

**CALL (1 March / 4 April 2014)**

**Forest Resources for Iberian Empires:  
Ecology and Globalization in the Age of Discovery  
ForSEAdiscovery**

Twelve three-year Fellowships are available to undertake doctorates in an interdisciplinary, innovative research project in the context of the Early Modern Age (16th-18th centuries). Each Fellow will receive an annual living allowance of 38,000 Euros/year (subject to minor adjustments) and a mobility allowance of 700-1000 Euros/month (subject to minor adjustments).

Each will be a participant in **ForSEAdiscovery**, a project combining academic research on the History of shipbuilding, trade networks, Dendro-Archaeology, Wood biology, Forestry and Wood/Timber provenance, with training in the wider dissemination of research based on a formal network established between universities and private sector companies and funded by the European Union (**Call identifier: FP7-PEOPLE-2013-ITN**)

**ForSEAdiscovery- ITN  
(Grant agreement no.: 607545)**

**ForSEAdiscovery** is an interdisciplinary, innovative research project in the Humanities and Social & Life Sciences framework. In the Early Modern Age (16th-18th centuries) the construction of ocean-going ships was paramount to the development of cultural encounters in what became the Age of Discovery and European expansion. In the case of the Iberian Empires, the establishment of new trade routes brought up the need for armed merchantmen, galleons and smaller vessels, placing unprecedented demands on Iberian forests for the supply of construction timber. Forestry and sea power became inextricably linked, creating new geopolitical tensions, alliances and forest regulations. Key questions in this context are: could Iberian forest resources sustain the increasing demand of sound timber, or was the wood imported from elsewhere? If so, how were the trade networks organized? And did the lack of raw material force the technological changes that occurred in shipbuilding in the 16th century, or were they a result of exchange between Mediterranean and Atlantic shipbuilding traditions? This project will address these questions through a multidisciplinary and innovative training research program to improve the understanding of our historical past, our cultural heritage, and our knowledge of the use of shipbuilding resources. The prerequisite for such approach is combining knowledge derived from Humanities and Life Sciences.

The **objective** is to broaden the background and experience of trainees in the different research areas, and to develop their transferable skills for future careers in academia or the private sector, whilst advancing the research fields through the integration of research tools, the development of reference datasets and the exploration of historical structures and development.

The aims of the project are:

i) To consolidate a research line combining historical research, underwater archaeology, GIS and wood-provenancing methods (dendrochronology, wood anatomy and geo/dendrochemistry);

ii) to increase the background and experience of trainees in the different research areas, by engaging the fellows in training courses and workshops aimed at developing their scientific, communication, and management skills; and

iii) to develop their transferable skills for future careers in academia or the private sector whilst advancing the research fields through the integration of research tools, development of reference datasets and the exploration of historical structures and developments.

#### **ForSEADiscovery Full Partners:**

1. Consejo Superior de Investigaciones Científicas (CSIC), Dr. Ana Crespo Solana (ITN-Coordinator)
2. Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa (FCSH-UNL), Dr. Rosa Varela Gomes
3. Universidad de Santiago de Compostela (USC), Dr. Ignacio García González  
Dr. Antonio Martínez Cortizas
4. University of Wales Trinity Saint David (UWTSD), Dr. Nigel Nayling
5. Maritime Archaeology Ltd (MALtd), Garry Momber
6. Wageningen Universiteit (WU), Dr. Ute Sass-Klaassen
7. Universiteit Leiden (UL) Dr. Catia Antunes
8. Rijksuniversiteit Groningen (RUG), Dr. Jan Willem Veluwenkamp
9. Université de Lorraine (UdL), Dr. Anne Poszwa

#### **ForSEADiscovery Associated Partners:**

1. Texas A&M University (TAMU), Dr. Filipe Vieira de Castro
2. DendroDK (DDK), Dr. Aoife Daly
3. Archaeonauta S.L. Dr. Miguel San Claudio
4. Nicolaus Copernicus University (NCU), Dr. Tomasz Wazny
5. Dixit International, Malcolm Dixelius

## **NUMBER OF POSITIONS AVAILABLE: 12**

### **Academic Requirements**

Master Degree or equivalent

Acceptance by Institution where doctorate will be undertaken (see specific requirements in each ESR positions).

