

Newsletter Number 2 Dec 2020

# Attracting and Encouraging Triple I Talent Mobility– Athenea3i



**Athenea3i** is a research fellowship programme focused on attracting highly talented researchers to the University of Granada (UGR) in order to benefit their research career with International, Interdisciplinary and Intersectoral opportunities.

This programme is enclosed within the Marie Skłodowska-Curie Co-funding of Regional, National and International Programmes (**MSCA-COFUND**) category and is 50% co-funded between the European Commission and the University of Granada, being the total budget **4.248.000 euros**.

The **researchers** hired by the UGR under the Athenea3i programme are working under the supervision of well-experienced Professors from the UGR. In this occasion, we dedicate this Newsletter to these renowned researchers: **The Supervisors**.

Some of them explain their experience as a supervisor of Athenea3i fellows as well as the connection of their research with the Athenea3i projects.

#### In this Newsletter...

Check out the <u>Featured News</u>! Visit the <u>European Researchers' Night 2020 Activities</u> You cannot miss the Interviews to Athenea3i Supervisors



## **FEATURED NEWS**



Researchers from the Athenea3i program of the University of Granada explain their projects at Lemon Rock – Canal UGR (Spanish UGR webpage)



Learn how to detect fake news on Twitter with TATGranada – El ideal (Spanish newspaper)

UGR scientists create 'time crystals', a new state of matter, using a supercomputer – Canal UGR (Spanish UGR webpage)

An artificial retina of nanoparticles restores sight to blind rats – El País (Spanish newspaper)





What's in a dress? – Business World (Philippine newspaper)

# EUROPEAN RESEARCHERS' NIGHT 2020 ACTIVITIES

Our coast calls for help – María Bermúdez Pita A futuristic view of eating disorders: understanding the emotions that drive unhealthy eating patterns – David García Burgos Entropy explained by coin toss - Carlos Pérez Espigares How to make transport infrastructure more sustainable and intelligent - Ana Jiménez del Barco Carrión

### **INTERVIEWS TO ATHENEA3i SUPERVISORS**

#### Athenea3i Supervisors' CV

Manuel Díez-Minguito is Associate Professor and member of the Environmental Fluid Dynamics Research Group (GDFA) at the University of Granada (Spain). His expertise is in coastal physical oceanography with experience in collecting and analysing data, and modelling marine environments. His present research interest is in the circulation and transport processes in estuarine and shelf environments. His main scientific contributions are on the salt and sediment transport mechanisms and tide-river-sediment-biota interactions in estuaries.



https://gdfa.ugr.es/personal/ mdiezm/

## Supervisor: Prof. Manuel Díez Minguito

### Fellow: Dr. María Bermúdez Pita

he Project: **FLOWPLAN** Jid Flood risk analysis under global warming for long-term coastal cities up planning

The supervision of the Athenea3i fellow - María Bermúdez - has been a very enriching experience. The project that she is carrying out is focused on analyzing current and future flood risks in coastal urban areas, a hotspot of vulnerability to the impacts of climate change. Responding to the risks posed by climate change is a promising and relevant research field, where knowledge growth is accelerating, and which receives a large amount of public and private research funds. It is therefore of great interest for the GDFA group to strengthen this research line. The background of the fellow in hydrological risks, obtained through her PhD in Civil Engineering at the University of A Coruña and her postdoctoral positions at the University of Bristol and the University of Leuven, has proven invaluable for this task. She has brought new perspectives into the group's research, contributing to the multidisciplinary approach needed to address the many challenges faced in tackling climate change. Her wide network of contacts and the relationship with the Outgoing Phase institution of the Athenea3i project (University of Florida) has also allowed us to enlarge our academic network and start new collaborative works with leading international researchers.

The research topic is of great relevance to my academic interests. Coastal settlements are often located at estuaries, where both inland and coastal processes drive flood risk. The combination of my experience in estuarine and coastal assessments with the fellow's background in urban flood modelling has enabled the development of a truly integrated approach to flood risk in these areas, which includes the analysis of the upstream catchment processes and their response to different climate scenarios. It has been a pleasure to provide hands-on training to the fellow in coastal modelling and first-hand knowledge of the case study sites located in the Mediterranean coast. From a project management perspective, having a well-defined mentoring and training working plan has been greatly beneficial for my role as supervisor, ensuring an adequate progress towards the project objectives.



