

ANNEX 5)

PROFILE

PhD PROGRAMME IN MEDITERRANEAN RIGHTS, ECONOMIES AND CULTURES

CUN Scientific Areas: 11a Historical, philosophical and pedagogical sciences, 12 - Legal sciences, 13 - Economic and statistical sciences, 14 – Political and social sciences

Scientific Subject Code: IUS/01, IUS/02, IUS/03, IUS/04, IUS/05, IUS/06, IUS/07, IUS/08, IUS/10, IUS/11, IUS/12, IUS/13, IUS/16, IUS/17, IUS/19, IUS/21, SECS-P/01, SECS-P/02, SECS-P/06, SECS-P/07, SECS-P/08, SECS-P/11, SECS-P/13, SECS-S/01, M-PED/01, SPS/12

Coordinator: prof. Alessandro Rubino

Administrative Office: Dipartimento Jonico in "Sistemi Giuridici ed Economici del Mediterraneo: società, ambiente, culture"

PEC: segreteria.djsge@pec.uniba.it

Duration: three years

Curricula: NO

Total available PhD positions 9 organised as follows:

1) Scholarship DM n. 117/23 – Scientific sector: SECS-P/13 Commodity Sciences

- **Project** n. 1 scholarship on the subject "Life Cycle Assessment (LCA) of photovoltaic systems with focus on the phases of predictive maintenance and end of life" co-financed by **ITALCAVE Spa**
- **Call for tender:** DM n. 117/2023
- **Scholarship thematic title:** Life Cycle Assessment, Commodity Sciences SECS-P/13
- **Description of research activities:** The objective of this PhD project is to apply the LCA tool to photovoltaic systems, with particular attention to the maintenance and end-of-life phases. The maintenance phase has a considerable impact on the environmental profile of the system. The information necessary for the activation of predictive maintenance paths dedicated to photovoltaic systems can be produced by applying different survey methods via UAV (unmanned aerial vehicle). The increasing extension of the renewable installations requires new data acquisition technologies to improve maintenance efficiency; in this sense, UAVs equipped with thermographic cameras lead to the reduction of maintenance costs and operational risks and increase the effectiveness of aerial inspections. During the PhD project attention will be paid to these technologies, to the LCA of the protocols and to the identification of the most efficient and environmentally friendly operating methodologies.
- **Research period at the Company:** 6 Months at Italcave s.p.a. via per Statte, 6000 – 74123 Taranto
- **Research period at Universities or research institutions abroad:** 6 months at Mineral and Energy Economy Research Institute Polish academy of Science ul. J. Wybickiego 7° 31-261 Kraków, Poland

2) Scholarship DM n. 117/23 - Scientific sector: SECS-P/02, SECS-P/06 economic policy, applied economics

- **Project** n. 1 scholarship on the subject "Impact of carbon obligations on the energy transition investments a focus on business models and power regulations in Sub-Saharan Countries and MENA region" co-financed by **GOPA-International Energy Consultants GmbH**
- **Call for tender:** DM n. 117/2023

- **Scholarship thematic title:** regulation, energy markets, investments, energy transition, economic policy, applied economics; SECS-P/02; SECS-P/06
- **Description of research activities:** Investments in modern infrastructures for energy are required to engage more directly with technological innovations and are subject to rapid replacement cycle. governments alone cannot afford to close these increasing infrastructure gaps through tax revenues. It is therefore critical in emerging markets (such as the Sub Sahara Africa – SSA and Middle East and North Africa - MENA) to attract private investors to intensify investments aimed at increasing productivity and promote sustainable growth. This project moves from an analysis of the factors that determine investment under uncertainty, in a low carbon transition context. It explores the relationship between market, regulatory and institutional factors on investment signals in the energy sector with two main focuses: 1) Test the ability of the existing business environment to deliver the desired quantity and type of investment and to identify investment gaps; 2) Define effective business models and regulatory frameworks able to tackle and reduce risk exposure.
- **Research period at the Company:** 18 Months at GOPA-International Energy Consultants GmbH, Hindenburgring 18; 61348 Bad Homburg v.d.H., Germany
- **Research period at University or research institutions abroad:** 6 mesi presso Institute of Environmental Technology and Energy, Economics (IUE) at Hamburg University of Technology, Hamburg, Germany