### **Marie Curie ITN programs requirements**

In accordance with the criteria set out by Marie Curie Innovative Doctoral Program, the researchers must not have resided or carried out main activity (work, study, etc.) in the host country for more than 12 months in the 3 years immediately prior to taking up a fellowship. Also, in accordance with the criteria the researcher at the time of recruitment must not yet have been awarded the doctoral degree and must be in the first 4 years (full-time equivalent) of their research career. All partner institutions have formalized equal opportunities policies and good track records in appointing female researchers and we will take all necessary and reasonable measures to recruit minimum of 50% female researchers to the network. Partners will honour EU and national employment law in relation to the recruitment and ensure that researchers enjoy the same rights and health and safety standards as local researchers.

### **Benefits**

- 36 month full-time employment contract
- Additional mobility, travel and career exploratory allowances
- Supervision by recognized experts and access to state-of-the-art research and research facilities
- Education in complementary skills via workshops, training schools and conferences, conducted by the partners and by other leading expert and agencies.

### **Duration of Fellowships**

36 months – starting in 1 September or 1 October 2014

### **Obligations of Fellows**

a) Completion of PhD on an aspect of the project, according to the list of individual projects (see below), with a thesis designed to fit the overall research project.

b) As the duration of the ForSEAdiscovery project is 48 months (1 February 2014 – 31 January 2018), fellows will be encouraged to finish their individual research within the duration of the ForSEAdiscovery program.

Fellows would focus on the deliverables of the project as a productivity requirement and they may have the opportunity to conduct most of their PhD training during their period of contract.

Academic supervision of PhD candidates will be undertaken by host universities under their own regulations, with network wide supervision by the Supervisory Board of **ForSEAdiscovery** complementing this and providing additional training opportunities and support at a network level (including supervision and training provided by the recruited Experienced Researchers, ERs)

c) Participation in program of mobility to other **ForSEAdiscovery** institutions, totaling at least 3 months during the Fellowship.

### **Closing date of applications: 4 April 2014**

According to the Grant Agreement PITN-GA-2013-607545 **ForSEAdiscovery** in article B.4.3.3:

Each partner will submit the list of candidates received and their CVs to the training and scientific coordinators, to ensure eligibility criteria and fairness in the selection

process.

The positions will be advertised too at the web pages of individual partners and institutions involved. Those candidates that fulfil eligibility criteria will be interviewed by the Principal Investigator (supervisor) at the lab in which he/she showed interest.

**Date for interviews (shortlisted candidates):** 15 April -10 May 2014

Travel expenses will be paid by **ForSEAdiscovery- ITN** for those coming to interviews.

**Submitting an application:**

Please contact the supervisor of each ESRs (see below), with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es)

Or Search into:

<http://ec.europa.eu/euraxess/#>

Please submit the application for your first choice Fellowship. If you wish you can also for up to two other Fellowships, in order of priority,

**For more information about each Research individual project contact directly to the supervisor**

**ForSEAdiscovery ESR1:** Dr. Ana Crespo Solana ([ana.crespo@cchs.csic.es](mailto:ana.crespo@cchs.csic.es))

**ForSEAdiscovery ESR2:** Dr. Cátia Antunes ([c.a.p.antunes@hum.leidenuniv.nl](mailto:c.a.p.antunes@hum.leidenuniv.nl))

**ForSEAdiscovery ESR3:** Dr. Jan Willem Veluwenkamp ([j.w.veluwenkamp@rug.nl](mailto:j.w.veluwenkamp@rug.nl))

**ForSEAdiscovery ESR4:** Dr. Jan Willem Veluwenkamp ([j.w.veluwenkamp@rug.nl](mailto:j.w.veluwenkamp@rug.nl))

**ForSEAdiscovery ESR5:** Dr. Nigel Nayling ([n.nayling@tsd.uwtsd.ac.uk](mailto:n.nayling@tsd.uwtsd.ac.uk))

**ForSEAdiscovery ESR6:** Dr. Nigel Nayling ([n.nayling@tsd.uwtsd.ac.uk](mailto:n.nayling@tsd.uwtsd.ac.uk))

**ForSEAdiscovery ESR7:** Dr. Rosa Varela Gomes ([rv.gomes@fcs.unl.pt](mailto:rv.gomes@fcs.unl.pt)) or her assistant in ForSEAdiscovery project:

Alexander Monteiro ([al Monteiro@fcs.unl.pt](mailto:al Monteiro@fcs.unl.pt))

**ForSEAdiscovery ESR8:** Dr. Rosa Varela Gomes ([rv.gomes@fcs.unl.pt](mailto:rv.gomes@fcs.unl.pt)) or to Alexander Monteiro ([al Monteiro@fcs.unl.pt](mailto:al Monteiro@fcs.unl.pt))

**ForSEAdiscovery ESR9:**Dr. Ignacio García González ([ignacio.garcia@usc.es](mailto:ignacio.garcia@usc.es))

**ForSEAdiscovery ESR10:** Dr. Ute Sass-Klaassen ([ute.sassklaassen@wur.nl](mailto:ute.sassklaassen@wur.nl))

**ForSEAdiscovery ESR11:** Dr. Antonio Martínez Cortizas

([antonio.martinez.cortizas@usc.es](mailto:antonio.martinez.cortizas@usc.es))

**ForSEAdiscovery ESR12:** Dr. Anne Poszwa ([anne.poszwa@univ-lorraine.fr](mailto:anne.poszwa@univ-lorraine.fr))

# DESCRIPTION OF ESRs POSITIONS AVAILABLE

## ESR1. Fellowship Title and ID code

**ForSEAdiscovery ESR1, Centro de Humanidades y Ciencias Sociales, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain,**

**Supervisor: Dr. Ana Crespo Solana (CSIC)**

## Title of Research Project (or research field):

**Organisation, management and supply of forest resources for shipbuilding in Spain (AD 1500-1800) (WP1).**

**Fellowship description:** From September 1, 2014, the Institute of History of the Consejo Superior de Investigaciones Científicas (CSIC) will host an interdisciplinary research fellow willing and able to participate in the overall activities of the **ForSeaDiscovery** consortium. This fellowship implies working in an international and interdisciplinary team of junior and senior researchers directly and indirectly involved in the project.

A 36-month vacancy is to be filled by a PhD researcher into naval building and commercial networks in Spain in the Early Modern Era. The thesis director will be Dr. Ana Crespo Solana. The defense of the thesis must take place before two years after the end of the 36-month period although an early defense will be encouraged.

## **Tasks:**

- . To compile data on timber supply of Spanish shipyards (16<sup>th</sup> to 18<sup>th</sup> centuries) from the historiography and archival sources and identify sources of timber supply of the main Atlantic Spanish shipyards.
- . To collect in the literature information concerning timber trade related to the Atlantic Iberia (1500-1800) shipbuilding industry.
- . To compile information from archives and existing databases about navigation and timber trade; Database containing information about merchant networks, volume of timber trade and transport, and areas supplying timber for shipbuilding to Atlantic Iberia (16<sup>th</sup> to 18<sup>th</sup> centuries).

## **Requirements, skills and Languages required:**

MA degree in Early Modern Economic or Social History, History of the European Expansion, Global History or World History.

Languages: English, Spanish, Dutch (understanding only)

Paleographic skills for Early Modern archives.

Willingness to work in an interdisciplinary environment.

Note that this ESR involves a three-months secondment at the Rijksuniversiteit Groningen (search on Dutch archives, database management) and 2-month

secondment at University Wales Trinity Saint David (Comparative study of contemporary forestry practice and timber supply on the British Isles: historical, archaeological and structural approaches. Based in commercial sector Archaeological Services).

**Applications:** (to be sent to [ana.crespo@cchs.csic.es](mailto:ana.crespo@cchs.csic.es) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR2. Fellowship Title and ID code**  
**ForSEAdiscovery ESR2, Universiteit Leiden, The Netherlands,**

**Supervisor: Dr. Catia Antunes**

**Title of Research project (or Research Field)**

**Portuguese forest resources and timber supply in the Age of Discovery and expansion (AD 1500-1800).**

**Fellowship description:** From September 1, 2014, the Section of Economic and Social History, History Institute at Leiden University will host an enthusiastic and interdisciplinary research fellow willing and able to participate in the overall activities of the **ForSEAdiscovery** consortium and in the overall activities of the History Department.

This fellowship implies working in an international and interdisciplinary team of junior and senior researchers directly and indirectly involved in the project. Individuals will be required to openly share questions, hypotheses and results and participate in open discussions of each other's' work. The Section Economic and Social History is a dynamic research group with broad interests, enthusiastic researchers and lecturers with outstanding track records and successful in attracting national and international research grants.