Daniel Stich received a degree in Geophysics in 1998 from Ludwig-Maximilians-Universität, München, Germany, and a doctoral degree in Physics in 2003 from Granada University, Spain. During his career, he worked at Earth Science institutions in Italy, US, UK and Germany, and is now Professor of Physics of the Earth at Granada University. His main research focus is on seismology, including work on seismotectonics, seismic sources inversion, volcano seismology, wave propagation, historical earthquakes, time reversal, and numerical methods. He is author of 57 publications in SCI journals that received a total of 1565 citations to date. He has been supervising numerous MSc and PhD projects, and is now supervising for the first time an Athenea3i fellow, which is turning out to be a particularly enjoyable experience.

## Supervisor: Prof. Daniel Stich

## Fellow: Dr. José Ángel López Comino

#### Project: ASPIS

Assessing the Source Properties of Induced Seismicity by fluid injection on different scales through rupture directivity and extended fault inversion



This Athenea3i project is dedicated to understanding the source process of anthropogenic seismicity. Such man-made earthquakes may be associated with different exploration and industrial technologies, and may range from weak microseismicity to felt and even damaging earthquakes for example in the context of water reservoir operations, the exploitation of geothermal reservoirs, or wastewater disposal and hydraulic fracturing during oil extraction. Man-made earthquakes are worth paying attention for at least two reasons: First, they occur at shallow depths and ideally should be well recorded by dedicated seismic networks, thus offering an excellent opportunity to investigate the seismic source process in detail. Second, they are a major concern for the general public as well as the operating companies, and advances in our understanding of anthropogenic seismicity are key for improving the safety of operations.

For this purpose, we investigate seismic source geometry, rupture nucleation and rupture propagation in triggered or induced seismicity, as well as their relationship with the operation of the responsible facilities. This project is bringing together experience in different processing techniques and work on

various case histories at different scale. At the present stage, it is already characterised by stimulating discussions and elaboration of a large amount of source models. Currently, we are within the outgoing phase of the Athenea3i fellow at GeoForschungs-Zentrum (GFZ) Potsdam, Germany. This collaboration has come along with short visits of scientists from the partner institutions, is continuing online since the irruption of covid19 in early 2020, and is now already leading to a more consistent appraisal of cases of anthropogenic seismicity and the preparation of scientific reports.



## Supervisor: Prof. Pablo I. Hurtado Fernández

#### Fellow: Dr. Carlos Pérez Espigares

#### Project: HyfOQS

#### Hydrodynamics and fluctuations in open quantum systems

Understanding the physics of nonequilibrium systems constitutes one of the major challenges of modern theoretical physics. The solution to this challenge is encoded in the fluctuations that characterize systems out of equilibrium, their statistics and associated emergent structures. The formidable complexity of the problem has historically hampered progress along this fundamental research line. However, a number of powerful new tools for investigating fluctuating behavior in complex nonequilibrium systems have emerged in recent years, promising to change radically our understanding of nonequilibrium physics. These tools include advanced rare-event simulation algorithms, spectral methods for the analysis of the dynamics, and a macroscopic fluctuation theory (MFT) to understand fluctuations out of equilibrium, among others, together with exceptional computational resources to perform detailed, microscopic numerical simulations of complex behaviors.

Together with the Athenea3i fellow Dr. Carlos Pérez-Espigares, we exploit these new tools and resources to push forward the frontiers of knowledge in nonequilibrium physics. In particular, we are expanding the range of applicability of macroscopic fluctuation theory (used until now in systems too simple to be technologically relevant) to more complex situations, addressing along the way central problems in nonequilibrium physics, as e.g. the universality of non-local behavior. We are also using spectral techniques to analyze the dynamics of fluctuations, particularly near dynamical phase transitions, which offer key information on how to exploit this rich behavior in the design of mesoscopic devices and new states of matter. This has allowed us to propose a new path to build time crystals, a new phase of matter (recently proposed by the Nobel-prize winner Frank Wilczek) that breaks spontaneously continuous time translation symmetry.



In this way, my experience as a supervisor of the Athenea3i program at UGR cannot be more positive. The continuous scientific interaction with Dr. Carlos Pérez-Espigares, granted by the Athenea3i program, has enriched my research group, creating synergies that are reflected in the excellence of our scientific results.

https://ic1.ugr.es/phurtado

Prof. Hurtado research experience includes 4 years of PH.D. at the University of

Granada and another 17

years of senior research

experience, with 2 years in Boston University (USA) and

1 year in the University of

Montpellier II (France). Since

October 2006 prof. Hurtado

works in the Department of

Condensed Matter Physics at

the University of Granada, where he holds an Associate

Professor position since

2012. His research line is

focused on nonequilibrium

statistical physics, and has

top international journals,

Lett., etc., and two edited

led to 55 papers published in

including PNAS, Phys. Rev.

books. He has supervised 4

postdoctoral researchers, as

well as 6 Ph.D. students and

Hurtado has been invited to

talk at prestigious institutions

Rutgers, etc.), having visited

research centers around the

more than 30 international

more that 20 master and

bachelor theses. Prof.

