



Lichfield Science & Engineering Society

LICHFIELD **GARRICK**
Theatre & Studio

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8:00 pm on Wednesday, 10th May 2017
in the Studio Theatre of the Lichfield Garrick, Castle Dyke, Lichfield
following the Society's AGM

FIBRE OPTICS: THE PAST, PRESENT AND FUTURE INTERNET

Professor Andrew Ellis

Professor of Optical Communications

Aston University

For centuries optics has underpinned our ability to communicate remotely. Today over 99.9% of all data traffic passes through at least one optical fibre and the internet they support increasingly penetrates our everyday life. Demand for connectivity is continuing to grow, with "Fibre" now seen as the entry level. The importance of a "Pure Fibre" infrastructure is now seen a sufficiently critical to national success to prompt an announcement of government subsidy of £200m in the autumn statement. This talk will review the history of optical communications, the difference between "Fiber", "Pure Fiber" and "5G" and address the fundamental question "Is the internet nearly full, or at least economically changing?"

Professor Ellis received the B.Sc. degree in physics with a minor in mathematics from the University of Sussex, Brighton, U.K., in 1987. He received the Ph.D. degree in electronic and electrical engineering from The University of Aston in Birmingham, Birmingham, U.K., in 1997 for his study on all optical networking beyond 10 Gbit/s. He previously worked for British Telecom Research Laboratories as a Senior Research Engineer investigating the use of optical amplifiers and advanced modulation formats in optical networks and the Corning Research Centre as a Senior Research Fellow where he led activities in optical component characterization. He headed the Transmission and Sensors Group at the Tyndall National Institute in Cork, Ireland, where he was also a member of the Department of Physics, University College Cork. He research interests include the evolution of core and metro networks, and the application of photonics to sensing. He is now Professor of Optical Communications at Aston University where he is also deputy director of the Institute of Photonics Technologies (AiPT) group. He has published over 170 journal papers and over 25 patents in the field of photonics, primarily targeted at increasing capacity, reach and functionality in the optical layer.

Prof. Ellis is a member of the Institute of Physics and Technical Program Chair for the European Conference on Optical Communication, 2019 (Dublin).

For further information, please see our website at www.LSES.org.uk
Students and Members Free.

Visitors £5.00. Tickets are not issued in advance, please pay at the door.

Members must sign in. Those signing in before 7:50 pm will have precedence over all visitors.

This lecture is expected to finish by 10.00 pm.