**Tasks:**

- Compilation of data on the timber supply of Portuguese shipyards (16th to 18th centuries)
- Identification of sources for timber supply for the main Portuguese Atlantic shipyards.
- study the process of timber selection, acquisition, mechanisms of trade, commercial and transport networks
- Compilation of a database containing the above mentioned data
- Submitting research results for publication in international peer-reviewed academic journals (in single or co-authorship)
- Presenting papers at conferences and workshops
- Actively participate in project discussions and work as peer review for the team
- Possibility of using data outputs for completion of a PhD dissertation

**Objectives:**

- To compile data on timber supply of Portuguese shipyards (16th to 18th centuries) from the historiography and archival sources and identify sources of timber supply of the main Atlantic Portuguese shipyards.
- To study the process of timber selection, acquisition, mechanisms of trading networks and transport.

**Tasks and methodology:**

- To collect in the literature information concerning timber trade related to the Atlantic Iberia (1500-1800) shipbuilding industry.
- To compile information from archives and existing databases about navigation and timber trade

**Results:**

- Database containing information about merchant networks, volume of timber trade and transport, and areas supplying timber for shipbuilding to Atlantic Iberia (16th to 18th centuries).

**Requirements:**

- MA degree in Early Modern Economic or Social History, History of the European Expansion, Global History or World History
- Paleographic skills for Early Modern archives
- Fluency in English, Dutch and/or Portuguese (knowledge of French, German, and/or Spanish will be strongly considered)
- Basic knowledge of Statistics applied to Early Modern Economic History
- Working knowledge of Access or SPSS (preferred, but not compulsory)
- Willingness to work in an interdisciplinary environment
- Ability to work independently and as part of the team

**Note that this ESR involves:**

- 3 month secondment at the Universidade Nova de Lisboa (Introduction to Portuguese archives: archaeological and architectural approaches: GIS models, data entry and data analysis)
- 2 month secondment at the University of Wales Trinity Saint David (Comparative study contemporary forestry practice and timber supply in British Isles: historical, archaeological and structural approaches. Based in commercial sector Archaeological Services, Maritime Archaeology LTd).

**Applications:** (To be sent to [C.A.P.Antunes@hum.leidenuniv.nl](mailto:C.A.P.Antunes@hum.leidenuniv.nl) with copy to [Forseadiscovery@cchs.csic.es](mailto:Forseadiscovery@cchs.csic.es)):

1. Cover Letter submitted in English
2. Statement of Purpose
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes)
6. In case of non-native English speakers or those without an undergraduate degree obtained in The Netherlands or an English-speaking country, proof of English language proficiency (IELTS 7.0 lower only considered in exceptional circumstances, e.g. in the case of other compensatory factors in terms of unique experience and expertise)
7. List of (maximum) two referees (with full postal addresses, telephone numbers and emails). Referees will be contacted directly by the search committee

All requested documents should be sent in pdf format.

**ESR3. Fellowship Title and ID code**

**ForSEAdiscovery ESR3, Rijksuniversiteit Groningen, The Netherlands**

**Supervisor: Dr. Jan Willem Veluwenkamp**

**Title of Research project (or Research Field)**

**The North European Timber Trade to Spain and Portugal: Volume and Transport (AD 1500-1800)**

**Fellowship description****Objectives:**

- To compile and study quantitative timber supply data from the historiography and archival sources.
- To collect and analyse quantitative information on trade and transport from Northern Europe to the Iberian Peninsula (16th – 18th centuries).

**Tasks and methodology:**

- To collect in the literature quantitative information concerning timber trade and transport between Northern Europe and Atlantic Iberia (1500-1800) and to explain that information.
- To compile and study quantitative information from archives and existing databases on timber trade and transport such as the Sound Toll Registers Online.

**Results:**

- Database containing information about the volume of timber trade and transport, and areas supplying timber for shipbuilding in Atlantic Iberia (16th through 18th centuries).
- A dissertation in which this information is studied.

**Required skills and Languages required**

MA degree in Early Modern Economic or Social History, History of the European Expansion, Global History or World History

English, Dutch;

Working knowledge of Spanish and Portuguese;

A basic ability to read early modern handwriting.

