



SPEED DATES | OPEN LABS

27 october, Buildings C3, C6 or C8, 12:30-14:30

Ciências PMA | Área de Gestão de Projetos
FCiências.ID | Associação para a Investigação e Desenvolvimento de Ciências

Title: Speed dating the (great) experts behind great scientists!

Location and Hour: C3 building | ground floor | room 3.1.05 | 12:30-14:30

Description: *Ciências PMA and FCiências.ID challenge you to meet a research management specialist and improve your funding opportunities through a thematic, personalized, 5 minutes speed date!*

If you want to know everything about funding opportunities for research, please join us, at lunch break, in C3 building! We have several different funding profiles for you to speed date!

A. National funds

1. *FCT: PTDC /Pex/ CERN/ CEEC /Cooperações Bilaterais/FACC*
2. *Portugal 2030*
3. *PRR – Recuperar Portugal*

B. International funds

1. *Horizon Europe: New Opportunities*
 - i. *Horizon Europe: A General Overview*
 - ii. *ERC Grants*
 - iii. *Marie-Sklodowska-Curie Actions*
 - iv. *Widening*
 - v. *COST Actions*

2. *Life 2021-2027*
3. *“La Caixa” Foundation Health Research Call 2022*

C. R&D Services

1. *Organizing events: make it easy*
2. *Build your proposal & make your budget*
3. *Public procurement issues*

D. External Cooperation and Intellectual Property

... 5 minutes with someone who works everyday with research management will give you crucial hints for your researcher life!

Send, until October 26th, an e-mail to fciencias.id@fciencias-id.pt with the subject Speed-dating referring the theme that interests you to enroll!

We will be accepting latecomers...if there are any slots left!

SEE YOU THERE!

BioISI | Biosystems & Integrative Sciences Institute

Meet BioISI researchers

Title: Speed-date with a Plant Biologist

Researcher: Célia Miguel (Prof)

Location and Hour: C3 building | ground floor | room 3.1.07 | 12:30-13:30

Description: *How to use genomics to guide strategies for plant disease resistance. Come and have a chat with a Plant Biologist working in Forest Genomics and learn about molecular approaches being applied to study the interaction between the pine wood nematode and maritime pine, to find strategies for resistance to pine wilt disease.*

Title: Genetic basis of chestnut resistance to ink disease

Researcher: Susana Serrazina (Researcher)

Location and Hour: C3 building | ground floor | room 3.1. 07 | 12:30-14:30

Description: *What makes chestnut resistant to ink disease? European chestnut is highly sensitive to the ink disease pathogen, which has high impact on fruit production in Portugal and Europe. The basis of chestnut resistance lies in Asian chestnuts, which have been naturally in contact with the pathogen and are resistant to it. Our group and collaborators have been comparing resistant*

and sensitive chestnuts at the gene level to disclose the basis of the defense response. The final objective is to improve the European chestnut. Come along to know more about this challenging project!

Title: Speed date with a Molecular Biologist

Researcher: Daniela Alves (MSc student)

Location and Hour: C3 building | ground floor | room 3.1.07 | 12:30-14:30

Description: *Roles in development, immunity, response to stress and cancer. What protein can do all of this? Curious? Talk to a Molecular Biologist that is working with the protein STAT3 and how its activity is regulated.*

Title: Speed-date with a Biomedical Scientist

Researcher: Iris Silva (Posdoc researcher)

Location and Hour: C3 building | ground floor | room 3.1.07 | 12:30-14:30

Description: *How can we predict in the lab what is the best treatment for a patient? Come have a chat with a researcher that does personalized medicine using stem cells from patients with Cystic Fibrosis to determine which is the best drug for each patient. We can talk about life in science research, how was moving from being a student to being a researcher, how it is to work with doctors or even how we can use our knowledge and the science that we do in BioISI to help to determine the best therapies for these patients.*

Title: Speed-date with a Plant Biologist

Researcher: Helena Santos (PhD student)

Location and Hour: C3 building | ground floor | room 3.1.07 | 13:30-14:30

Description: *Plants are fascinating creations of nature. They defend themselves against pathogens despite their absence of mobility! Come have a chat with a Plant Biologist working in plant defense against fungal pathogens, which is one of the most intriguing and crucial part of plant life. Using their own barriers such as cell wall, plants give their best against many different strategies and techniques used by fungi.*

Title: Diagnosing Cystic Fibrosis using next generation sequencing and rectal biopsies analyses

Researcher: Cláudia Rodrigues (Research Fellow)

