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SERVIZIO CONCORSI E PROCEDIMENTI  
ELETTORALI

**COMPARATIVE SELECTION FOR N. 11 SENIOR RESEARCH ASSOCIATES – ART. 24, PARAG. 3, LETTER B) OF LAW NO. 240 DATED 30 DECEMBER 2010 - FULL TIME - NON-RENEWABLE THREE-YEAR TERM (DDG register no. 578/2018 - 98348., dated 25.06.2018)**

**DEPARTMENT OF FILOLOGIA E CRITICA DELLE LETTERATURE ANTICHE E MODERNE**

**N. 1 POSITION**

**Academic recruitment field:** 10/11 Spanish and Latin American Languages, Literatures and Cultures

**Academic discipline:** L-LIN/05 Spanish Literature

**Research Project:**

“Classical and contemporary Spanish Literature: History and Translation”

**Research activities:**

The successful candidate will conduct his/her research activity on topics pertaining to the subject area SSD L-LIN/05, with special reference to the *siglo de oro*, twentieth-century, and contemporary literature. In line with the research plans of the Dipartimento di Filologia e Critica delle Letterature antiche e moderne, it is understood that the newly appointed researcher will combine historical, literary and textual research activity in modern literature with work in literary translation and translation theory

**Hours of classroom teaching each academic year:** At least 60 hours

**Foreign requested language:** SPANISH - **Level of proficiency:** C2

**Maximum of scientific publications:** 12

**DEPARTMENT OF BIOTECNOLOGIE MEDICHE**

**N. 1 POSITION**

**Academic recruitment field:** 05/11 Genetics

**Academic discipline:** BIO/18 Genetics

**Research Project:** “Gene editing”

**Research activities:**

The researcher will be involved in the development of cellular and / or animal models for the application of gene therapy, in particular "gene editing" through CRISPR technology. The CRISPR system is a powerful advanced technique that allows to modify the genome in a very precise way. The aim of the project is to restore the normal sequence in hereditary diseases such as Alport syndrome and other rare diseases. A second application of the technology will concern the use of CRISPR to target and kill TP53-mutated tumor cells in various types of cancers such as leukemia, lung cancer and other types of solid tumors



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**Hours of classroom teaching each academic year:** 60

**Foreign requested language:** ENGLISH - **Level of proficiency:** Excellent

**Maximum of scientific publications:** 14

**DEPARTMENT OF SCIENZE STORICHE E DEI BENI CULTURALI**

**N. 1 POSITION**

**Academic recruitment field:** 10/A1 Archaeology

**Academic discipline:** L-ANT/01 Prehistory and Early History

**Research Project:**

“Historical and methodological approaches to human peopling process during Prehistory: Cultures, Landscape Archaeology, Settlement and Cultural Practices”

**Research activities:**

The research activity will be oriented to increase and further develop studies on prehistory in an interdisciplinary perspective and in a wide chronological range from Palaeolithic to Bronze Age. The research will deal with peopling processes analysis with a landscape archaeology approach aiming also to highlight the archaeological potential, also through the use of GIS. The research, focused on cultures, landscape archaeology, settlement and cultural practices, will have a historical-archaeological and theoretical and methodological issues. The research will be oriented on significant prehistoric contexts and developed within an international framework and in contact with wide research networks

**Hours of classroom teaching each academic year:** 72

**Foreign requested language:** ENGLISH - **Level of proficiency:** Advanced (C1)

**Maximum of scientific publications:** 12

**DEPARTMENT OF SCIENZE STORICHE E DEI BENI CULTURALI**

**N. 1. POSITION**

**Academic recruitment field:** 10/C1 Cinema, Music, Performing Arts, Television and Media Studies

**Academic discipline:** L-ART/07 Musicology and History of Music

**Research Project:**

“History of Music in Italy between 17th to 19th c. AD”