Note that this ESR involves a three months secondment in Consejo Superior de Investigaciones Científicas (CSIC) (Search in Spanish archives, database management, training on GIS) and a two months secondment in UWTSD (Comparative study of contemporary forestry practice and timber supply on the British Isles: historical, archaeological and structural approaches. Based in commercial sector Archaeological Services).

**Applications:** (to be sent to [j.w.veluwenkamp@rug.nl](mailto:j.w.veluwenkamp@rug.nl) with copy to: [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.



**ESR4. Fellowship Title and ID code**

ForSEAdiscovery ESR4, Rijksuniversiteit Groningen, The Netherlands

**Supervisor:** Dr. Jan Willem Veluwenkamp

**Title of Research project (or Research Field)**

**Trading Networks involved in the Timber Trade: mechanisms and routes (AD 1500-1800)**

**Fellowship description****Objectives:**

- To compile and analyse information from archives and literature about merchant networks involved in the timber trade between Northern Europe and the Iberian Peninsula.
- To study the mechanisms of trading and transport networks.

**Tasks and methodology:**

- To collect in the literature information concerning timber trade and transport networks related to the Atlantic Iberian shipbuilding industry (AD 1500-1800) and to explain that information.
- To compile and study information from archives and existing databases about timber trade and transport networks.

**Results:**

- Database containing information about merchant networks in the timber trade and transport, and about Northern European areas supplying shipbuilding timber to Atlantic Iberia (16th through 18th centuries).
- A dissertation in which this information is studied.

**Required skills and Languages required**

MA degree in Early Modern Economic or Social History, History of the European Expansion, Global History or World History

English, Dutch;

Working knowledge of Spanish and Portuguese;

A basic ability to read early modern handwriting.

Note that this ESR involves a three months secondment in Consejo Superior de Investigaciones Científicas (GIS on trading networks, historical perspectives, Spanish trading networks) and UNLA (Portuguese, trading networks and mechanisms).

**Applications:** (to be sent to [j.w.veluwenkamp@rug.nl](mailto:j.w.veluwenkamp@rug.nl) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR5. Fellowship Title and ID code  
ForSEAdiscovery ESR5, UWTSD**

**Supervisor: Associated Professor Nigel Nayling**

**Title of Research project (or Research Field)**

**Reconstructing timber in Spanish-Atlantic shipbuilding - treatise and archaeology (WP2).**

**Fellowship description**

**Objectives:**

- To compile information from written sources (archives and literature) and databases about shipbuilding techniques and associated forestry management in Spanish Atlantic in the 16th and 17th centuries, and known or suspected Spanish shipwrecks
- To make an inventory of key-construction features found in previously researched Spanish shipwrecks.
- To assess and analyse excavated Spanish ship timber assemblages
- To select a limited number of demonstration Spanish shipwreck sites for potential survey and dendrochronology analysis
- To survey and sample selected sites, carry out ring-width analysis and supply subsamples to others.
- To synthesise results and assess best practice.

**Tasks and methodology:**

- Combined documentary research, collation of archaeological information, timber characterisation and dendrochronology.
- Synthesis of results and dissemination.

**Required skills and Languages required**

English,  
Spanish (understanding only)

Notes that this ESR involves a two months secondment at Maritime Archaeology Ltd (MALtd), United Kingdom (Hands-on experience in commercial sector: timber recording, excavation, ship documentation and timber sampling), in two two-months secondments at Archaeonauta (ArchSL) (Shipwreck excavation, recording and timber sampling and analysis); and in a two months secondment in Consejo Superior de Investigaciones Científicas (Search on Spanish archives, database management; training on GIS).

The candidate should hold a diving qualification equivalent to CMAS 3\* or HSE SCUBA or be prepared to undertake training during the Fellowship

Applications: (to be sent to [n.nayling@tsd.uwtsd.ac.uk](mailto:n.nayling@tsd.uwtsd.ac.uk) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR6. Fellowship Title and ID code**  
**ForSEAdiscovery ESR 6. UWTSD**

**Supervisor: Associate Professor Nigel Nayling**

**Title of Research project (or Research Field)**

**Developing dendro-archaeological approaches in Nautical Archaeology: integration of ring studies, dendrochronology and timber morphology (3D CAD) for the reconstruction of past forestry practice and exploitation.**