Location and Hour: C3 building | ground floor | room 3.1.07 | 13:30-14:30

Description: *Cystic Fibrosis (CF) is the most common, lethal monogenic disorder in Caucasians, with an incidence of ~1:4,000-1:6,000 newborns in Portugal. This genetic disorder is caused by mutations in the gene encoding the CF transmembrane conductance regulator (CFTR) protein, a chloride and bicarbonate channel at the apical membrane of epithelial cells.*

CF is usually diagnosed early in life through clinical evaluation. Nonetheless, to confirm a diagnosis of CF, it is necessary to obtain evidence of CFTR dysfunction. This can be achieved through the identification of two CFTR gene mutations previously assigned as CF-causing or two positive sweat chloride tests (Cl⁻ concentration ≥ 60 mEq/L). However, some patients have a 'non-classical' presentation of the disease, which means that they present one or more typical symptoms of CF but can have intermediate sweat chloride levels (30-60 mEq/L) and/or one or two CFTR mutations associated with an 'undetermined prognosis'. In these cases, it is crucial to obtain conclusive evidence of CFTR dysfunction for a correct diagnosis. This can be achieved, for example, through the detection of CFTR-mediated chloride secretion in small rectal biopsies by using Ussing chamber.

Title: Speed-date with a Biochemistry PhD Student

Researcher: Violeta Railean (PhD student)

Location and Hour: C3 building | ground floor | room 3.1.07 | 13:30-14:30

Description: *How high-throughput assay methods are used for drug discovery? Come have a chat with a Biochemistry PhD Student that is working on identification of compounds acting on alternative chloride channels in Cystic Fibrosis. This method allows the identification of a small group of compounds among thousands from different drug libraries, that are most promising to target these channels.*

Title: Exploring Drug Repurposing in a rare disease: FDA-approved drugs in Cystic Fibrosis

Researcher: Filipa Castela Ferreira (MSc student)

Location and Hour: C3 building | ground floor | room 3.1.07 | 13:30-14:30

Description: *Can a drug repurposing strategy help find novel modulator therapies for Cystic Fibrosis (CF)? To date, there are four CFTR modulator drugs approved for the treatment of individuals with CF. Despite such progress, these therapies are only approved for specific CF-causing mutations and individuals taking them still face several disease-related symptoms and complications. Since there is still scope for additional or better modulators, a high-throughput approach recently developed by the FunGP group was used to screen the FDA-approved Drug Library. Selected drug hits are currently being validated individually and in combination with approved modulators.*

If you're curious and want to know more, come talk and get to know the work of a Master's student at BioISI.

Title: Speed-dating a Philosopher: PHILOSOPHY OF SCIENCE FOR SCIENTISTS

Researcher: João L. Cordovil and Gil Santos

Location and Hour: C3 building | atrium | 12:30-14:30

Description: “There is no such thing as philosophy-free science; there is only science whose philosophical baggage is taken on board without examination — Daniel Dennett, Darwin's Dangerous Idea, 1995”

How can Philosophy of Science contribute to the work of scientists? A thorough answer to this question would be too long, but here we will summarize it in five brief points. Philosophy of Science helps understanding what science and pseudoscience are; it clarifies concepts, helps formulating new theories or better understand existing ones; it analyzes the ethical implications of science and technology; it fosters the dialogue between science and society; it promotes critical thinking and helps thinking out the box. If you're curious or if you're not convinced, come and join us at the speed date on Ciências Research Day to know about the research done at the Center for Philosophy of Sciences of the University of Lisbon (CFCUL), with João L. Cordovil (scientific coordinator of CFCUL) and Gil Santos (co-Pi of the FCT research project EITNS - Emergence in the Natural Sciences: Towards a New Paradigm)

Meet CFTC Physicists

Title: Data Science at CFTC

Researcher: Hygor Melo

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Is it really “the sexiest job in the 21st century”? Unless you do it with proper training or else you will be mostly cleaning data sets. At CFTC we develop models for human mobility, information and virus spreading and to detect electoral fraud. Do you want to know how a physicist can make the difference in the world of data science? Come talk to Hygor.*

Title: Why I came to Portugal for a PhD in Soft Matter?

Researcher: Danne van Roon

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Are you thinking of doing a PhD? Do you just want to dip your toe in research? Come to have a chat with Danne. Danne is a PhD student from an European Training Network and he chose to do his PhD in Soft Matter, in Portugal. What better place to do it than at CFTC?*

Title: Why I came to Portugal for a PhD in Soft Matter?

Researcher: Cristóvão Dias

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Soft Materials are the hardest to crack. When you try to study them, without proper training, all hell breaks loose. Those up to the challenge are equipped with unique skills, which they acquire through life-long training, skills that make them “a nightmare” to unsolved problems in academia and industry. If materials are soft, we will look for them, we will find them, and we will solve them. Are you up to the challenge?*

Title: Why I came to Portugal for a PhD in Soft Matter?

