

## **Curriculum vitae** (short)

### **Sandra Cristina Paul Fernandes Mesquita**

Portuguese. Born in 05.05.1971 in Luanda.

#### **Academic degrees**

Postgraduation course in Landscape Architecture and Urban Ecology, Instituto Superior de Agronomia (2010).

Master's degree in Geographic Information Systems, Instituto Superior Técnico (2005). Master's thesis on Spatial Interpolation of Bioclimatic Indexes for Continental Portugal.

Degree in Landscape Architecture, Instituto Superior de Agronomia (1997). Thesis on the Restoration of the plant component of Mafra Convent Garden (Jardim do Cerco).

#### **Professional degrees**

Professional Training Course on GIS – Quantum GIS, organized by “Giff” (October 2012).

Practical Course on Floristic and Phytossociology, organised by the Portuguese Phytossociology Association (Oct.1998); Introduction to Phytossociology Course, organised by the Agronomy Institute, (Feb., March, Apr. 2001); Advanced Course in Phytossociology, organized the Agronomy Institute, (July 2001).

Course "Natural Resources in Recreational Farms", by Landscape Architect Rita Therriaga, organized by the Casas de Fronteira e Alorna Foundation (November 1996).

Advanced Graduation Course in Photography, by the Portuguese Institute of Photography (1989-1991).

Certificate of Proficiency in English (grade B), by The British Council (1990).

#### **Other skills**

Mother tongue: Portuguese. Proficient user of the English language. Basic user of Spanish and French.

Excellent command of word processing and spreadsheet software (MS Office; OpenOffice), geographic information systems (ArcView; ArcGIS) and computer aided design software (AutoCAD).

#### **Professional Activity**

She is currently in private practice as a botany and conservation biology consultant and as a landscape architect. Her main research activities are vegetation mapping and modeling. Since 1998, she has worked in Regional Planning as a botany specialist; in Environmental Impact Assessment as a Landscape and Land Use Management specialist; as well as in several national and international scientific projects. *E.g.:*

- Habitat consultant for the Portuguese Institute for Nature Conservation and Forestry in the EEA "**Meeting 2015 EUNIS Habitat Classification - terrestrial NRC experts**".
- Consultant for Landscape studies and Land Use Management studies in **Environmental Impact Assessment** of several major projects (2002-20016), *e.g.* Irrigation Systems in Alqueva, Hydroelectric Projects, Wind Parks, Power Stations, Port and Airport Infrastructures, Roads and Railways (TGV), in Continental Portugal, Azores and Madeira.
- Consultant for Flora and Vegetation in **Environmental Impact Assessment** of several projects (2002-20015) in Angola, such as highways and power lines.

- Consultant for Flora in the **Masterplan of the Zoo / Botanical Park of Luanda** – Proposal for a Accomodation and Acclimatisation Program for Wild Fauna and Flora Species (2014).
- **Environmental Auditing and Monitoring of Lauca Hydroelectric Project**, Kwanza River, Angola. Responsible for surveys of Flora and Vegetation (2014-15).
- **Master Plan and Detailed Design for Ecological Protection and Improvement of Tasitolu**, Timor Lorosa'e. Responsible for surveys of Flora and Vegetation; and for Landscape studies (2014-15).
- **Mapping and Assessment of Ecosystems and Their Services (MAES)** in Alentejo (Portugal). Consultant with Instituto Superior Técnico for the Institute of Nature Conservation and Forestry (2014-15).
- **Establishment of baseline and indicators for the evaluation and monitoring of Integrated Territorial Interventions Serra da Estrela and Tejo International**. Mãe d'Água, for the Institute of Nature Conservation and Forestry. Co-responsible for surveys of flora and vegetation and vegetation mapping (2013).
- **Predictive Mapping of major forest species in Climate Change Scenarios**, for the Institute of Nature Conservation and Forestry.
- Project PTDC/AUR-URB/102578/2008: **National Ecological Network** - a proposal for its boundaries definition and regulations. Center for Studies in Landscape Architecture Prof. Caldeira Cabral. Responsible for the task "Landscape Subsystem – Vegetation" (2011).
- Vegetation studies for the **Municipal Ecological Structure for the Municipalities of Loures** (2001, vegetation mapping survey), **Sintra** (2003-4, executive coordination) and **Almada** (2005-6, executive coordination), in Lisbon area. Department of Plants Protection and Phytoecology, Agronomy Institute.
- **Detailed Plan of the area surrounding Boca do Inferno** (Plano de Pormenor da UOPG 9 do POOC Sintra-Sado). Department of Civil Engineering, Faculty of Science and Technology, Universidade Nova de Lisboa. Responsible for surveys of flora and vegetation and vegetation mapping at scale 1:500 (2007).
- **Regional Management Plan for "Tagus Valley and West"**. Erena. Responsible for surveys of flora and vegetation and vegetation mapping (2006-7).
- **Management Plan for the Natural Reserve of Sado Estuary**. Erena. Responsible for surveys of flora and vegetation and vegetation mapping (2006).
- **Management Plan for Protected Areas in Madeira: Paul Serra and Fanal**. Silviconsultores. Responsible for surveys of flora and vegetation and vegetation mapping (2005).

