ISR-Connected 3.0 issue #11

January & February 2020,

Welcome to the first issue of 2020, that contains different news and achievements of our community, as well as new calls at FCT (projects, PhD scholarships). As the world fights the spread of new coronavirus, let us follow the advice from the health care authorities, including washing our hands often with soap and water!
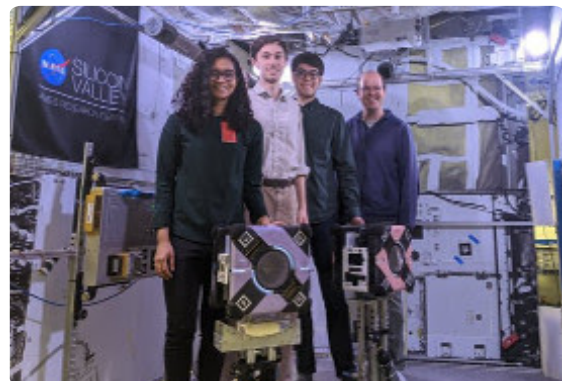
José Santos-Victor

What's New

PhD Award
Congratulations to Janir da Cruz who received a distinction for Best PhD Thesis 2019 from École

MIT Portugal Seedling Project
The MIT-Portugal seedling project ReSwarm, in which PhD student Monica Ekal takes part,

Polytechnique fédérale de Lausanne. His research was developed within the Técnico-EPFL joint Doctoral initiative and during that period he was a collaborator at LaSEEB. The Brain Mind Institute at EPFL awards this distinction to students of their School of Life Sciences, for their high-quality thesis and outstanding research work. Learn more about 'Neural compensation mechanisms of siblings of schizophrenia patients as revealed by high-density EEG' here
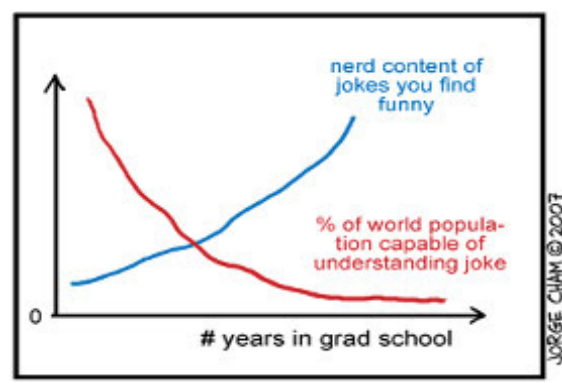
recently conducted a one week campaign at NASA Ames performing ground testing with the NASA Astrobee free-flyer robot. They were among the first research teams (other than NASA's internal team) using this ground testing facility, and the first to deploy a Nonlinear Model Predictive Control (NMPC) algorithm on this robot. The ReSwarm project is coordinated by Rebecca Masterson from MIT and Rodrigo Ventura. More

IEEE EMBS Board Election

Congratulations to João Sanches, researcher and member of the board of Directors at ISR, where he has been developing work focused in biological and medical image processing, as well as statistical signal processing of physiological and behavioural data. He will be vice-chair of the Portuguese Chapter of IEEE Engineering in Medicine and Biology Society, the largest international society of Biomedical Engineers, congregating 12 thousand members spread across 97 countries. More

Iberian Team won in Abu Dabi

The team of 24 researchers and engineers from U. Seville, CATEC and IST (ISR and IPFN) won Challenge 3 of MBZIRC2020 and Ranked 4th in the Grand Challenge triathlon, in Abu Dhabi. They managed to put out a fire inside a home scenario, by using a mobile manipulator UGV. Other participants from research units such as CMU, ETHZ, U. Toquio, KAIST, UP Madrid, Indian Institute of Science, Danish Technical University, U. Aachen, or Danish Technical University missed out on an award of 250 000 USD. More

Opportunities & Events

Tec Labs Open Call

Call for Projects launched by Tec Labs, that is open until April 17. They're looking for applied research projects of science and technology, with teams of at least one element with affiliation with one of ULisboa Schools, to help them create a spin-off or license technology. Those approved by the selection process will take part in training and mentoring (May 6 & 9) before selecting the finalists (May 13). After that finalists will have access to a capacitation program, to help them develop their projects and bring them closer to the market. Learn more or apply here

PhD Courses

The PhD course Nonlinear Optimization is offered next semester, for the period of February-May 2020, if interested please contact João Xavier. Also, the PDEEC offers the Processing Big Data PhD course, contact Cláudia Soares for more information on the schedule. The course on Nonlinear Control Systems that is being offered through the Doctoral Program in EEC/IST will be taught by António Pascoal and the first lecture of the PhD course on Computer Vision took place February 21st at 10 am. Contact José Santos-Victor to learn if you may still join.

20th EPIA Conference

The EPIA Conference on Artificial Intelligence is a well-established European conference in the field of AI. The 20th edition, EPIA 2020, will take place in Lisbon on September 7th-9th, 2020. As in previous editions, this international conference is hosted with the patronage of the Portuguese Association for Artificial Intelligence (APPIA). The purpose of this conference is to promote research in all areas of AI, covering both theoretical/foundational issues and applications, and the scientific exchange among researchers, engineers and practitioners in related disciplines.