3) Scholarship DM n. 118/23 – PNRR 4.1. - Scientific Sector IUS/10 - Administrative Law

- **Project n. 1 scholarship** on the subject "The impact of the new regulations for the simplification and acceleration of administrative procedures instrumental to the implementation of the Recovery and Resilience Plan on the authorization procedures relating to the installation of plants powered by renewable sources, with particular reference to the environmental impact assessment procedure in the Arpa Puglia intervention area"
- **Call for tender:** DM n. 118/2023 PNRR 4.1.
- **Scholarship thematic title:** implementation of strategies for the simplification of administrative procedures, administrative law, IUS/10
- **Description** of research activities: The project aims to analyze the implementation of strategies for simplifying administrative procedures involving environmental interests, especially with reference to the renewable energy sector, in order to: 1) monitor the implementation of the measures introduced by the PNRR in terms of simplification and acceleration of environmental decisions; 2) measure the effectiveness, in terms of reduction of procedural times, of new environmental authorizations and administrative processes, with particular reference to environmental impact assessment procedures, strategic environmental assessment and the issuance of authorizations for installations powered by renewable sources; 3) deepen the role of the Regional Environment Agency (ARPA) in environmental procedures relating to the Puglia Region area; 4) provide a comparative analysis of the implementation of actions to simplify environmental procedures in the other Member States of the European Union.
- **Research period at Universities or research institutions abroad:** 6 months at University of Białystok, Mickiewicza 1, Białystok, Polonia

4) Scholarship DM n. 118/23 – PNRR 4.1. Scientific sector: SECS-P/11 - Economics of financial intermediaries.

- **Project n. 1 scholarship** on the subject "Climate risk, Sustainability and Complex Networks in Modern Financial Systems"
- **Call for tender:** DM n. 118/2023 PNRR 4.1.
- **Scholarship thematic title:** sustainable finance, climate risk management, risk management - Economics of financial intermediaries SECS-P/11 .
- **Description of research activities:** Natural disasters, linked to climatic, environmental, and human factors leave behind human, social and economic losses. These risks affect the resilience of economic activities, especially when linked to sectors that are particularly vulnerable to climate and environmental risks. As economic and financial systems are inherently complex, the simultaneous interaction of different agents and the heterogeneity of possible economic and financial interactions make these systems naturally suited to be modeled through the metrics of complex network science. In this project , we aim to examine the nature of the complex relationship between systemic and climate risk, identifying a link between financial systemic risks and climate change and the different trajectories through which climate change and related natural disasters can influence global economic and financial crises.

- **Research period at universities or research institutions abroad:** 6 months at Universiteit Leiden, Faculty of Mathematics and Natural Sciences, Leiden Institute of Physics, The Netherlands

5) Scholarship DM n. 118/23 – PNRR 4.1. PUBLIC ADMINISTRATION - scientific sector M-Ped 01 GENERAL AND SOCIAL PEDAGOGY

- **Project** n. 1 scholarship on the subject “Digitization of public administration communication: innovative processes and interactive participation methods”
- **Call for tender:** DM n. 118/2023 4.1. P.A.
- **Scholarship thematic title:** digitization of communication, Municipality of Taranto, GENERAL AND SOCIAL PEDAGOGY, M-Ped 01
- **Description of research activities:** The gradual affirmation of ICT within organizations and around the world has brought to light the need to reconsider the work of the public administrations in terms of management. The Digital Transformation, if oriented on the pedagogical-social level through an approach to the human resource training that is not limited and self-centred, but rather inclusive and participatory, can foster the achievement of the sustainable development goals of the different territories and represent the driving force for the economic growth and the conversion of the current communication model of the public administration with the outside. It makes it possible to adapt the complex reality of the public administration to the new challenges for innovation concerning society, education and work, with an important impact on the environment and the economy.
- **Research period in Public Administration:** 6 months at the Municipality of Taranto, Piazza Castello, Taranto (TA)
- **Research period at Universities or research institutions abroad:** 6 months at Universidad de León: Leon, Castilla y León, Department of General and Specific Didactics and Educational Theory, Spain