**Research activities:**

The researcher will undertake his/her research within the subject L-ART/07 Musicology and history of music. In particular, (s)he will focus the research on the literary, musical and archive sources produced in Italy between the 17<sup>th</sup> to 19<sup>th</sup> c. AD. The research consists of studies of the patronage, the ways of production, diffusion and sharing of musical repertoires through collections and publishing. The



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researcher will use the proper tools of the historical musicology. The research includes also the making and implementing of specific databases to store and record the musical heritage and the sharing of the research outcomes

**Hours of classroom teaching each academic year: 72**

**Foreign requested language: ENGLISH - Level of proficiency: Advanced**

**Maximum of scientific publications: 12**

**DEPARTMENT OF INGEGNERIA DELL'INFORMAZIONE E SCIENZE MATEMATICHE**

**N. 1 POSITION**

**Academic recruitment field: 09/F1 Electromagnetic Fields**

**Academic discipline: ING-INF/02 Electromagnetic Fields**

**Research Project:**

"Novel antennas for satellites and 5G applications"

**Research activities:**

Antennas are key components in several ICT systems, including the next generations of Communications, Environment Sensing, Space, and Imaging systems. Despite the high degree of flexibility and the technological maturity reached, new solutions are actively sought to improve upon existing ones in response to the continuous demand for increased performance. In this framework, tunable materials, metamaterials and metasurfaces appear to be the key concepts for improving the existing antennas, especially in space and 5G applications, and when multi-beams and reconfigurability are needed. The three-year research activity involves the exploration of the property and the definition of new models of metamaterials and metasurfaces, with emphasis on the radiation/absorption mechanism through planar and curved surfaces, with the objective to model, design, and building new antennas of medium-high gain

**Hours of classroom teaching each academic year: 60**

**Foreign requested language: ENGLISH - Level of proficiency: Excellent**

**Maximum of scientific publications: 30**

**DEPARTMENT OF BIOTECNOLOGIE, CHIMICA E FARMACIA**

**N. 1. POSITION**

**Academic recruitment field: 05/E1 General Biochemistry**

**Academic discipline: BIO/10 Biochemistry**



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**Research Project:**

“Biochemical studies on the pathophysiology of rare diseases”

**Research activities:**

The research activity will focus on the application of biochemistry to the study of human rare diseases. Particular emphasis will be placed on the elucidation of the pathophysiological molecular mechanisms of the onset and progression of such diseases, and on the identification of molecular biomarkers. Knowledge of scientific challenges related to rare metabolic and oncologic diseases, as well as to the development of adequate in vitro and ex vivo cell and tissue models, will be of specific interest

**Hours of classroom teaching each academic year:** 60

**Foreign requested language:** ENGLISH - **Level of proficiency:** Excellent

**Maximum of scientific publications:** 25

**DEPARTMENT OF MEDICINA MOLECOLARE E DELLO SVILUPPO**

**N. 1 POSITION**

**Academic recruitment field:** 05/H2 Histology

**Academic discipline:** BIO/17 Histology

**Research Project:**

“Role of the sAnk1.5 protein in the regulation of glucose metabolism in skeletal muscle cells”

**Research activities:**

The project aims to identify the role of the sAnk1.5 protein in the predisposition to type 2 diabetes. While it is known that sAnk1.5 interacts with the obscurin protein to organize the sarcoplasmic reticulum, it is not known by which mechanisms the increase in expression of sAnk1.5 associates with type 2 diabetes, as suggested by recent studies. The project is based on the use of two mouse models in which the two genes (sAnk1.5 and obscurin) have been eliminated and on the characterization of a new mouse model in which the protein sAnk1.5 is expressed at higher levels than controls. The project involves an assessment of blood glucose, in conditions of rest and after intense physical activity, in these animals and a study of the signal transmission pathways that are expected to be activated following the increase of sAnk1.5 expression