Researcher: Nuno Araújo

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Reductionist statements that there is a theory of everything is not only a fairy tail. If true, it would mean that once it is found, there are no more jobs for Physicists. Fortunately, this is definitely not true for fundamental reasons. The theories of Physics are hierarchical and the best model and theory depends on the time, length, and energy scales. As recognized again by the Nobel committee in 2021, among the big challenges of the 21st century is the urge to understand the Physics of many body systems. "How collective is different from the sum of all parts?" or "What is emergence?" are examples of the many big questions. If you want to know more about them, just come and meet the experts...*

CQE-Ciências | Centro de Química Estrutural

Meet CQE researchers

Title: How to control properties and to design nanocrystalline materials for sustainable applications

Researcher: Olinda C. Monteiro (Prof)

Location and Hour: C3 building | ground floor | room 3.1.09 | 12:00-12:15

Description: *Innovative synthesis methodologies of doped, hybrid and composite nanomaterials have been used to control particles properties.*

If we have the control over their properties, can we anticipate the performance of such semiconductor nanoparticles, for instance for photo-assisted applications? What we need to know to decide about those systems to predict the success in future applications? Titanate nanotubes is an extremely versatile semiconductor material that allows us to dream about a more sustainable world...

Title: Speed-date with a Chemist: When we leave our “comfort zone” ... we may find many answers

Researcher: Filomena Martins (Prof)

Location and Hour: C3 building | ground floor | room 3.1.09 | 12:00-12:30

Description: *Do you want to know how a physical chemist ended up studying multidrug-resistant tuberculosis? Have you ever thought how a research team is built? Do you know that scientists from different areas speak different “languages”? What is the importance of a project PI (Principal Investigator)?*

Let’s talk a bit about these and other questions and on how we learn from each other. Don’t miss it! See you soon!

Title: Crystals and their Skeletons

Researcher: Carlos Bernardes (Researcher)

Location and Hour: C3 building | ground floor | room 3.1.09 | 13:30-14:30

Description: *Crystals are everywhere in our life. They are found in the rocks on our planet, in food, in electronic devices, and literally inside of us. Thus, understanding how crystals are formed and how this process can be controlled is crucial for our society, as it allows the development of better products (e.g., active pharmaceutical ingredients) using more environmentally friendly methods. Achieving this goal requires comprehensive knowledge of how crystalline materials are formed from their base units (e.g., molecules). For this, a large variety of experimental and theoretical methods are required, some of them I'm currently developing at Centro de Química Estrutural. (<http://mol2cryst.rd.ciencias.ulisboa.pt/>)*

Title: Tackling drug resistance in fungal infections: a molecular biophysics approach

Researcher: Rodrigo de Almeida (Prof), Joaquim Trigo Marquês (Prof) and Andreia Bento-Oliveira (PhD student)

Location and Hour: C8 building | floor 4 | room 8.4.67 | 12:00-12:30

Description: *Did you ever stop to wonder how impactful are fungal infections? Fungal infections and multidrug resistance are a major health concern, but also have vast social-economic impact through food losses.*

Which strategies can be undertaken to fight multidrug resistant fungal infections? Sphingolipids are major lipid components of the plasma membrane of eukaryotes and their organization in the plasma membrane is critical for many vital cellular functions. Since their structure and biophysical properties present fundamental differences in fungal and mammalian membranes, one of the most important found in our lab at Ciências, it is urgent to deeply exploit those differences, as they provide a unique opportunity to reach significant breakthroughs to overcome fungal infection.

Talk with us to discover the elegant strategies provided by Molecular Biophysics to investigate fungal membrane organization and drug-membrane interactions.

GFM | Grupo de Física Matemática

Meet GFM Mathematicians

Title: **Mathematics through the looking glass**

Researcher: James Kennedy (Prof)

Location and Hour: C6 building | ground floor | room 6.1.15 | 13:30 - 14:30

Description: *Have you ever wondered what research in mathematics looks like? Come have a chat with a mathematician working in analysis and partial differential equations about the shape of the field. How can ideas from linear algebra help us to solve differential equations? What do eigenvalues have to do with Fourier series and frequencies of vibrating objects? Why are most musical instruments essentially one-dimensional? And what properties can one "hear" based only on their resonant frequencies? All these questions can be answered by treating equations such as the wave equation as a linear operator between vector spaces, an idea at the heart of functional analysis that underpins much of the modern theory of partial differential equations, and also has applications or ties to such diverse areas as quantum mechanics (Schrödinger operators) and even data analysis (the search for clusters in data sets).*

