migration of the database engine from Ingres to PostgreSQL. Development of GulpMail, an application for receiving data from the real-time observation networks of Puertos del Estado. Development of RedAlert, an alert generation system.

Technologies Java, Python, NetCDF, PHP, Javascript, XML, JSON, INGRES, PostreSQL, MySQL.

Analyst consultant

Ministry of Industry, Tourism and Trade (SATEC) [09/2009 – 09/2012]

City: Madrid

Country: Spain

Name of unit or department: Electronic invoicing - **Business or sector:** Professional, scientific and technical activities

Support and evolution of the Facturae format: Development and evolution of version 4.0 of the Facturae format, aligned with international standards (CEN BII, UNCEFACT CII...). Maintenance of Oracle database and Oracle Forms / Reports application.

Technologies Java, Hibernate, Struts, Spring, Oracle

Project manager

Ministry of Industry, Tourism and Trade (VASS) [01/2008 – 09/2009]

City: Madrid

Country: Spain

Name of unit or department: Electronic invoicing - **Business or sector:** Professional, scientific and technical activities

Facturae: Analysis, design, and programming of the official application for generating electronic invoices offered by the Ministry at the national level: Facturae.

Technologies Java, Hibernate, XML, advanced presentation logic.

Project manager

Telefónica (Telenium) [09/2007 – 01/2008]

City: Madrid

Country: Spain

E-Agora Portal: Leading the development team for the QJ User Management application, which manages the LDAP of the e-Agora Providers Portal, critical for Telefónica de España's business.

Programmer analyst

Telefónica (Telenium) [07/2005 – 09/2007]

City: Madrid

Country: Spain

E-Agora Portal: Responsible for the integration of applications in the Portal. Portal Administrator. Development of JSP and Java components on Vignette 7.

Technologies Java, JSP, Vignette

Programmer

National Centre for Supervision and Operations - CNSO (Axpe Consulting) [05/2004 – 08/2004]

City: Madrid

Country: Spain

PDSL Project: Support to CNSO as a PDSL expert to configure monitored tests.

Technologies Perl, OVIS (HP), Firehunter (Agilent), CitraTest (TEVRON)

Programmer / Integrator

Telefónica I+D [08/2003 – 07/2005]

City: Madrid

Country: Spain

PDSL Project: Solaris Systems Administrator. Management of ATG Dynamo eCommerce platform. Java and JSP developments (including "droplets").

Technologies Java, JSP, ATG Dynamo

EDUCATION AND TRAINING

Computer Science Engineering

Escuela Superior de Informática of Ciudad Real – Castilla-La Mancha University (UCLM) [2000 – 2005]

Level in EQF: EQF level 7

Thesis: PFC: Oracle Label Security code Generator for Secured Databases (with Honors)

Software Engineering, Advanced Programming, Concurrent Programming, Advanced Databases, Artificial Intelligence, Project Management.

LANGUAGE SKILLS

Mother tongue(s):

Spanish

Other language(s):

English

LISTENING C1 READING C2 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

French

LISTENING A1 READING A1 WRITING A1

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

DIGITAL SKILLS

Operating Systems

Linux (Debian, Fedora, Ubuntu) / Solaris / Windows / Sistema operativo macOS

Programming languages

Java / Python / C / PHP / ADA / .NET / Fortran / Shell Scripting / Perl / PLSQL

Frameworks

Spring / Django / JSF / FastAPI / AOP / Anaconda / Struts / Ibatis / Hibernate

Databases

PostgreSQL / Pgpool / Ingres / MySQL / Access / SQLServer / Oracle / MongoDB / Hsqldb

Code management and deployments

Git/Gitlab/Github / Dockers / Git-flow / Apache Maven / Subversion SVN / Jenkins

Data treatment

netCDF / XSLT, XML and XML Technologies / JSON / YAML

PUBLICATIONS

Copernicus Marine Service Ocean State Report, issue 2

[2018]

<https://doi.org/10.1080/1755876X.2018.1489208>

Journal of Operational Oceanography, 11:sup1, S1-S142, DOI: 10.1080/1755876X.2018.1489208

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Lessons Derived from Two High-Frequency Sea Level Events in the Atlantic: Implications for Coastal Risk Analysis and Tsunami Detection

[2016]

Frontiers in Marine Science.3:206

Pérez-Gómez, B, **Manzano-Muñoz F**, Alvarez-Fanjul E, González C, Cantavella JV, Schindelé F.