**Fellowship description**

**Objectives:**

- To contribute to an inventory of key-construction features found in previously researched Spanish shipwrecks.
- To assess and analyse excavated Spanish ship timber assemblages
- To select a limited number of demonstration Spanish shipwreck sites for potential survey and dendrochronology analysis
- To survey and sample selected sites, carry out ring-width analysis and supply subsamples to others.
- To synthesise results and assess best practice

**Tasks and methodology:**

- Collation of archaeological information on timber usage in Spanish ships.
- Develop approaches to 3D reconstruction of past forestry practice/timber usage.
- Recover samples from underwater sites for timber characterisation and dendrochronology.
- Synthesis of results and dissemination

**Results:**

- GIS layer on Spanish shipwrecks.
- Best practice and protocols for dendro-archaeological analysis including post-excavation digital approaches.
- Synthesis of site specific studies

**Required skills and Languages required:**

English,  
Spanish (understanding only)

Notes that this ESR involves a two-months secondment in MALtd (Hands-on experience in commercial sector: timber recording, excavation, ship documentation and timber sampling) and in two two-months secondments at ArchSL (Shipwreck excavation, recording and timber sampling and analysis).

The candidate should hold a diving qualification equivalent to CMAS 3\* or HSE SCUBA or be prepared to undertake training during the Fellowship.

**Applications:** (to be sent to [n.nayling@tsd.uwtsd.ac.uk](mailto:n.nayling@tsd.uwtsd.ac.uk) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR7. Fellowship Title and ID code**

**ForSEAdiscovery 7**, Faculdade de Ciencias Sociais e Humanas da Universidade Nova de Lisboa (FCSH-UNL)

**Supervisor: Dr. Rosa Varela Gomes**

**Title of Research project (or Research Field)**

**16th century shipbuilding in Portuguese dockyards: a historical and archaeological perspective**

**Fellowship description**

**Objectives:**

- To compile information from written sources (archives and literature) and databases about shipbuilding techniques and associated forestry management in Portuguese Atlantic in the 16th and 17th centuries, and known or suspected Portuguese shipwrecks
- To make an inventory of key-construction features found in previously researched Portuguese shipwrecks.
- To assess and analyse excavated Portuguese ship timber assemblages
- To select a limited number of demonstration Portuguese shipwreck sites for potential survey and dendrochronology analysis
- To survey and sample selected sites, carry out ring-width analysis and supply subsamples to others.
- To synthesise results and assess best practice.

**Tasks and methodology:**

- Combined documentary research, collation of archaeological information, timber characterisation and dendrochronology.
- Synthesis of results and dissemination.

**Required skills and Languages required:**

Portuguese, English,  
Spanish (understanding only)  
Paleographic skills for Early Modern archives  
Willingness to work in an interdisciplinary environment

**Notes that this ESR involves a four-month secondment in ArchSL (Shipwreck excavation, recording and timber sampling and analysis) and a two months secondment in UWTSD (Comparative study of contemporary ship construction in Northern Europe. Article preparation. Based in commercial sector Archaeological Services).**

**Applications:** (to be sent to [rv.gomes@fcs.unl.pt](mailto:rv.gomes@fcs.unl.pt) or her assistant in ForSEAdiscovery project: Alexander Monteiro ([almonteiro@fcs.unl.pt](mailto:almonteiro@fcs.unl.pt)) and copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR8. Fellowship Title and ID code**  
**ForSEAdiscovery ESR8, UNL**

**Supervisor: Dr. Rosa Varela Gomes**

**Title of Research project (or Research Field)**  
**The Dendro-archaeology of Portuguese ships of the Early Modern Period**

**Fellowship description**

**Objectives:**

- To compile information from written sources (archives and literature) and databases about shipbuilding techniques and associated forestry management in Portuguese Atlantic in the 16th and 17th centuries, and known or suspected Portuguese shipwrecks
- To make an inventory of key-construction features found in previously researched Portuguese shipwrecks.
- To assess and analyse excavated Portuguese ship timber assemblages
- To select a limited number of demonstration Portuguese shipwreck sites for potential survey and dendrochronology analysis
- To survey and sample selected sites, carry out ring-width analysis and supply subsamples to others.
- To synthesise results and assess best practice.

**Tasks and methodology:**

- Combined documentary research, collation of archaeological information, timber characterisation and dendrochronology.
- Synthesis of results and dissemination.