Title: **Optimal transport and entropy**

Researcher: Léonard Monsaingeon (researcher)

Location and Hour: C6 building | ground floor | room 6.1.11 | 13:00 - 14:30

Description: *Optimal transport was first introduced in 1784 by G. Monge, a French engineer, and later rediscovered by L. Kantorovich in the 1940's, a Soviet mathematician who was awarded the Nobel prize in economics for his work on the subject. In this session I will try to describe how*

optimal transport allows to understand the link between diffusion (for example of the heat in a room) and entropy, thus providing a self-contained view on the 2nd principle of Thermodynamics.

Title: Speed-date with a Mathematical Physicists

Researcher: Davide Masoero (FCT Researcher)

Location and Hour: C6 building | ground floor | room 6.1.11 | 13:00 - 14:30

Description: *It is often observed that the critical behaviour of mathematical systems is governed by universal laws, which can be described via solutions to a class of nonlinear differential equations known as Painlevé equations. We will explore how singularities of solutions to these equations self-organise in regular patterns.*

IA | Instituto de Astrofísica e Ciências do Espaço

Title: Speed-date with Astronomers

Researcher: IA research team members

Location and Hour: C3 building | ground floor | room 3.1.05 | 12:30-13:30 and 13:30-14:30

Description: *Do you want to be taken on an out-of-this-world trip to the stars, planets, galaxies and beyond? Researchers at Ciências do it everyday (and quite often everynight), using instruments which are also developed in-house and either placed in remote powerful telescopes or in orbiting unparalleled observatories. How far can we reach? How do we ensure state-of-the-art Science is produced at Ciências, now and for the coming decade? Do come for a ride with IA researchers and risk discovering a parallel universe...*

IBEB | Instituto de Biofísica e Engenharia Biomédica

Meet IBEB researchers

Title: Speed-date with a Social Neuroscientist

Researcher: Carlotta Cogoni (postdoc)

Location and Hour: C3 building | ground floor | room 3.1.05 | 12:30-13:30

Description: *The the “#metoo” and “#timesup” movements have increased the necessity to understand why sexual assault and harassment of women is such a prevalent problem. It has been theorized that among other factors, a dampening of the perpetrator’s empathic feelings*

toward the victim of the violence drives the tendency to act violently. In this speed date we will shed lights on neural and behavioral process that might explain why women are still victims of sexual harassment. Specifically, studies on empathic responses toward humans and objects and their automatic perception will be discussed.

Title: Non-invasive electrical stimulation strategies in neurorehabilitation

Researcher: Sofia Rita Fernandes (postdoc)

Location and Hour: C3 building | ground floor | room 3.1.05 | 13:30-14:30

Description: *Electric currents have been applied since the last four decades for the treatment of many neurological conditions. Most approaches include surgical implantation of stimulating electrodes, as in deep brain stimulation for the treatment of Parkinson's Disease. These procedures often result in higher costs and medical risks, thus non-invasive brain and spinal stimulation (NIBSS) has been considered as a potential alternative to invasive approaches. Randomized control trials and pilot studies have uncovered the therapeutic potential of NIBSS in neurological and psychiatric conditions (e.g. attention-deficit-hyperactive disorder, depression, spinal cord lesions, motor neuron diseases). In this speed-date, we will discuss new trends in neurorehabilitation with NIBSS and how computational numerical models can contribute for a more personalized and targeted therapeutic approach using non-invasive stimulation.*

LASIGE | Computer Science and Engineering Research Centre

Title: Speed-date with a Data Scientist

Researcher: João Batista (PhD student)

Location and Hour: C3 building | atrium | 13:30-14:30

Description: "In nature, biological structures that are more successful in grappling with their environment survive and reproduce at a higher rate" - John R. Koza, author of Genetic Programming (1992)

Biology and Computer Science are too different? Come have a chat with a Data Scientist that is working with Genetic Programming, one of the many Evolutionary Computation methods that are inspired by the evolutionary theories of Charles Darwin. Using these methods, the algorithm evolves a population of Artificial Intelligence models that compete among themselves for a higher chance of propagating their genetic code through crossovers and mutations. This system allows the evolution of mostly anything, from satellite antennas to AI bots for games.