(Harvard, Princeton,

world.

Berkeley, La Sapienza, Cambridge, CEA-Saclay,

Electromagnetism and

Rosario M. Sánchez Martín has developed her research career between the UK and Spain. For the past 16 years she has been working in the area of nanotechnology in biomedicine. Nowadays, Dr. Sánchez-Martín leads the research team NanoChemBio of the University of Granada (UGR) in Spain. She is Lecturer of the Deparment of Medicinal and Organic Chemistry in the School of Pharmacy of the UGR. When she finished her PhD at the UGR in 2002 she spent 9 years in the UK, firstly as postdoctoral fellow at the University of Southampton and later, in 2006, as independent researcher at the University of Edinburgh when she was awarded a prestigious Dorothy Hodgkin Fellowship from the Royal Society. In January 2011, she was awarded a Marie Curie CIG reintegration fellowship and she moved to the UGR. Since then, she has worked on transferring all her expertise and know-how in designing and developing nanotechnologybased platforms to the UGR. In 2013, she has been granted with her own research lab in the Centre for Genomics and **Oncological Research (GENYO)** integrated by Pfizer - UGR -Junta de Andalucía. She has been coinventor of 4 patents and founder of a start-up company -Nanogetic S.L. She is Chief of the Scientific Advisory board of this company. Additionally, NanoChemBio research group have already several R&D contracts with international biotech. Member of (i) Nano2clinic COST Action CA17140, (ii) The European Technology Platform on Nanomedicine (ETPN) and (iii) Nanomedicine Network for the Diagnosis and Treatment of Diseases with large social impact: cancer, atherosclerosis, infections (NanoCARE)

@SanchezUgr, @NanoChemBio

## Supervisor: Prof. Rosario Sánchez Martín

### Fellow: Dr. Belén Rubio Ruiz

#### Project: NanoTherHAi

Development of a novel nanotechnology-assisted antitumor strategy for combination therapy based on the implication of hyaluronic acid in cancer biology

My experience as mentor of Belen Rubio is extremely positive and fruitful. I strongly believe that Athenea3i programme has provided us with an unique opportunity to integrate in our team a top researcher with independent thinking, excellence research skills and knoweldge. Then her enrollment has enriched dramatically our team. I think that being awarded an Athenea3i grant has been a decisive step on her path to become an independent researcher.

NanoChemBio is a multidisciplinary research team that focussed its research on the design and development of chemical based therapeutic and diagnosis strategies with a clear translation outcome. A major goal of our team is to apply our know-how in both nanotechnology and chemical biology techniques to develop radical approaches for developing efficient diagnosis probes and selective therapies against cancer. Int his context, the Athenea3i Project lead by Dr. Rubio has perfectly integrated in our research team by creating an emerging research line focussed on the development of a nanosystem able to conduct both chemotherapy and photothermal therapy at the same time.

<u>https://www.genyo.es/research-groups/nanochembio-development-of-</u> <u>therapeutic-and-diagnosis-strategies/?lang=en</u>





María Carmen is a Professor of Construction Engineering at the University of Granada (Spain). She joined the University of Granada in 1997, following her career in construction engineering, where she has developed a significant portfolio of both teaching responsibilities and funded research projects. She is currently the head of LabIC.UGR research group (www.labic.ugr.es) composed of 14 people (professors, researchers and technicians), and the coordinator of the Civil Engineering Doctoral Studies Program at the University of Granada.



# Supervisor: Prof. María del Carmen Rubio Gámez

### Fellow: Dr. Ana Jiménez del Barco Carrión

#### Project: Bio-ROAD

Bio-Recycling off Asphalt mixtures at Decreased temperatures



Working as supervisor in a research project such as Athenea3i is an amazing and unique opportunity. This project Bio-ROAD is being carried out by an outstanding postdoc researcher, who has been previously well trained in a field with strong bonds with our research interests. This

has opened a lot of opportunities for the development of new materials, technologies and products, as well as the possibility of intensifying dissemination and outreach activities, thus being able to reach a wider audience.