6) Scholarship DM n. 118/23 – PNRR 4.1. PUBLIC ADMINISTRATION - scientific sector M-Ped 01 GENERAL AND SOCIAL PEDAGOGY

- **Project** n. 1 scholarship on the subject “Active social policies for inclusion and for overcoming inequalities”
- **Call for tender:** DM n. 118/2023 4.1. P.A.
- **Scholarship thematic title:** active social policies, Municipality of Taranto, GENERAL AND SOCIAL PEDAGOGY, M-Ped 01
- **Description of research activities:** The UN 2030 Agenda and the program guidelines of the NRRP (Mission 5) highlight the chance of pursuing the sustainability project by focusing on the development of smart and inclusive cities. In fact, urban regeneration implies a better quality of life, not only on an economic level but also on a social one, i.e. with respect to its pedagogical framework and in the perspective of the construction of territorial networks committed to actions of care, assistance and social inclusion. The project aims at the identification and subsequent implementation of a community welfare model, based on a shared and participatory vision, in order to prevent inequalities and promote the social inclusion of the most disadvantaged categories (minors, NEETs, women, immigrants) in the Ionian territory.
- **Research period in Public Administration:** 6 months at the Municipality of Taranto, Piazza Castello, Taranto (TA)
- **Research period at Universities or research institutions abroad:** 6 months at Universidad de León: Leon, Castilla y León, Department of General and Specific Didactics and Educational Theory, Spain

7) Scholarship DM n. 118/23 – PNRR 4.1. PUBLIC ADMINISTRATION Scientific-disciplinary sector: SECS-P/13 Commodity Sciences

- **Project** n. 1 scholarship on the subject “Quantification of airborne industrial emissions of benzene through gas chromatography via drone to assess the environmental load with Life Cycle approach”.
- **Call for tender:** DM n. 118/2023 4.1. P.A.
- **Scholarship thematic title:** Life Cycle Assessment, Commodity Sciences SECS-P/13
- **Description of research activities:** The present research project starts from the primary need to develop an effective protocol for the measurement of benzene concentrations in airborne form through innovative technologies that include the integration of portable gas chromatographic instrument on UAV platform. The Project is fully in line with the themes of PNRR and aims to develop new technologies and protocols for monitoring airborne benzene emissions from industrial plants (steel, oil, etc.) with a Life Cycle Assessment approach. The UAV and gas chromatographic

technologies available in the department' laboratory will be available to the PhD student to carry out the experiments coordinated by ARPA at industrial centers (preferably steel and oil).

- **Research period in Public Administration:** 6 months at ARPA (Agenzia Regionale Protezione Ambiente), corso Trieste, 27, 70126, Bari
- **Research period at Universities or research institutions abroad:** 6 months at Institute of Sustainability in Civil Engineering RWTH, Aachen University, Mies-van-der-Rohe-Straße 1, 52074 Aachen, Germany

8) Scholarship DM n. 118/23 – PNRR 4.1 Cultural Heritage Scientific-disciplinary sector IUS/19 – History of medieval and modern law

- **Project n. 1 scholarship on the subject** “Law and Society in the Confraternities of Southern Italy”
- **Call for Tender:** DM n. 118/2023 4.1. Cultural Heritage
- **Scholarship thematic title:** Diritto e la Società del Mezzogiorno, Corporazioni di Arti e Mestieri, Storia del diritto medievale e moderno, IUS/19
- **Description of research activities:** The Confraternities have always been considered a historical and cultural heritage of the whole of Italy, but especially of the South. The study of this phenomenon, through the research of their origins and the comparison of their Statutes and Internal Regulations, aims to bring to light the Law and Society of the South, retracing, both from a historical and juridical point of view, the purposes that have given rise, and that still keep alive these realities that are well established in the panorama of our peninsula. The themes addressed in this project, therefore, will be the following: Origin of the Confraternities and Corporations of Arts and Crafts, with particular attention to their Statutes and Internal Regulations, but above all, historical reconstruction of the Law and Society of Southern Italy through the lens of the congregations.
- **Research period in research centers:** 6 months at Pontificia Facoltà Teologica dell'Italia Meridionale, viale Colli Aminei n. 2, 80131, Napoli – via F.Petrarca, 115, 80122 Napoli.
- **Research period at Universities or research institutions abroad:** 6 months at Universidad Rey Juan Carlos – Facultad de Ciencias, Jurídicas y Políticas, Madrid, Spagna