She has worked in several national and international scientific projects, as responsible for surveys of flora and vegetation:

- European Community project **Bioassess - EUROPEAN BIODIVERSITY ASSESSMENT TOOLS** (Ireland, UK, Germany, Netherlands, Switzerland, France, Spain, Portugal, Hungary, Finland). Centre for Applied Ecology Prof. Baeta Neves. Responsible for surveys of flora and vegetation in Portugal (2000-2).
- European Community Project (Copernicus) **Multiple Objective Forest Management of Protected Areas (Nature Reserves) in Central and Eastern Europe for the Prevention of Soil Erosion** (Portugal, United Kingdom, Romania, Hungary). Centre for Applied Ecology Prof. Baeta Neves. Responsible for surveys of flora and vegetation in Portugal (2000-1).
- Project PAMAF - 4 No 970955522, **Bioindicators Monitoring in Portuguese Forests**. Centre for Applied Ecology Prof. Baeta Neves. Responsible for surveys of flora and vegetation of the sampled plots (2000).

- Project PAMAF 4069, **Cork-oak and live-oak park grove stands typification in the counties of Aviz, Mora and Arraiolos**. National Forest Research Station. Co-responsible for the flora and vegetation studies - floristic, phytosociology, processing and integration of data and mapping in a Geographical Information System (1998-2000).
- Project PRAXIS 3/3.2/FLOR/2126/95, **Modelling of biodiversity indicators in areas of maritime pine of the Centre and North of Portugal**. National Forest Research Station. Co-responsible for the flora and vegetation studies (1998-2000).

She has worked as a vegetation and conservation biology consultant in other projects:

- National project **Land Cover Map of Portugal (COS.2007, lot B)**, for the Portuguese Geographical Institute. Conexa. Technical coordination of the photointerpreters team (2009-10).
- Project **Botany applied to Historic Gardens** (La Botanique Appliquée aux Jardins Historiques). Centre de Recherche du Chateau de Versailles and ACB – Arquitectura Paisagista. Botany consultant for the Portuguese team (2007-8).
- Project **AGRO 458: Vegetation Management Strategies in the Algarve Mountain Cork-oak Landscapes for Reducing Risk of Fire, for Socio-Economic Recovery and Conservation of Biodiversity**. Centre for Applied Ecology Prof. Baeta Neves. Responsible for surveys of Scenic Valuation (2007).
- Project **Vegetation Series Map for Continental Portugal**. Center for Botany Applied to Agriculture, Agronomy Institute. Responsible for all GIS modelling (2006).
- Project (PIDAAC) **New Ecological Map of Portugal**. National Forest Research Station, Department of Plants Protection and Phytoecology, Agronomy Institute and General Board of Forest Resources. Responsible for the ecological modelling (2004-2005).
- Community Project (*Culture 2000*) **Plants in European Masterpieces**. Ajuda Botanic Garden in collaboration with World Monuments Fund Association of Portugal, the Royal Botanic Gardens Kew, the Botanic Garden of Leiden and the University of Genoa. Responsible for the identification of flora in art masterpieces (2001-2).

Taught Basic Concepts of Landscape Architecture and Ecology and History of Garden Art in the **Ajuda Botanical Garden Gardening School** (2002 and 2003).

### **Current interests of research**

Vegetation and ecosystems mapping. Predictive vegetation modeling. Landscape modeling.

### **Other activities**

She attended several workshops and International Symposiums and Reunions, since 1996. She has been invited to lecture in symposiums since 2006. She was part of the organizing committee of national and international symposiums, namely of the 48<sup>th</sup> Annual Symposium of the IAVS - International Association of Vegetation Science.

### **Publications**

She has presented posters and lectures and published several papers in scientific journals, e.g.: EUROPEAN ENVIRONMENT AGENCY (2015). Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats. Copenhagen, Denmark. 38 pp. (Contributor).