Furthermore, the fellow is integrated in a recognized research group (in this case very well known before joining Athenea3i), with the necessary facilities to successfully develop her research project. She can share her work not only with the supervisor, but with the rest of the group, as well as with the associated collaborative network (with a strong representation of industry, research centres and public agencies in the field of road engineering).

It is very satisfying to see the progress she has reached after her first year of work and the possibilities for future research projects to perform with the findings achieved.

Specifically, she is working with recycled and renewable materials for pavements showing promising results at lab scale, setting up new devices to study different material's properties and developing frameworks to advance in the topic of sustainability assessment in pavement engineering. She has

participated in different communication activities such as the EU Researchers night, Science Week and Women's Day. She is also leading an international collaborative research group in RILEM and is disseminating her work scientifically through conferences and webinars. A big milestone for Bio-ROAD next year (2022) will be the delivery of the 1<sup>st</sup> international workshop on the use of biomaterials in with the collaboration of other pavements, universities and industry.



Francisco Perfectti is Professor of Genetics at the University of Granada (UGR). He obtained a Ph.D. in Biological Sciences at UGR in 1995. He did a postdoctoral stay at the University of Rochester (NY, USA), working on speciation genetics. During the 1997/98 academic year, he returned to UGR as Associate Professor. He has been a visiting professor at the University of California -Berkeley. He is a member of the governance board of the Excellence Unit Modeling Nature.

F. Perfectti teaches Evolutionary Biology and several postgraduate courses in the Master in Genetics and Evolution. He has been recognized with the UGR award for scientific excellence. He is a member of The Society for the Study of Evolution, the Spanish Society of Genetics, and a founding member of the Spanish Society of Evolutionary Biology. He is also a member of the editorial board of Scientific Reports. His research has been published in journals such as Nature, Evolution, Genetics, and Trends Ecol. Evol.



http://wpd.ugr.es/~fperfect

## Supervisor: Prof. Francisco Perfectti

### Fellow: Dr. Antonio Jesús Muñoz Pajares

Project: EXTENSITY

**EXTENded barcodes for monitoring biodiverSITY** 

In my research, I have analyzed the coevolutionary processes at the genomic level (parasite chromosomes, the evolution of repeated DNA) and the ecological level (evolutionary biology of the interaction between pollinators and plants). I have also



investigated the role of individual-based networks in the dynamics and evolution of populations.

I currently maintain two main lines of research. The first one analyzes the genetic basis of phenotypic plasticity in plants. The second one examines the ecological and genetic processes producing speciation, including hybridization, polyploidy, and local adaptation as speciation drivers. This last line of research interrogates how biodiversity is produced and maintained in natural populations. The project of the Athenea3i fellow A. Jesús Muñoz-Pajares integrates into this research line and apports a new perspective in how climatic change may reduce genetic diversity in natural populations at short temporal scales.

Dr. Muñoz-Pajares has joined evoflor (http://www.evoflor.org), the research group that I co-founded. He is bringing to evoflor his expertise in genomic library construction and in bioinformatic analyses. I think his research has

benefited from three main aspects: The group's intellectual milieu, cultivated through formal and informal conversations; the help that my research group has provided him in material resources; and the assistance from the group's technical staff.





Juan de Vicente is full professor of Applied Physics and the Director of the Singular Laboratory in Advanced Technologies F2N2lab at the University of Granada. He has led 14 Research Projects on Magnetic Soft Matter (>2.5 M€), funded by EU programs, Spanish Ministry and Junta de Andalucía. He has participated in 41 Projects and 15 Industrial Contracts (Total Marketing Services, Maxamcorp Holding S. L., Unilever R&D, PDVSA, Repsol-YPF, Kolmer S.A., Rylesa, Polymat, Operon, Nanogetic and NanoMYP). His publication record contains peer-reviewed JCR papers (>140, >90% in Q1), book chapters (33), patents (7, 2 PCT), books (5) and conference papers (>200). He has been appointed as external advisor of the German. Dutch and Italian Research Foundations and also evaluator for AEI, ANEP and ANECA. He is member of the Executive Committee of the International ERMR Conference, Spanish Society of Rheology, Spanish Group of Colloids and Interfaces (RSEF & RSEQ) and Editorial Board of the Rheologica Acta.