**Required skills and Languages required:**

Portuguese, English, Spanish

Notes that this ESR involves a two-month secondment in USC-BIOAPLIC (Hands-on training on wood id and dendrochronological research of samples recovered from shipwrecks) and a four-month secondment in ArchSL (Shipwreck excavation, recording and timber sampling and analysis).

**Applications:** (to be sent to [rv.gomes@fcsh.unl.pt](mailto:rv.gomes@fcsh.unl.pt) or her assistant in ForSEAdiscovery project: Alexander Monteiro ([almonteiro@fcsh.unl.pt](mailto:almonteiro@fcsh.unl.pt)) and copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR9. Fellowship Title and ID code**

**ForSEAdiscovery ESR9, University of Santiago de Compostela (USC), Faculty of Forestry, Department of Botany (BIOAPLIC)**

**Supervisor:**

**Dr. Ignacio García González**

**Title of Research project (or Research Field)**

**Development and implementation of a tree-ring data network for the assessment of the date and provenance of Iberian ship-timbers**

**Fellowship description****Objectives:**

- Construction of multi-century Iberian oak and pine tree-ring chronologies for key areas from where timber was supplied for shipbuilding
- Dating of samples from ship-timbers collected by ESRs from WP2

**Tasks and methodology:**

- Collation of past environmental data on past vegetation, and assessment/identification of areas capable of delivering timber resources for contemporary shipbuilding industries (literature research, search on historical maps and pollen databases).
- Sampling of living oak and pine trees at forest stands in different areas pointed out by literature and by the archival information retrieved by ESR of WP1 to construct tree-ring chronologies (standard dendrochronological techniques).
- Sampling of roof timbers from buildings located close to the selected stands to extend chronologies back to the 15th century (standard dendrochronological techniques)

**Required skills and Languages required:**

Candidates should have an academic background in Wood science, Forest Sciences, Biology, Geography or related discipline involving dendrochronology. Proven previous experience at dendrochronological techniques (sampling of living trees and/or historical objects, tree-ring measuring, chronology building, and especially dendrochronological dating) is the outmost preferable skill. Knowledge of wood anatomy, paleo-environmental techniques, and GIS is also recommended.

Proficient writing and oral communication skills in English are required. Good knowledge of Spanish language is highly recommended, and it will be necessary along the duration of the fellowship. Additionally, understanding of Portuguese, French and/or Dutch are beneficial.

**Additional preferred skills:** ability and initiative to develop research plans and proposals and to write scientific publications. Good communication, interpersonal and organizational skills are a bonus. A good physical condition is advisable, as sampling will be carried out in mountain areas and in buildings.

Notes that this ESR involves a 1 month secondment in UdL (geochemistry analyses; analysis of data); two month secondment in ArchSL (Shipwreck excavation, recording and timber sampling and analysis) and a two-months secondment in Wageningen Universiteit, (Analysis of data, writing articles).

**Applications:** (to be sent to [ignacio.garcia@usc.es](mailto:ignacio.garcia@usc.es) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.

**ESR10. Fellowship Title and ID code**

**ForSEAdiscovery ESR 10, Wageningen Universiteit, The Netherlands,**

**Supervisor: Dr. Ute Sass-Klaassen**

**Title of Research project (or Research Field)**

**Application of ecological wood anatomy for provenancing oak and pine wood from Atlantic Iberia**

**Fellowship description**

**Objectives:**

- Assessment of the impact of local climate, specific site conditions, and forest management on tree-ring variables and wood-anatomical characteristics of oak and pine wood from Atlantic Iberia.
- Development of a wood-anatomy based method for high-precision dendroprovenancing of oak and pine wood from Atlantic Iberia.
- Application of wood-anatomy based dendroprovenancing on oak and pine wood from excavated shipwrecks.

**Tasks and methodology:**

- Fieldwork – site selection (based on historical and ecological information) and sampling of living oaks and pines in Atlantic Iberia.
- Labwork - efficient measurement of large series of tree-ring width and quantitative and qualitative wood-anatomical variables of living oak and pines as well as samples from shipwrecks.
- Statistical analyses – modelling relationships between regional climate, local climate and specific ecological and management-related site factors on tree-ring width and wood-anatomical variables; identifying suitable wood-anatomical variables for dendroprovenancing and testing wood-anatomy based dendroprovenancing on archaeological samples.