Copernicus Marine Service Ocean State Report, issue 1

[2016]

<http://dx.doi.org/10.1080/1755876X.2016.1273446>

Journal of Operational Oceanography, 9:sup2, s235-s320, DOI: 10.1080/1755876X.2016.1273446

Karina von Schuckmann, Pierre-Yves Le Traon, Enrique Alvarez-Fanjul, Lars Axell, Magdalena Balmaseda, Lars-Anders Breivik, Robert J. W. Brewin, Clement Bricaud, Marie Drevillon, Yann Drillet, Clotilde Dubois, Owen Embury, Hélène Etienne, Marcos García Sotillo, Gilles Garric, Florent Gasparin, Elodie Gutknecht, Stéphanie Guinehut, Fabrice Hernandez, Melanie Juza, Bengt Karlson, Gerasimos Korres, Jean-François Legeais, Bruno Levier, Vidar S. Lien, Rosemary Morrow, Giulio Notarstefano, Laurent Parent, Álvaro Pascual, Begoña Pérez-Gómez, Coralie Perruche, Nadia Pinardi, Andrea Pisano, Pierre-Marie Poulain, Isabelle M. Pujol, Roshin P. Raj, Urmas Raudsepp, Hervé Roquet, Annette Samuelsen, Shubha Sathyendranath, Jun She, Simona Simoncelli, Cosimo Solidoro, Jonathan Tinker, Joaquín Tintoré, Lena Viktorsson, Michael Ablain, Elin Almroth-Rosell, Antonio Bonaduce, Emanuela Clementi, Gianpiero Cossarini, Quentin Dagneaux, Charles Desportes, Stephen Dye, Claudia Fratianni, Simon Good, Eric Greiner, Jerome Gourrion, Mathieu Hamon, Jason Holt, Pat Hyder, John Kennedy, **Fernando Manzano-Muñoz**, Angélique Melet, Benoit Meyssignac, Sandrine Mulet, Bruno Buongiorno Nardelli, Enda O'Dea, Einar Olason, Aurélien Paulmier, Irene Pérez-González, Rebecca Reid, Marie-Fanny Racault, Dionysios E. Raitsos, Antonio Ramos, Peter Sykes, Tanguy Szekely & Nathalie Verbrugge

MyOcean In-Situ Thematic Centre: A service for operational Oceanography

[2014]

7th EuroGOOS Conference Proceedings .Lisboa, 28-30 October 2014. 5 p.

Pouliquen, S., Carval, T., Guillotin, D., Coatanoan, C., Loubrieu, T., Guyot, C., Szekely, T., Gourrion, J., Grouazel, A., Von Schuckmann, K., Wedhe, H., Ringheim, L. S., Hammarklint, T., Hartman, A., Soetje, K., Gies, T., Jandt, S., Muller, L., De Alfonso, M., **Manzano Muñoz, F.**, Perivoliotis, L., Kassis, D., Chalkiopoulos, A., Marinova, V., Jaccard, P., Ledang, A., Sorensen, K., Notarstefano, G., Tintore, J., Kaitala, S., Roiha, P., Rickards, L., Manzella, G., Reseghetti, F.

OPERATIONAL OCEANOGRAPHY

Ten years of experience in operational oceanography and more than twelve in data processing

The last 10 years of work experience have given me great knowledge in operational oceanography and in the processing of oceanographic data: physical data (waves, currents, temperature, salinity ...), meteorological data (wind, pressure, humidity ...), and biogeochemistry (oxygen, turbidity, chlorophyll ...). As part of the work carried out in this period: the acquisition of data from different types of stations (buoys, tide gauges, ships, radars, ARGOS, gliders ...) from different providers (Meteogalicia, IGN, Puertos del Estado, Instituto Hidrográfico, Marine Institute, NOC ...) of different nationalities (Spain, Portugal, France, UK, Ireland ...) with very different formats; automatic quality control and scientific validation of data, homogenization of information in a unique format and synchronization with other institutions.