# Supervisor: Prof. Juan de Vicente Álvarez-Manzaneda

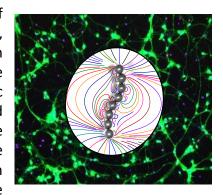
### Fellow: Dr. Mattia Bramini

#### Project: MAG-NEUROREG

Magnetic ferrofluid nanosystems as innovative neuro-interfaces to foster regeneration and restore network connectivity in neurodegenerative disorders

The Athenea3i program is the ideal framework to open new and high-risk forward looking lines of research. The beneficiaries of these contracts are highly trained researchers with high specialization. Thanks to the MAG-NEUROREG project we have incorporated a Biotechnologist with experience in Neuroscience into our team. Starting from highly specialized equipment that is currently available in the F2N2lab and the know-how of a

multidisciplinary group consisting of Physicists, Chemists, Chemical engineers, Biologists and Telecommunication engineers, the project aims to investigate the use of unprecedented unsteady 3D magnetic fields for neural reconnection, repair and stimulation. The results are expected to have a large socio-economic impact with the hope that eventually they may be of interest in rehabilitation therapies as well as the



treatment of degenerative diseases, like Alzheimer's or Parkinson's, to name just a couple.



https://www.ugr.es/~jvicente/ @Juan\_de\_Vicente http://sl.ugr.es/0bkV

I am Associate Professor at the Department of Microbiology of the UGR. In 2004 I initiated and directed a new research line at this Department that is now consolidated thanks to 5 projects of the National Plan of I+D+I of the Spanish Government that I have been granted as PI, 2 proposal from the regional and University funding, 2 grants for technology transfer and 4 Proposals for exchange program of researchers, 4 from the UGR program and one from the Fulbright Association (Washington), all of these as PI. I have published 54 articles in JCR journals (74% in Q1, 82% as first, last or corresponding author) and I have 2 patents. I have presented my results in more than 70 meeting (most of them international, 13 as invited speaker/keynote). I have directed 4 PhD Thesis and I have won the third price of the IDEAS contest, regarding innovative ideas. I am also the Chair of the Master in Biotechnology at the University of Granada, and the Chair of the Degree in Biochemistry. My research line is multidisciplinar. We study bacterial mineralization of carbonates and iron oxides. Lately, we are focused on the synthesis of biomimetic magnetic nanoparticles mediated by magnetosome proteins. We have patented this technology and we are collaborating with many researchers to apply that to the clinical sector, both in cancer therapy and in antibacterial treatments, plant diseases, enzyme immobilization and recycling, DNA extraction and water remediation.



# Supervisor: Prof. Concepción López Jiménez

### Fellow: Dr. Francesca Oltolina

Project: TAR-MA-LI-T Novel TARgeted functionalized MAgnetoLIposomes for cancer Therapy

Working with magnetic nanoparticles makes people feel skeptical about their potential applications. As long as they are used as substrates for enzyme immobilization and recycling or as biosensors or bioadsorbents is OK, but when it comes to clinical applications, there is always the same question: are they really useful?

Trying to convince people that our biomimetic magnetic nanoparticles are nothing comparable to those purely chemically synthesized that already exists, and that, unlike these chemically synthesized ones, our biomimetic magnetic nanoparticles are in better situation to be potentially applied in clinics, is challenging.

When Francesca Oltolina and I decided to go ahead exploring the clinical applications of our biomimetic magnetic nanoparticles, I thought that it could lead my group to an area in which our nanoparticles could be really useful and make a stepforward. After all the hard work my group has been putting in understanding biomineralization processes and taking inspiration from nature to produce those biomimetic nanoparticles, and after all the hard work put to patent them, going deeper in their applications in clinics seemed worthed. Dr. Oltolina, with a background in Biotechnology and Biomedicine, is the perfect bridge between our already multidisciplinary lab and clinics. Her project goes from the design of novel nanoformulations (based on magnetoliposomes embedding our biomimetic magnetic nanoparticles and novel antibodies), to their production, to their in vitro test and, finally, to their in vivo test.

Working with a researcher of this multidisciplinary background and abilities really opens up our research line, extend and consolidates our international collaborations and reinforce our research group, since these postdoctoral fellows are independent, able to design the experiments needed to complete their project, to manage students and to manage their own work plan and budget.

Also, undergraduate students that approach our lab have a life example of an international young researcher that is integrated in our laboratory and research line while, at the same time, thanks to her work, our group and research is internationally expanding and consolidating.

