



Svenska OptikSällskapet
Swedish Optical Society
the Swedish Branch of the European Optical Society



Vad händer i Stockholm inom **optiken**?

Välkommen på ett **kvällsseminarium** under ca. en timmes tid

Torsdagen den 4 november 17.30 – 18.30

**KTH-Kista, Isafjordsgatan 22, Electrum
plan 3, section C, FMI seminar room**

Katia Gallo, PhD, Laser physics department, KTH

***Second-order nonlinear optical devices for advanced signal processing
in telecom systems***

Quadratic (c(2)) nonresonant optical nonlinearities offer several attractive features for the implementation of ultra-fast, low-noise and transparent telecom devices. In recent years, c(2) micro-engineering in waveguide configurations has dramatically increased the efficiency of quadratic devices (e.g. Periodically Poled LiNbO₃), driving a steady move towards practical applications. In this talk we shall overview recent applications of this technology to signal processing in advanced telecommunications systems, providing a few examples (e.g. devices for TDM to WDM format conversion, pulse chirp elimination, phase-sensitive amplification).

Marco Forzati, PhD, Department for networking and transmission, Acreo AB

DSP-based compensation of non-linear impairments in 100 Gb/s PolMux QPSK

PolMux QPSK has emerged as the solution of choice for the first commercial implementations of 100 Gb/s transmission systems. Thanks to coherent detection and digital signal processing (DSP), linear distortions such as chromatic dispersion (CD) and polarisation mode dispersion (PMD) can in principle be completely compensated for. And indeed, effective algorithms have been devised and extensively investigated that allow CD- and PMD-resilient transmission of 100 Gb/s over long distances, leaving optical noise accumulation and non-linear impairments as the factors ultimately limiting reach. In this talk, a simple algorithm is presented to compensate for intra-channel Kerr non-linearity (both intra- and cross-polarisation) arising in the transmission of PolMux QPSK signals at 100 Gb/s.

följt av

OPTOPUB 18.30 – 20.00

för alla som vill prata optik och fotonik eller annat

***OBS!! Alla som föranmält sig bjuds på mat av:
ADOPT, Linné center i Modern Optik och Fotonik.***

Viktigt: Föranmälan till sergeip@kth.se för mat!!!

Senast onsdag 3/11 före kl.13:00 !!!

*Sergei Popov
Ari T. Friberg*

Saulius Marcinkevicius