

EMPHASIS NEWS

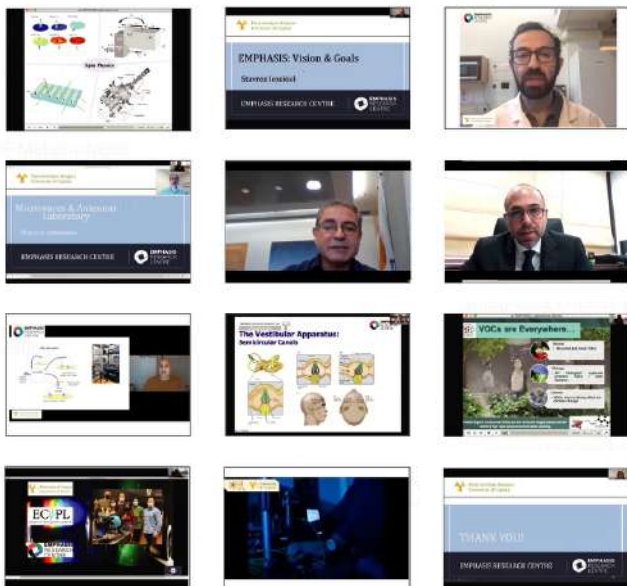
VIRTUAL LAUNCH EVENT

25/11/2020

“THE MISSION OF PROMOTING THE DEVELOPMENT OF KEY ENABLING TECHNOLOGIES IN CYPRUS IS BEING ACCOMPLISHED THROUGH THE INTERDISCIPLINARY NATURE OF THE CENTRE - PROF. TASOS CHRISTOFIDES”

With the Virtual Launch Event, held via teleconference, on the 25th of November the Emphasis Research Centre has debuted.

The event had almost 100 registered participants, representing more than 30 organizations, including universities, government entities, and private companies. Among the speakers, the Rector of the University of Cyprus, Prof. Tasos Christofides, and Dr. Nikolas Mastrogiannopoulos, Chief Scientist of the Republic, expressed their support for the centre's mission in advancing the sector of key enabling technologies in Cyprus. During the event, the acting director, Prof. Stavros Iezekiel presented the vision of EMPHASIS in the context of the current technological scene, in Cyprus and internationally. The event concluded with a series of scientific talks from a variety of research projects undertaken in the centre. The complete programme of the event is provided on page 2. The momentum and exposure gained through the launch event puts EMPHASIS on the way to becoming an internationally recognized and locally respected entity in the field of technological research.



Interdisciplinarity and collaboration is key in achieving our vision.

“EMPHASIS SHARES OUR NATIONAL VISION TO FURTHER ENHANCE THE LOCAL RESEARCH AND INNOVATION COMMUNITY .. ADDING VALUE ACROSS ALL SECTORS OF THE ECONOMY”

- DR. NIKOLAS MASTROYIANNOPOULOS



TALKS AND PRESENTATIONS

INTRODUCTION

Prof. Tasos Christofides, Rector of the University of Cyprus

Dr. Nikolas Mastrogiannopoulos, Chief Scientist for Research and Innovation

EMPHASIS Research Centre: Vision & Goals

Prof. Stavros Iezekiel, Acting Director of EMPHASIS

EMPHASIS Research Laboratory Presentations

Presentation of Selected Research Projects in Electronics, Microwaves & Antennas, Photonics and Sensors

PRESENTATIONS -PART 1

- **Medical Electronics**, Prof. Julius Georgiou
- **Sensors for Precision Agriculture**, Dr Marios Sophocleous
- **Resveratrol loaded Polymeric Micelles for Theranostic Targeting of Breast Cancer Cells**, Dr Yiota Grigoriou
- **White Light Emitting Structures Based on III-Nitrides and Lead Halide Perovskite Nanocrystals**, Dr Modestos Athanasiou
- **Multi-bacteria, Multi-antibiotic Testing Using Surface Enhanced Raman Spectroscopy (SERS) for Urinary Tract Infection (UTI) Diagnosis**, Dr Katerina Hadjigeorgiou

PRESENTATIONS -PART 1

- **Electric-Field Measurements of Microwave Circuits**, Dr Haris Votsi
- **Integrated Circuits for RF Metasurfaces**, Loukas Petrou/Kypros Kossifos
- **Influence of Carriers in Spin Pumping in Organic Semiconductors**, Constantinos Nicolaidis
- **Microwave Photonics for Space**, Georgios Charalambous
- **Wireless Power Transfer (WPT) and Far-Field RF Energy Harvesting**, Dr Abdul Quddious

THANK YOU TO THE ATTENDEES!
IN CASE YOU MISSED IT *CLICK HERE*



RESEARCHER'S NIGHT

27/11/2020



SENSE AND THE CITY

Smart sensors make a smart city! Sense changing conditions in the air, the water, its surroundings, and its inhabitants. With miniaturized cost-effective chemical sensors, we can make sense of scents for cents. Sensors are all around us, communicating via wireless technologies and the internet of things to create an intelligent city of the future.

Our virtual booth exhibited our projects on sensors for many applications, from chemical detection to healthcare, and beyond! For example: how millimeter-waves can monitor your vital signs from a distance, and how small capsules, which when swallowed, sense intestinal cancer. Visitors to our booth discovered how microdevices and nanoparticles can quickly detect molecules in your breath, saliva or sweat, to check for disease markers; how silicon microchips are designed, and how they are now used not only for electronics but also to process light for the internet of the future. These and other exciting demonstrations were presented and explained by our researchers.

Our research is sponsored by companies and by national and European funders, including Horizon 2020 and the European Defence Agency and European Space Agency. In partnership with these funders, our vision is to transform Cyprus into a centre of high technology.

POSTER HALL PRESENTATION



PeroGaN: Nowadays, there is a continuous increasing demand for wireless data traffic, which is currently limited by the available radio frequency spectrum. To this extend LEDs can help to tackle this problem, by enabling the data transmission with the use of light at much higher speeds owing to their fast response. The PeroGaN project, aims to produce a novel light emitter, by merging two promising semiconductor families, III-Nitrides and lead halide perovskite nanocrystals (LHP NCs) into novel nanostructured architectures. The proposed project will be investigating the potential flow of energy from the donor material (III-nitrides) to the acceptor (LHP NC), via radiative pumping but also via efficient nonradiative energy transfer, aiming to achieve next generation white light emitters for visible light communications, also known as LiFi. - **Dr Modestos Athanasiou**

PROJECTS RELATED TO THE RESEARCHERS NIGHT:



PeroGaN: The project is supported by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 831690.

VISORSURF: This project has received funding from the European Union via the Horizon 2020: Future Emerging Topics call (FETOPEN), under grant agreement No. 736876.

THANK YOU TO:



FOR MORE INFORMATION PLEASE VISIT OUR WEBSITE OR CONTACT US:

www.emphasis.ucy.ac.cy | info.emphasis@ucy.ac.cy

FROM ALL OF US AT **EMPHASIS RESEARCH CENTRE**
MERRY CHRISTMAS AND
A HAPPY NEW YEAR!



FOR MORE INFORMATION PLEASE VISIT OUR WEBSITE OR CONTACT US:

www.emphasis.ucy.ac.cy | info.emphasis@ucy.ac.cy