G. Jiménez-Moreno (Associate Professor UGR) is an expert on paleoecology and paleoclimate working on past lacustrine and marine sedimentary archives. He has published more than 79 articles included in the SCI (Scopus H index = 29; times cited: 2068) on palaeoenvironmental and paleoclimatic studies mostly based on pollen analysis. He has carried out research in southern Spain (especially in Sierra Nevada) but also in various locations in Europe and, due to a postdoctoral position, in the SW USA. He is currently PI of three funded research projects (MINECO and Junta de Andalucía) and advisor of a PhD student. He is also associate editor of Quaternary magazine (http://www.mdpi.com/journal/ guaternary/editors) and of the Spanish Journal of Palaeontology.

https://www.researchgate.net/p rofile/Gonzalo\_Jimenez-Moreno

## Supervisor: Prof. Gonzalo Jiménez Moreno

Fellow: Dr. Sahbi Jaouadi

#### Project: CERES

Climates, landscapes and historical social-Ecological systems RESilience in the semi-arid lands of central Tunisia and southern Spain

I am supervising/working together with Sahbi Jaouadi in the project called "CERES - Climates, landscapes and historical social-Ecological systems RESilience in the semi-arid lands of central Tunisia and southern Spain". Sahbi has done previous research about climate and human impact in the environments in Tunisia in the last 2000 years and the goal of this project is to compare these relationships in two semi-arid Mediterranean areas (Andalusia, Spain and Central Tunisia). This can be done studying historical sedimentary records containing signals that provide ecosystem dynamics that can be correlated to the historical and archaeological records for each region - tracing the interactions between the societies and their environments.

One of the most positive outcomes from working together with Sahbi in this research project is that it expands my research knowledge and area across the Mediterranean giving insight on how human societies were impacted by climatic variability on the northern and southern Mediterranean shores and the relationships between the adaptive strategies developed by different populations/cultures from their different socio-political and economic point of view to manage environmental stresses.

Finally, the project will try to use lessons learnt from the past regarding the resilience of social-ecological systems in both regions in order to reduce current and future vulnerability to ongoing climate changes and to address the challenges of implementing sustainable development policies.

The Athenea3i program then has given us an opportunity of working together in this exciting and ambitious international research project.



Ana Ruiz Gutiérrez is a professor in the Department of Art History at the UGR. Her research career is linked to her main lines of research: artistic relations between Spain and the Philippines (16th-20th centuries) through the route of the Galleon of Manila, historical-artistic heritage: Andalusia and the Americas: cultural relations. Implemented with emerging research lines, philippine ivory sculpture, silk, women and art routes (sea and land routes) between Europe - Asia. Specialized publications, highlighting the most recent: El Galeón de Manila. 1565-1815. Intercambios culturales. Granada: Alhulia: Universidad de Granada, 2016. ISBN: 978-84-15897-52-1. Lo que fue de ellas. Mujeres protagonistas en la ruta transpacífica del Galeón de Manila. Siglos XVI-XIX (Editor). Editorial Alhulia. 2018.



I got my PhD at the University of Granada, working in entanglement and complexity measures. As a postdoc I have worked in the Institute of Quantum Optics and Quantum Information (Austria), at the Massachusetts Institute of Technology (US), and the Singapore University of Technology and Design (Singapore). I returned to the University of Granada as a Marie Curie-Talent Hub fellow and currently I am a Junior Professor. My main fields of study are quantum thermodynamics, quantum computing, and quantum biology.



@spidermanzano





## Prof. Ana Ruiz Gutiérrez Dr. Stephanie Marie Coo

### **RED PH EU**

### Rediscovering Philippine Material Culture in European Archives and **Private Holdings**

I have had excellent experience working as the supervisor of Stephanie Coo, a history professor from the Ateneo de Manila University (Philippines), who worked on a project entitled "Rediscovering Philippine Material Culture in Iberian Archives" in Spain and Portugal. We have learned from one another, and our line of investigation about Philippine material culture in Spain has made it such that we have a common motivation to continue with our projects beyond the stay of Professor Coo in the Department of Art History at the University of Granada.

I would no doubt repeat the experience, since it is always enriching to learn more about the methods of other international researchers in related areas.



# Prof. Daniel Manzano Diosdado

## Dr. Juani Bermejo Vega

#### **QURE**

Quantum Computing with Minimal Resources

My fellow, Juani Bermejo-Vega, is an expert in different aspects of quantum computing. She is developing a very

interesting project on quantum resources for quantum computing. Beyond that, she has helped me in establishing a new line of research in quantum computing and machine learning. This line of research would be impossible to develop without her expertise. She actively participates in teaching and science communication, including supervising undergrad and master



students.

https://ic1.ugr.es/manzano/ http://entangledapples.blogspot.com/





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Vicerrectorado de Investigación y Transferencia