**Academic qualifications and profile required:** Master of Science in Wood Sciences, Forest Science or Biology. Strong interest and experience in wood anatomy and dendrochronology; skills in various methods of statistical analysis, including time-series analyses as well as basic programming skills in R are desirable.

**Languages:** Proficient writing and oral communication skills in English.

**Preference factors:** evidence of ability and initiative to develop research proposals and plans and to write scientific publications. Good communication, interpersonal and organizational skills are a bonus. A good physical condition is advisable, as sampling will be carried out in mountain areas and in buildings.

The position involves a two months secondment in USC-BIOAPLIC (Collection of samples; acquisitions and analysis of data (practical exchange); introduction to wood-anatomical markers); a 1 month secondment in UdL (Introduction to geochemistry analyses; analysis of data).

**Applications:** (to be sent to [ute.sassklaassen@wur.nl](mailto:ute.sassklaassen@wur.nl) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

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3. Curriculum Vitae and list of publications (if applicable)
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**ESR11. Fellowship Title and ID code**

**ForSEAdiscovery 11. University of Santiago de Compostela (USC), Faculty of Biology, Department of Soil Science (ES2)**

**Supervisor: Dr. Antonio Martínez Cortiza**

**Title of Research project (or Research Field)**

**Identification of potential biomarkers of wood for provenancing**

**Fellowship description**

**Objectives:**

- Use of the geochemical composition of the wood to trace the physical environment (local soils, lithological materials, rainfall water) where the wood was formed

**Tasks and methodology:**

- Pyrolysis-GC/MS of wood from shipwrecks and living trees in sites.
- FTIR-ATR analyses of wood from shipwrecks and living trees in sites.
- Analyses of trace elements in wood from shipwrecks and living trees in sites.

**Required skills and Languages required:**

English, Dutch,  
Spanish, French (understanding only)

**Knowledge on:**

1. Operation of GC/MS systems
2. Stable carbon and nitrogen isotope chemistry
3. Organic geochemistry

Notes that this ESR involves a two months secondment in Wageningen Universiteit, (Introduction to dendrochronology and wood anatomy) and a two months secondment in UdL (Analysis of data, writing articles).

**Applications:** (to be sent to [antonio.martinez.cortizas@usc.es](mailto:antonio.martinez.cortizas@usc.es) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

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**ESR12. Fellowship Title and ID code  
ForSEAdiscovery ESR12, Université de Lorraine (UdL)**

**Supervisor: Dr. Anne Poszwa**

**Title of Research project (or Research Field)  
Geochemical fingerprinting of potential source areas of the wood**

**Objectives:**

- Use of the geochemical composition of the wood to trace the physical environment (local soils, lithological materials, rainfall water) where the wood was formed.

**Tasks and methodology:**

- Sampling of rocks, soils, waters and wood from living oak and pine trees at different forest sites pointed out as potential sources of wood used for shipbuilding (same sites as in ESR 11).
- Determination of geochemical and isotopic composition (especially  $87\text{Sr}/86\text{Sr}$ ) of samples collected to identify specific local signatures recorded in oak and pine wood.
- Measurements of geochemical and isotopic composition of wood from shipwrecks, and comparison with specific local signatures highlight in actual forest stand.

**Results:**

- Geochemical and isotopic fingerprinting of wood and soils to allow provenancing of oak and pine species used in ship building.
- Geochemical database of the sources of elements in oak and pine from Atlantic Iberia.

**Required skills and Languages required:**

- Master Degree or equivalent in Soil science or Earth science with good knowledge and interest in geochemistry.
- English and French languages required.

Notes that this ESR involves a two months secondment in Wageningen Universiteit and a two months secondment in USC-BIOAPLIC (Collection of samples; introd. to dendrochronology and wood anatomy)

**Applications:** (to be sent to [anne.poszwa@univ-lorraine.fr](mailto:anne.poszwa@univ-lorraine.fr) with copy to [forseadiscovery@cchs.csic.es](mailto:forseadiscovery@cchs.csic.es))

1. Statement of Purpose in English
3. Curriculum Vitae and list of publications (if applicable)
4. Copy of the MA thesis
5. If MA thesis has not been written in English, sample of writing in English (minimum of 5000 words, excluding footnotes).

All requested documents should be sent in pdf format.