

Modulating Light

The future of photonic modulation formats
& the case for Communications in a Photonics TIC
University of Bristol, Thursday Sept. 29th 2011

UPDATE: Recommendations for a £20 million Photonics Technology Innovation Centre (TIC) are currently being developed. This meeting will also seek to identify evidence to support focusing part of a photonics TIC on optical comms.

As optical communication continues to be pushed faster, further and deeper, simple on-off-keying is being abandoned for more sophisticated modulation. Simultaneously, the evolution of silicon has enabled real-time processing at line rates to become possible, enabling greater complexity in modulation formats to become practical.

In core networks the whole toolbox has been deployed to make 100G communication viable, but what is left to take us to the next step beyond 100G?

In the access network, the challenge remains to push forward the speeds and distances that can be deployed, but at a cost point the user will pay. PIANO+ projects will act as a stimulus to push forward the technology, but what will be the best route?

The availability of new ADCs at 10G and above is transforming optical comms, but where will these take us next?

Meanwhile, new tools are required to study these new formats with capabilities to look more deeply into the signal.

This workshop will address some of the latest developments in these areas feeding into a open discussion to develop a roadmap, identifying the technology direction, the hurdles and the opportunities.

This event is for anyone researching, developing

Agenda (onsite badge pickup from 9:30am)

10:00 Welcome

10:10 Photonics research and advanced modulation *University of Bristol*

10:40 **100G and beyond: evolution of formats for core networks** *Prof. Nick Doran, University of Swansea*

11:10 *Coffee, networking*

11:40 **Developments in silicon for signal processing** *Neil Sellars, Fujitsu*

12:10 **Advanced formats for access networks** *Prof. Jianming Tang, University of Bangor*

12:40 **Measuring advanced formats** *Ricardo Arias, Aragon*

12:55 **Photonics TIC status & Comms** *John Lincoln*

13:00 *Lunch, informal discussions*

14:00 **Discussions: Roadmaps and the case for Comms in the TIC**

15:15 **Review of results**

15:25 **The iNet, Wrap-up, Follow-up**

15:30 **Tours of University of Bristol facilities**

or advising on components, modules and systems for advanced optical communications.

The **University of Bristol** have kindly agreed to host this meeting at the [Centre for Nanoscience and Quantum Information, University of Bristol, Tyndall Avenue, BS8 1FD](#).

A meeting by **SEPNET** in collaboration with the **ESP KTN & iNets South West Microelectronics funded by ERDF**
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Registration

Advanced registration is required at www.regonline.co.uk/advmod. The cost to attend this meeting is £25+VAT for non-sepnet members due to the generous support of our sponsors.