Research Data Scientist

The candidate will integrate the Research team of Cleverly in Lisbon Portugal and she/he will work on the strategic mid-term vision of the company. At the same time, the candidate will have access to real data from our clients and she/he will be part of a startup that works in an agile way and develop and test solutions that bring value to the customer as early as possible. The candidate will be involved in various company events and she/he will have the opportunity to participate in international conferences and training programs. Learn more and apply here

24th RoboCup Submissions

The 24th Annual RoboCup International Symposium will be held in conjunction with RoboCup 2020 at the Bordeaux Exhibition

IEEE RAS Summer School

The IEEE RAS Summer School on Multi-Robot Systems will be held at the campus of Czech Technical University, in Prague. The content will

Centre, France. The call for submission of papers reporting innovative research with relevance in areas of robotics and artificial intelligence is open until April 15. Within the described scope of topics, they also encourage submissions of high-quality overview articles, papers describing real-world research, and papers reporting theoretical results. Learn more

be focused on systems of cooperating aerial vehicles and the topics addressed are composed to provide the participants with the necessary knowledge to understand the available theory. There will be real-world experiments with a fleet of autonomous micro aerial and ground vehicles, on the last day of the Summer School. Applications open here

Priberam Labs

Priberam is hiring for a senior research position in NLP and ML. Priberam Labs is a highly-technological company based in Lisbon, Portugal. Their research team conducts applied and exploratory research in the areas of Machine Learning and Natural Language Processing, to create and improve core technology. Their main business interests lie within three vertical pillars: health, media monitoring, and legal. Apply here

PhD & Postdoc Opportunities

The European Research Council (ERC-Synergy) project GALVANI is a multi-disciplinary project at the interface of epilepsy, biomathematics, biophysics and engineering. They have several open positions. At the EU level, there's also a one-year postdoctoral position, by the Belgian National Fund for Scientific Research, involving strong collaboration with the control engineering department of the University of Liège.

Media & Culture

270 Seconds of Science

90 Segundos de Ciência is a radio show which airs on Antena 1 and gives voice to Portuguese scientists from many different fields. Their team recently interviewed our researchers: Rute Luz on her work with Raposa plus challenges on participating in an analogue space mission; João Costeira about Feedbot, a meal assistant robot that tracks the head of its user; and Rita Nunes

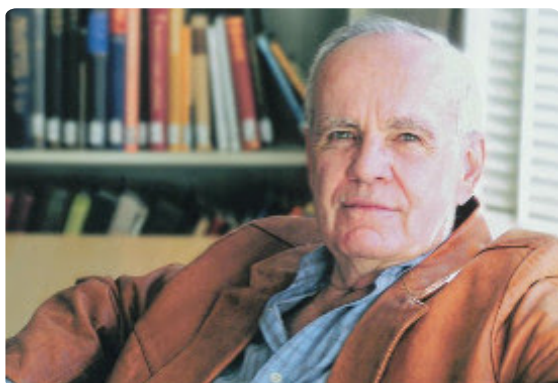## Isabel Ribeiro in Antena 2

Isabel Ribeiro was a pioneer of mobile robotics in Portugal and an important figure in the development of robotic technology. Her fascinating career at Instituto Superior Técnico is matched by her many passions and never-ending curiosity. Professor Ribeiro's career had a very important parallel component of project management and here a passion for science

on how she and her team are developing software for the diagnosis of atrial fibrillation (arrhythmia). Listen to the episode on Feebot here, the interview to Rute Luz in this link and the latest episode, with Rita Nunes, here

carried to several Institutes and peers. To learn more about her story you can listen here to an episode of the Antena 2 show 'No Tempo das Dálias', which shares some of her achievements and endeavours.

DURABLE Dissemination

The EU project DURABLE will apply drones and robotics to accelerate the performance of wind and solar power in the Atlantic region. You can learn more and watch an explanation of the contribution by the several partners, including ISR-Lisboa/Técnico researchers. You'll also be able to see the UGV developed by IRSg in action, including the prospects of using the vehicle for maintenance and inspection in solar farms.

Ocean measures round table

Invited by the Portuguese Ministry of the Sea, Professor António Pascoal was part of the round table at Academia das Ciências de Lisboa, during an event organised to discuss Ocean Observation and Protection Measures. Advocating for closer collaboration in Ocean sciences Pascoal highlighted current projects in marine robotics stating that "we still lack truly autonomous systems operating at sea".

How to Write a Great Paper

Famous writer Cormac McCarthy has provided extensive editing to numerous faculty members and postdocs at the Santa Fe Institute (SFI) in New Mexico. He has helped to edit works by scientists such as Harvard University's first tenured female theoretical physicist, Lisa Randall, and physicist Geoffrey West. This article collects his advice on essential points so that they can be shared with everyone, together with tips on were combined as tips on how to write a compelling article. Read them here

Lecture on humanoid robots

José Santos-Victor joined a session by Academia das Ciências de Lisboa, a Nacional institution created to promote research, development and dissemination, which exists since 1779. Invited to participate in their regular 'Science Class Sessions' José Santos-Victor presented an interesting collection of examples of the use of humanoid robots to study human cognition, learning and sensorimotor coordination while offering engineers with new approaches to build artificial systems. Learn more here

To the attention of all PhD holders: the newest FCT call for scientific employment