L3MATRIX
LARGE, LOW POWER AND LOW COST DATA CENTRES

NEWSLETTER

Number 2
September 2017

ECOC 2017 – Special Edition

Dear Readers,

Welcome to the second edition of the L3MATRIX newsletter - ECOC 2017 Special Edition. For the Photonics Community September has been one of the distinguished months of the year due to the largest optical communication event in Europe: The European Conference and Exhibition on Optical Communication (ECOC). This year's ECOC in Gothenburg, Sweden from the 17th to the 21st of September 2017 is of particular importance for L3MATRIX since it gives us the opportunity to present proudly the highlights of the first half of the project.
This second Newsletter is dedicated to our project's wide range of activities during ECOC 2017. L3MATRIX will be among the exhibitors at the conference and we will present the 5th International Symposium for Optical Interconnect in Data Centres on Tuesday the 19th.
We look forward to meeting you there!

Booths, papers, talks

@Booth

The L3MATRIX team will be welcoming you at the **Stand #334**.

@Conference

Tu.1.C.4 • 09:30
Bert Offrein, IBM et al. "Broadband High Channel Count Optical Fiber Interface for Silicon Photonics using Polymer Waveguides"
Tu.2.A.2 • 14:00
Bert Offrein, IBM et al. „ Monolithic Silicon Photonic WDM Transceivers"
Workshop WS1 • Silicon Photonics • Session 3
Nikos Pleros, AUTH "Chip-scale disaggregated computing via Silicon Photonics: can be more than replacing a link!"

5th International Symposium for Optical Interconnect in Data Centres

Co-Located with 43rd European Conference on Optical Communication (ECOC 2017)
Date: Tuesday, 19th September 2017
Location: Meeting Room J2, ECOC Exhibition 2017
Svenska Mässan – Entrance number 2, Mässans gata 24, Gothenburg, Sweden

The symposium is focused on high-performance, low-energy and cost and small-size optical interconnects across the different hierarchy levels in data center. We intend to draw out and discuss the key technology enablers and inhibitors to widespread commercial proliferation of photonic interconnect in "mega" data centre environments and how the optical interconnect community can collectively help to address these.
The topics addressed will centre on passive and active embedded photonic interconnect technologies including optical circuit boards, polymer and glass waveguides, III-Vs, silicon photonics, photonic crystals and plasmonics in data centers.

5th International Symposium for Optical Interconnect in Data Centres - Programme

08:30 Registration

08:40 ***Welcome*** by Tolga Tekin (H2020 – L3MATRIX, Fraunhofer IZM)

Session 1: Enabling the data centre
09:00 Katherine Schmidtke (Facebook) ***Increasing datacenter bandwidth: A network or a technology issue?***
09:20 Richard Pitwon (Seagate) ***The inevitable truth: Photonics and the digitisation of society***
09:40 Robert Blum (Intel) ***Silicon Photonics and the future of optical connectivity in the data center***
10:00 Salah Ibrahim (NTT) ***Enabling a highly scalable OPS/OCS DC network with hybrid optoelectronic routers***
10:20 Elad Mentovich (Mellanox) & Chris Cole (Finisar): ***1300nm vs. 1550nm***

11:00 – 11:20 Coffee break

Session 2: Integrated photonics in the market place
11:20 Bert Offrein (IBM) ***Chip and system-level integration technologies for silicon photonics***
11:40 Kazuhiko Kurata (PETRA) ***Multimode commercial PIC transceivers***
12:00 Tom Marrapode (AIM Photonics) ***Overview of iNEMI-IPSR Board-Level Optical Interconnect Project***
12:20 Jeroen Duis (SmartPhotonics) ***The Integrated Photonics Revolution***
12:40 Peter de Dobbelaere (Luxtera) & James Regan (EFFECT Photonics): ***Si vs. InP***

13:20 – 14:20 Lunch

Session 3: Advances in Integrated Photonics
14:20 Lars Brusberg (Corning) ***Glass Waveguides for Board-level Optical Interconnects***
14:40 Hideyuki Nawata (Nissan Chemicals) ***Polymer optical waveguide on package substrate***
15:00 Blanca Ruiz (Reichle & De-Massari) tbd
15:20 Timo Aalto (VTT) ***Silicon photonics on 3 and 12 µm thick SOI for optical interconnects***
15:40 Takaaki Ishigure (Keio University) ***Polymer optical waveguide circuit for high bandwidth density on-board interconnects***
16:00 Round table discussion

16:20 – 16:40 Coffee break

Session 4: Where do we go next? Disruptive innovations
16:40 George Papen (UCSD) ***Parallel Optical Datacenter Networks***
17:00 George Kanellos (H2020 – STREAMS, University of Bristol) ***ICT-STREAMS - WDM concepts for on-board optical interconnects***
17:20 Manos Varvarigos (H2020 – NEPHELE, NTUA) ***NEPHELE project - Dynamic bandwidth assignment in slotted optical datacenter networks***
17:40 Joni Mellin (H2020 – L3MATRIX, ams) ***ams Silicon Photonics: 3D Photonic interposer platform***
18:00 Marco Romagnoli (H2020 – TERABOARD, CNIT) tbd
18:20 Segolene Olivier (H2020 – COSMICC, CEA-LETI) ***H2020 COSMICC : Silicon photonics for mid-board integrated transceivers targeting aggregated data rate beyond 1 Tb/s***

18:40 End of Symposium

Chairs: Tolga Tekin (Fraunhofer IZM, Germany), Richard Pitwon (Seagate, United Kingdom), Nikos Pleros (AUTH, Greece), Paraskevas Bakopoulos (Mellanox, Israel), Dimitris Apostolopoulos (ICCS / NTUA, Greece)

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