2016 Young Researcher Award in Optical Technologies

In 2016, for the ninth time, the Erlangen Graduate School in Advanced Optical Technologies (SAOT) will present the Young Researcher Award in Optical Technologies (YRA) to a young scientist with an excellent proven record in optics and optical technologies.

The 2016 designated laureate is Professor Darko Zibar from the Department of Photonics Engineering at the Denmark Technical University (DTU), Denmark. During the award celebration ceremony on July 8th, 2016, the award will be conferred on him in recognition of his outstanding contributions related to “Application of machine learning techniques to optical communication”.

Optical technologies have had a tremendous impact on the current communication infrastructure by enabling a high capacity data transport. This has resulted in a data explosion as the world is connected more than ever. It is expected that the global data traffic will exceed Exabit/s (10^{18} bit/s) in the near future. By 2020, our society will require capacities that are physically impossible to implement using current state-of-the-art optical communication technologies. To build future optical networks that can satisfy future capacity demands will require combination of several disciplines such as nonlinear optics, machine learning and optical fibre communication.

The expertise of Professor Zibar fits well to establish a fruitful collaboration between SAOT researchers and him, especially in the fields of optical communication. Moreover, the idea is to initiate new research directions by exploring the machine learning techniques for optical fibre sensors and cavity opto-mechanics.

As award winner he will have the status of a guest professor during his visits at the SAOT when he spends the prize money of 100,000 Euros in close collaborations with several SAOT scientists. For the next few years he will set up a small working group in Erlangen to pursue optical investigations in his area of expertise.

The award underlines SAOT’s objective to improve interdisciplinary research and education in development and application of optics and optical technologies, particularly at the interfaces between natural sciences, engineering and medicine in the six SAOT research areas: optical metrology, optical material processing, optics in medicine, optical material and systems, optics in communication and information technologies and computational optics. The Young Researcher Award in Optical Technologies strengthens the international networking of distinguished experts and provides a platform for the interdisciplinary exchange of innovative scientific ideas.

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