Meet LIP Physicists

Title: Spectroscopy of Heavy Barions and the Quark-Diquark Model

Researcher: André Torcato (MSc student)

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Over the years we have found a lot of particles. Some more well known than others. You have probably heard of electrons, photons and the Higgs boson. But how much do you know about quarks and the particles they form? Come learn more about some of these particles: the baryons, and how the quarks form them. You'll be surprised by what is needed to learn something as simple as their mass.*

Title: Neutrinos and the Universe

Researchers: José Maneira (Prof) and Ana Sofia Inácio (PhD Student)

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *Over the years we have found a lot of particles. Some more well known than others. You have probably heard of electrons, photons and the Higgs boson. But how much do you know about quarks and the particles they form? Come learn more about some of these particles: the baryons, and how the quarks form them. You'll be surprised by what is needed to learn something as simple as their mass.*

Title: Speed-date with Theoretical Particle Physicist

Researchers: João Pires (Prof)

Location and Hour: C3 building | ground floor | room 3.1.06 | 12:30-14:30

Description: *In this speed-date we discuss the branch of physics that tries to answer the most fundamental questions about Nature, such as, what are the basic blocks of matter in the Universe, and how these interact to make what we are made of.*

The Standard Model of particle physics is currently our best theory to answer these questions. It explains how particles called quarks (which make up protons and neutrons) and leptons (which include electrons) make up all known matter. It also explains how force carrying particles, which belong to a broader group of bosons, influence the quarks and leptons.

Despite being our current best theory of particle physics, the Standard Model can't explain observable features of our Universe, such as the existence of dark matter, or the matter-antimatter asymmetry in the Universe. Current experiments running at the Large Hadron Collider (LHC) at CERN collect data from proton-proton particle collisions at high energies to explore these questions helping theorists build a more complete theory describing Nature.

OPEN LABS

Open Labs activity: We invite you to a live experience of Ciências Research in Chemistry, Biochemistry and Physics with guided tours to research labs of the Centro de Química Estrutural (CQE) and Laboratório de Instrumentação e Física Experimental de Partículas (LIP).

CQE Research Labs

Researcher(s)	Hour	Rounds	Participants/Round	Room	Research Lab Area
Prof. José Nogueira / Dr. Nuno Neng / Oriana Gonçalves	12:00-13:00	2	8	8.2.48	Analytical Chemistry / Sample Preparation and Chromatography Techniques
Profª. Cristina Moiteiro / Profª. Helena Gaspar	12:00-12:30	1	8	8.5.55	Marine Chemistry Laboratory/Natural Products
Profª. Ana P. Carvalho / Drª. Ana S. Mestre	12:00-13:00	2	8	8.3.60	Adsorption and Adsorbent Materials
Profª. Olinda Monteiro	13:00-14:30	2	6	8.3.47	Nanomaterials/synthesis and photocatalytic applications
Prof. Fernando Santos / Drª. Carla Queirós / Dr. Xavier Mendes	13:30-14:00	2	5	8.4.31	Thermophysical Properties / Viscosity and Electrical Conductivity Measurement
Profª. Ângela Santos / Drª. Ana Cristino / MSc Luís Nobre	13:30-14:00	2	5	8.4.32	Fluid Science and Engineering. Measurement of Densities, speeds of sound and refractive indices.
Profª. Filomena Martins	14:00-14:30	1	6	8.3.12	Chemical Kinetics and Solution Calorimetry
Prof. Fernando Antunes / Profª. Helena Soares	14:00-14:30	1	6	8.4.61	Redox Biology/Cell Culture
Profª. Susana Marinho / Prof. Bruno Carmona	17:00-17:30	1	6	8.4.61	Redox Biology/Cell Culture
Prof. Jorge Correia / Profª. Ana Viana	12:00-13:30	unlimited	to decide in the lab	8.3.46/47/62	Interfacial Electrochemistry
Profª. Rodrigo F.M. de Almeida / Dr. Joaquim Trigo Marquês / Andreia Bento-Oliveira (PhD student)	12:00-13:30	unlimited	to decide in the lab	8.4.67	Molecular Biophysics
Profª. Amélia Rauter / Dr. Nuno Xavier / Dr. Jaime Coelho	17:00-17:30	1	8	8.5.40/41	Organic chemistry
Prof. Manuel Minas da Piedade	13:00-14:00 and 17:00-18:00	2	15	8.3.49/53	Molecular Energy Laboratory

LIP Research Labs (half an hour tour to all 3 labs)

Researcher	Hour	Participants/Round	Room	Research Lab Scientific Area
Luis Peralta	13:00-14:30	6	8.5.23	Radiation Physics in space, environment, art and health
Daniel Galaviz			8.5.15	Nuclear Physics and Reactions in Stars. Study the functioning of Stars in the laboratory
João Gentil			8.5.08	Sparkling materials and radiation detection. Application to ion beam radiotherapy