**Hours of classroom teaching each academic year:** 60

**Foreign requested language:** ENGLISH - **Level of proficiency:** optimal knowledge of written and spoken

**Maximum of scientific publications:** 15



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**DEPARTMENT OF SCIENZE FISICHE, DELLA TERRA E DELL'AMBIENTE**

**N. 1 POSITION**

**Academic recruitment field:** 04/A2 Structural Geology, Stratigraphy, Sedimentology and Paleontology

**Academic discipline:** GEO/02 Stratigraphy and Sedimentology

**Research Project:**

“Sedimentological and stratigraphic analysis of marine and continental clastic successions, aimed to the reconstruction of the sedimentary environments evolution, with particular reference to the fluvio-deltaic one”

**Research activities:**

The aim of the research project is the sedimentological and stratigraphic analysis (with particular reference to the modern facies analysis and sequence stratigraphic approaches) of some marine and continental clastic successions accumulated in sedimentary basins developed in different tectonic settings. These analysis will allow to investigate the various controlling factors that influence the depositional processes and the stratigraphic organization of clastic depositional environments, with particular reference to the fluvio-deltaic one, and of understand how is the sedimentary response to the interaction of different auto- and allo-cyclic controlling factors

**Hours of classroom teaching each academic year:** 60

**Foreign requested language:** ENGLISH - **Level of proficiency:** Good

**Maximum of scientific publications:** 15

**DEPARTMENT OF BIOTECNOLOGIE MEDICHE**

**N. 1 POSITION**

**Academic recruitment field:** 06/N2 Physical Training and Sports Sciences

**Academic discipline:** M-EDF/01 Physical Training Sciences and Methodology

**Research Project:**

“Electrical and mechanical adaptation in channelopathies, in patients with intraventricular delay, and in competitive athletes”

**Research activities:**

Differential diagnosis between channelopathies, intraventricular delay and exercise-induced electrical remodeling is often difficult. Furthermore, the effects of training on depolarization/repolarization patterns are not entirely known. Although imaging techniques could help in differentiating these conditions, few studies have investigated the behavior of cardiac mechanics by speckle-tracking echocardiography in patients with channelopathies or altered QRS and in competitive athletes. The aim of this research project is to investigate the potential effects of training on depolarization/repolarization patterns and to analyze and compare the electro-mechanical behavior among individuals with channelopathies, intraventricular delay and exercise-induced electrical



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remodeling in order to provide useful parameters to help physicians in the differential diagnosis

**Relief activities: With assistance activities**

**Hours of classroom teaching each academic year: 60**

**Foreign requested language: ENGLISH - Level of proficiency: High**

**Maximum of scientific publications: 20**

**DEPARTMENT OF ECONOMIA POLITICA E STATISTICA**

**N. 1 POSITION**

**Academic recruitment field: 13/A1 Economics**

**Academic discipline: SECS-P/01 Economics**

**Research Project:**

“Macroeconomic dynamics: theoretical models and empirical evidence”

**Research activities:**

The research activity is expected to be centred in the area of macroeconomics focusing on the interactions between goods and financial markets. Attention must be paid on theory of growth, business cycles and monetary and fiscal policies. The research activity must be developed following the internationally established methodologies

**Hours of classroom teaching each academic year: 60**

**Foreign requested language: ENGLISH - Level of proficiency: Advanced (C1)**

**Maximum of scientific publications: 12**

**DEPARTMENT OF ECONOMIA POLITICA E STATISTICA**

**N. 1 POSITION**

**Academic recruitment field: 13/C1 Economic History**

**Academic discipline: SECS-P/12 Economic History**

**Research Project:**

“The process of economic growth in a long run perspective: institutions, human capital and innovation”

**Research activities:**

The main aim of the research activity is to analyse the Italian economic growth process since Unification up to nowadays. The main focus will be on the role of institutions, the human capital formation process and the creation of innovative capabilities. The research activity, which have to use primary original sources, will adopt the international consolidate quantitative methods and a



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comparative approach

**Hours of classroom teaching each academic year: 60**

**Foreign requested language: ENGLISH - Level of proficiency: Advanced (C1)**

**Maximum of scientific publications: 12**

**ADMISSION REQUIREMENTS**

Applications for the comparative selection procedure are accepted from candidates holding a PhD or equivalent completed in Italy or abroad, or a diploma of medical specialization in the relevant area(s). In this case the PhD or equivalent qualification constitutes an advantage.

