Towards a new decade

Purpose

Promote new frontiers of knowledge in strategic themes, through the advancement of high-level education, research, and commercialization activities.





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UT Austin Portugal Program

Vision

Develop a knowledge-based society, and foster science and innovationbased companies to help Portugal face the challenges of the future.

Mission

Address a number of knowledge areas where scientists and companies in Portugal engage with the University and other institutions in Texas in multidisciplinary research and technology transfer and commercialization.

UT Austin Portugal Program

program areas

Advanced Computing

High Performance Computing, Quantum Computing, Data Science and Visualization **Medical Physics**

Emerging Cancer Therapies

Space-Earth Interactions

Space Technologies Sea Climate Clean Energy **V**

Nanotechnologies

Materials for New Markets TIE | UTEN

University Technology Enterprise Network

instruments

Strategic

Projects

Research

research

Exploratory Research Projects education

Advanced Training
Programs

Research Exchanges

innovation

Training	 startups
Mentoring	or tech star
Residency in Austin	
Industry Affiliates	

New program areas and instruments

Advanced Computing

Advancing Computing underpins most of Science, Technology, Engineering and Mathematics (STEM) impact in today's society. Simulation of complex physical and chemical systems, big data analytics, and training of deep neural networks pave the way for a whole new generation of exascale computing infrastructures worldwide. This program area will promote and support joint projects and training actions on high performance and high throughput computing systems, quantum computing, data management and visualization, aiming at better exploiting the use of advanced computing facilities, at the Texas Advanced Computing Center, Portugal and Europe in a variety of domains, including cities, agriculture, fisheries, space-earth observation, security, and health applications.

Medical Physics

The application of concepts and methods of physics to the diagnosis and treatment of pressing human diseases is emerging as a revolutionary approach to some new challenges that healthcare faces nowadays. This program area fosters the establishment of new joint ventures among UT Austin's Dell Medical School and Cockrell School of Engineering, UT's MD Anderson Cancer Center, and Portuguese research groups in medical physics, proton therapies, and radiation oncology. Aligned with the national strategy for the development of high energy particle beam therapies for cancer treatment, this initiative intents to boost the advanced training of oncology radiology experts.

Nanotechnologies

The areas of nanoscience and nanotechnology have demonstrated to have a tremendous impact in areas as health, the environment, energy, transportation, and information technology.

This program area establishes a new research and innovation agendas, involving complex materials engineering and science focused on an

integrative approach to nanoscience, over diversified applications. Further research will focus on the discovery and development of innovative nano materials, with a range of unique properties suitable for applications in space applications, sensing, the internet of things, information technology and energy harvesting and storage, with the engagement of the International Iberian Nanotechnology Laboratory (INL) and other research organizations in Portugal, as well as the various related initiatives at UT Austin, including the NSF Materials Research Science and Engineering Center (MRSEC) for Dynamics and Control of Materials (CDCM).

Space-Earth Interactions

UT Austin Portugal foresees a new research agenda involving transatlantic and north-south cooperation in complex engineering systems and science towards an integrative approach to space technologies, sea, climate and clean energy.

The program's agenda on this area will focus on exploiting the potential of integrating spaceborne, airborne, marineborne, along with underwater, data, towards a better understanding of the ocean, including deep sea areas, and its interactions with the earth and the atmosphere, aiming to improve predictive capabilities under climate change scenarios. This research will be developed together with the installation of the Atlantic International Research Center (AIR Center) which aims at creating a federated network for the management and processing of Atlantic data ranging maritime safety to the identification of biological resources, fisheries, the impact of climate change.

TIE | UTEN

Building on the scientific achievements in Portugal during the last decade, TIE | UTEN provides a comprehensive early venture assessment strategy, leveraging its previous high-impact work in transforming science into valuable technologies for businesses and helping Portuguese startup to attain success globally.