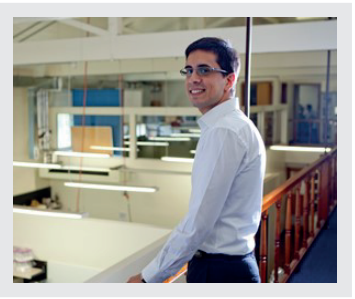
Foreword about Alexander Argyros, Senior Research Fellow, University of Sydney, Australia:



Alexander Argyros

Dr. Alexander Argyros was born in Cairo, Egypt in 1980. He completed a BSc (Advanced) degree with first class honours from The University of Sydney in 2001. He also completed his PhD in physics at the University of Sydney's Optical Fibre Technology Centre, in 2006, for which he was awarded the Australian Institute of Physics Bragg Gold Medal. Currently he is the Deputy Director of the Institute of Photonics and Optical Science (IPOS) and a Senior Research Fellow in the School of Physics, at the University of Sydney.

Dr. Argyros's initial research interest lay in photonic crystal fibres and photonic bandgaps, with a focus on understanding the guidance mechanisms in these fibres, and a strong experimental program on developing these fibres using polymers. Currently, his research is focused on two further projects on dielectric-based terahertz waveguides, and on metamaterials. Both these fields are relatively young and a lot of exciting research remains to be done.

The terahertz waveguide projects aim to address the practicality of using waveguides and this frequency range for practical applications, most importantly in security and medical sensing. The focus is on transferring knowledge developed in the context of microstructured fibres, to the space of THz radiation in a sensible way. Conveniently, polymers are a good material for such investigations and show the promise of low loss. Importantly, these may complement other work on metallic waveguides by offering features such as flexibility.

The work on metamaterials also has a practical aspect in investigating different fabrication methods, but also aims to use such intrinsically experimental work as a platform for triggering investigations into the properties of metamaterials and furthering understanding in that respect. The fabrication of metamaterials is advancing at a tremendous pace, and more complex metamaterials and metamaterials-based devices are not very far into the future.

Dr. Argyros's involvement with Advances in Electrical and Electronic Engineering arose from a collaboration with VSB-Technical University of Ostrava. The effort of the team in Ostrava for coordinating the journal and getting the recognition they have achieved thus far is truly commendable.