Applicants possessing a PhD or equivalent qualification obtained in Italy or abroad must also:

- have been awarded the National Scientific Qualification to practice as first or second level professors as laid down in art. 16 of Law no 240/2010 for the tender sector object of the call for applications or for one of the sectors included in its macro-sector;

or:

have benefited for at least three years, including non-consecutive ones, from:

- contracts as laid down in Art. 24 - paragraph 3- point a) of Law 240/2010 (junior researchers), or contracts entered into pursuant to art. 1, paragraph 14 of Law 230/2005 or similar contracts in foreign Universities;
- research grants pursuant to art. 22 of Law 240/2010, research grants pursuant to art. 51, paragraph 6, of Law 449/97, as amended, or postdoctoral scholarships in accordance with art. 4 of Law 398/89, or similar grants or scholarships in foreign universities.

As concerns these postdoctoral contracts, grants or scholarships, the candidate must fully describe their nature and duration, particularly should they refer to activities carried out abroad, in order to define the analogy.

Applications are also accepted from non-EU citizens who meet the admission requirements stated above.

**In relation to qualifications obtained abroad, it is necessary to attach the above-mentioned academic equivalence of the educational qualification in accordance with art 38 of Legislative Decree no 165/2001, or the certificate of equipollence with the PhD title in accordance with Italian University regulations issued pursuant to Paragraph 74 of Presidential Decree 382/1980, or the application for the request of the equivalence/equipollence certificate.**

In the latter case, applicants will be provisionally admitted to the call, it being understood that the academic equivalence/equipollence certificate must be in their possession at the time of recruitment.

Candidates must be in possession of the requirements for admission to the selection procedure by the deadline of this call.

**All candidates are admitted to the selection procedure conditionally, reserving the right to verify that they meet the requirements for admission to the selection procedure.** The administration can, at any time and with justifiable reason, exclude candidates who fail to meet the selection requirements.

Applications cannot be accepted from the following people: retired or currently employed full or associate University professors or researchers; those who have a relationship of consanguinity or



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affinity up to and including the fourth degree with a professor employed at the Department proposing the activation of the contract, or with the Rector, the Registrar or a member of the University Council.

## **Application Procedure**

Applications for admission to the procedures and the documents, **in pdf**, indicated below must be lodged by certified email to [rettore@pec.unisipec.it](mailto:rettore@pec.unisipec.it) or email to [concorsi@unisi.it](mailto:concorsi@unisi.it) within 30 days starting the day after the publication of this call in the *Gazzetta Ufficiale della Repubblica Italiana*.

Proof of receipt will be considered as: for applications sent by certified email (PEC) [rettore@pec.unisipec.it](mailto:rettore@pec.unisipec.it) - the date of the delivery receipt sent automatically by the system; for those sent by email: [concorsi@unisi.it](mailto:concorsi@unisi.it), the date of the University terminal that receives them. The University administration declines any responsibility for non-receipt of applications due to third party liability. To check whether an application has been received and is deemed complete, candidates can contact the University's *Servizio Concorsi e Procedimenti Elettorali* (tel. + 39 0577 235060 - 235059). Applications must be accompanied by a copy of the candidate's identity document under art. 38 of Presidential Decree no. 445 of 28 December 2000.

Applications must be compiled according the enclosed model (Annex A), providing all the information required.

Candidates must enclose with the application (**pdf Format**):

- scientific publications and its signed list;
- a signed curriculum vitae
- Declaration in lieu of certification (Annex B)
- copy of the candidate's identity document.

