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Green careers guide

Yiolanda Englezou
Cyprus



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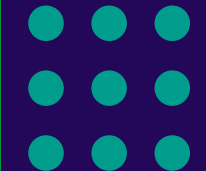
Cyprus



Dr. Yiolanda Englezou is a Post-Doc Researcher at the KIOS Research and Innovation Centre of Excellence, University of Cyprus, since completing her PhD in Statistics from the University of Southampton in 2018. Her research was within the field of Statistics and specifically the design of experiments, focusing on the development of methods for designing experiments for the calibration of physical and computational models, for example models derived from an underlying scientific knowledge. Yiolanda has been able to utilize the expertise gained through her studies in the UK to undertake cutting-edge research that can help towards the development of important technologies and advances in the area of Intelligent Transportation Systems (ITS). ITS consist of new technologies which can increase the capacity of the existing infrastructure and contribute towards reducing traffic congestion, fuel consumption gas emission and traffic accidents. To work in this area, Yiolanda was awarded a prestigious Marie Skłodowska Curie (MSCA) Widening Fellowship to work at the KIOS Center of Excellence in Cyprus.

As Yiolanda explains ITS have the potential to transform road transportation, personal mobility and undesired phenomena associated with current road transportation systems, e.g. traffic congestion, will be reduced and safety will improve. Recent studies have showed that an intelligent vehicle (IV) fleet will have a beneficial effect on noise pollution, leading to a general reduction of noise emissions. It has been proven that the use of IVs can help reduce the significant environmental impacts of the transportation system in many ways. Smart routing, self-parking, eco-driving, improved crash avoidance and platooning have the potential to reduce greenhouse emissions and achieve lower overall fuel consumption that can potentially alleviate the urban heat-island effect which contributes to climate change, now faster than at any point in the history of modern civilization. Impacts related to climate change are evident across regions and in many sectors important to society, such as human health, agriculture and food security, water supply, transportation, energy, ecosystems, and others. Such undesired impacts are expected to become increasingly disruptive throughout this century and beyond, hence it is of great importance to study IVs from a green industry perspective.

Yiolanda is able to combine her knowledge and expertise gained during her studies in the UK, with her employment at the KIOS CoE, which also collaborates with Imperial College London, to pursue a career that is highly multidisciplinary which can be notoriously hard. Patience and determination are two important qualities that should distinguish a researcher, but most importantly being flexible and unprejudiced to change research directions and gain the best practices from all fields involved.





Yiolanda's research project BITS, has received funding from the European Union's Horizon 2020 research and innovation programme (No 101003435), aims to transfer statistical learning tools in the area of ITS and develop novel methodologies and algorithms for quantifying uncertainty in the use of IVs. This project will provide an accurate representation of a network of IVs along with the probabilistic uncertainty concerning the vehicles, to gain insights on their performance, reliability and safety and improve the predictability of the system. It is a highly interdisciplinary project that combines methods from Engineering, Statistics and Computer Science. BITS will bring together the

best practices and state-of-the-art methods of different fields. The project will contribute towards the deployment of IVs in real traffic networks and our everyday lives, which will subsequently provide significant benefits on the environmental aspect of road systems.

Project's website

<https://www2.kios.ucy.ac.cy/BITS>