9) Scholarship DM n. 118/23 – PNRR 3.4 Digital Transitions Scientific sectors: SECS-P/02, SECS-P/06

- **Project n. 1 scholarship on the subject** “Renewable Energy Solutions deployment in the Mediterranean Region and South Saharan Africa and its determinants: A spatial econometric approach”
- **Avviso:** DM n. 118/2023 3.4 Transizioni Digitali.
- **Scholarship thematic title:** decentralized investments, renewable energy, regional and urban economy, spatial econometrics, economic policy, applied economics, SECS-P/02, SECS-P/06
- **Description of research activities** Promoting access to and increasing the supply of renewable energy is of fundamental importance for all countries in the Mediterranean area and neighboring regions, and in particular for those countries where the population has limited access to electricity. The present research project aims to provide an assessment of the enablers for decentralized investments in renewable energy (solar/photovoltaic/wind) by adopting both a country level approach and an approach with a higher level of geographical disaggregation. To this end, the research project foresees, applying a theoretical and empirical development of the regional and urban economy, the definition of a series of indicators that allow to identify the characteristics of the geographical areas in which decentralized investments in renewable energy sources are facilitated and an analysis of development policies that can encourage these virtuous processes using a spatial econometric approach.
- **Research period at the Company:** 6 months at Gestore dei Servizi Energetici GSE S.p.A., Sede legale Viale Maresciallo Pilsudski, 92 – 00197, Roma
- **Research period at Universities or research institutions abroad:** 6 months at Technoeconomics of Energy Systems Laboratory (TEESlab) at University of Piraeus, Karaoli ke Dimitriou 80, Piraeus 185 34, Greece

The PhD positions put out to tender with thematic scholarships pursuant DD. MM. n.117/2023 and n.118/2023 will be assigned according to the order in the merit ranking for each theme, until the places are completed.

Admission procedure:

The selection will take place pursuant to art. 6 of the call.

With regard to the places put out to tender with thematic scholarships pursuant to DD. MM. n.117 / 2023 and n.118 / 2023, the exam will be based on the evaluation of the qualifications and on the interview focusing on the discussion of an original research project (maximum 12000 characters including spaces) defined along the research lines of the doctoral course- The submission of the research project is an essential part of the application procedure , and therefore **must** be included together with the application and the document required for the call. Failing to do so will **determine the exclusion from the evaluation process**.

The interview will focus on the discussion of the research project and will evaluate its originality, methodological rigor and coherence with the research lines of the project. Th interview will also focus on the candidate's aptitude for scientific research and the coherence of his scientific and academic profile with the themes of the doctoral program. As part of the interview, the knowledge of the English will also be verified.

Procedures for carrying out the exam for foreign candidates:

Foreign candidates can choose to take the exam in Italian or in English.

Calendar and location of the admission tests:

Evaluation of qualifications and evaluation of the project 26 July 2023 (10:00 am)

Interview: 28 July 2023, 10:00 am

Examination venue Classroom IV Ionian Department in " Sistemi Giuridici ed Economici del Mediterraneo: società, ambiente, culture ", Via Duomo, 259 Taranto or remotely on Microsoft teams platform upon request.

Per ulteriori informazioni consultare il sito web: <https://www.uniba.it/it/ricerca/dipartimenti/sistemi-giuridici-ed-economici/postlaurea/dottorato-di-ricerca>