Publications must be submitted in the original language which, if other than English, French, German and Spanish, must be translated into one of said languages. The translated texts must be submitted as a certified true typed copy as required by current regulations.

Documents written in a foreign language other than English, French, German and Spanish, must be accompanied by an Italian translation, certified as true to the original text by the competent diplomatic or consular representation, or by an official translator.

## **EXAMINING COMMISSION**

The Examining Commission is composed of three full professors or researchers (including one from outside the University of Siena) belonging to the academic recruitment field or to a academic discipline in the same group of academic recruitment fields.

Prior to the start of the selection, the candidate must declare under his/her own responsibility, pursuant to article 7 of the University Code of Ethics, that he/she does not have a relationship of consanguinity or affinity up to and including the fourth degree with any member of the Committee, and that the Committee does not include his/her spouse or partner or any persons with whom he/she has business relations.

## **EVALUATION OF QUALIFICATIONS, PUBLIC INTERVIEW AND ORAL EXAM**

The selection is made by through a preliminary evaluation of candidates and a reasoned analytical judgment of their academic qualifications, curriculum and scientific productivity, including their doctoral thesis, if applicable, based on the criteria and parameters specified in Ministerial Decree 243 dated 25.05.2011 (Annex C).



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Following the preliminary evaluation, the top 10 to 20 per cent of the most merit-worthy candidates, and in any case no less than six, will be admitted to a public interview with the Commission concerning their qualifications and scientific work. If only six or less candidates apply, all of them will be admitted to the interview.

On the same occasion as the interview, candidates will be required to take an oral exam in a foreign language, to ascertain their proficiency, as declared in their academic qualifications. Candidates who do not pass the oral exam are not considered eligible.

Should the candidates be foreign nationals, they must demonstrate an adequate knowledge of the Italian language during the interview.

Following the interview, a score is given to the qualifications and each publication presented by the candidates who have passed the oral exam, according to criteria established in advance by the Commission itself.

The Commission writes up a report at the end of each individual meeting.

A notice inviting candidates for the interview and oral exam will be sent to the individual candidates at least fifteen days before the date of the interview and exam. This notice need not be given fifteen days in advance if all candidates admitted to the selection provide their explicit written consent.

Candidates must bring their identity document.

EU nationals must bring their passport or identity document issued by their country of origin. Candidates from non-EU countries must only bring their passport.

## **RANKING LIST AND PROPOSAL OF EMPLOYMENT**

Upon completion of the selection procedure, the Commission draws up a ranking list of eligible candidates. This list is valid for two years.

## **CONTRACT AND ACTIVITIES**

The successful candidate will be offered an individual, non-renewable three-year, fixed-term contract of employment regulated by the provisions in force concerning salaried employment, also in relation to tax, healthcare and social security contributions applicable to income from employment.

The University will pay for insurance against accidents and third party liability.

The total annual commitment to teaching, supplementary teaching and student support is equivalent to 350 hours; for the purposes of reporting on the research project, the research, supplementary teaching and student support together are figuratively equal to 1500 each year.

In the case of public funding, the contract will be terminated should the funding not be received. The trial period lasts three months.

## **INCOMPATIBILITY AND OTHER COMMITMENTS**

The research contract is not compatible with the following:

- any other contract of employment with a public or private body;
- research grants from other Universities;
- teaching contracts regulated by the relevant provisions in force;
- doctoral or post-doctoral research grants or, in general, any grant or scholarship for any purpose awarded by the University or any third party;



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**PUBLICATION**

This call and the summary in English are published on the University's Albo on line, on the web page at the following address: <http://www.unisi.it/ateneo/concorsi>, on the website of the Ministry for Education, University and Research ([www.miur.it](http://www.miur.it)) and on the European Union portal (<http://ec.europa.eu/euraxess/>).

Date digital signature

The General Director  
Emanuele Fidora

Endorsement  
The Procedure Manager  
Alessandro Balducci

ATTACHMENTS

- 1 Annex – A
- 2 Annex – B
- 3 Annex C