- CAPELO, J., RIBEIRO, S. & **MESQUITA, S** (2014). *Ecology, distribution and syntaxonomy of the endangered Linaria ricardoi*. Livro de resumos. XXIV Jornadas Internacionais de Fitosociologia / I Congreso de la Sociedad Española de Geobotánica.
- RIVAS-MARTÍNEZ S., RIVAS-SÁENZ, S., PENAS, A.M.; with the collaboration of: F. Alcaraz, J. Amigo, A. Asensi, M. Barbour, E. Biondi, P. Cantó, J. Capelo, J.C. Costa, M. Costa, M. del Arco, S. del Río, T.E. Díaz, B. Díez Garretas, F. Fernández-González, R. Gavilán, J.M. Gehú, J. Giménez de Azcárate, L. Herrero, J. Izco, M. Ladero, J. Loidi, M. Lousa, V.E. Martín Osorio, **S. Mesquita**, J. Molero, J. Nakamura, G. Navarro, P.L. Pérez de Paz, J.A.F. Prieto, P. Quézel, D. Sánchez-Mata, L.G. Sancho, P. Soriano, F. Valle, W. Wildpret (2011). Worldwide bioclimatic classification system. **Global Geobotany**. 1(1):1-638.
- MESQUITA, S.** & SOUSA, A.J. (2009). Bioclimatic mapping using geostatistical approaches: application to mainland Portugal. **International Journal of Climatology**. 29 (14): 2156-2170.
- CAPELO, J., **MESQUITA, S.**, COSTA, J.C., RIBEIRO, S., ARSÉNIO, P., NETO, C., MONTEIRO, T., AGUIAR, C., HONRADO J., ESPÍRITO-SANTO, M.D. & LOUSÃ, M. (2007). A methodological approach to potential vegetation modeling using GIS techniques and phytosociological expert-knowledge: application to mainland Portugal. **Phytocoenologia** **37(3-4)**: 399-415.
- AGUIAR, C., CAPELO, J., SEQUEIRA, M., HONRADO, J. & **MESQUITA, S.** (2005). Floristical And Phytocoenological Diversity At The Climactical Dominion. Lecture. 48th IAVS Symposium. *Marginal Landscapes*. Lisboa, de 24-29 Julho 2005.
- ARSÉNIO, P., **S. MESQUITA**, J.C. COSTA, M. LOUSÃ & M. D. ESPÍRITO-SANTO (2005). The use of phytosociology in landscape planning at the local scale - the experience of municipal green plans within the Lisbon metropolitan area. Poster. XX Jornadas Internacionais de Fitosociologia.
- CAPELO, J., M. SEQUEIRA, R. JARDIM, **MESQUITA, S.** & J.C. COSTA (2005). The Vegetation of Madeira Island (Portugal). A brief overview and excursion guide. **Quercetea** **7**: 95-122.
- CAPELO, J., **MESQUITA, S.** & ARSÉNIO, P. (2005). Vegetation sucessional patterns at the landscape level in the Lisbon area. A proposal of symphytosociological model and Natural Potential Vegetation typology. Poster. 48th IAVS Symposium. Lisboa.
- MESQUITA, S.**, SEQUEIRA, M., & CAPELO, J. (2005). Floristical Biodiversity Hotspots and Nature Conservation Areas in Madeira, Portugal. Poster e livro de resumos. 48º Simpósio IAVS. Lisboa.
- MESQUITA, S.** & ARSÉNIO, P., LOUSÃ, M., HENRIQUES, T.M.& COSTA, J.C. (2005). Sintra Vegetation and Landscape. **Quercetea** **7**: 65-81.
- CAPELO, J. H., **S. MESQUITA**, M. M. SEQUEIRA & C. AGUIAR (2002). A case-study of multivariate analysis in applied vegetation science: Modelling managed maritime – pine stands ground flora composition and diversity in relation to environmental and structural variables. Lecture. 4º Encontro da ALFA de Fitosociologia. Avintes, 11-15 Setembro 2002.
- CAPELO, J. H., J. C. COSTA, **S. MESQUITA**, M. LOUSÃ & F. C. REGO (1999). A syntaxonomical review of *Arbutus unedo* L. and *Laurus nobilis* L. dominated communities in Center-Western continental Portugal. **Colloques Phytosociologiques** **28**: 613-628.
- COSTA, J. C., J. H. CAPELO, M. D. ESPÍRITO-SANTO, M. LOUSÃ, A. MONTEIRO, **S. MESQUITA**, M. T. VASCONCELOS & I. MOREIRA (1999). Plant communities of the lagoons of the Portuguese Coastal Superdistrict - a multivariate approach. **Hydrobiologia** **415**: 67-75.