

Vad händer inom **optiken** i Stockholm? What happens in Stockholm in **optics** ?

Thursday 2nd Feb 17.30 – 18.30
Electrum at KTH-Kista, Isafjordsgatan 22,
Sal B, Plan 2

"Secure Quantum Communication"

Mohamed Bourennane, Professor, Department of Physics, Stockholms universitet

Quantum information science breaks limitations of conventional information transfer, cryptography and computation by using quantum superposition or entanglement as resources for information processing. I will present novel multiparty quantum communication protocols: secret sharing, detectable Byzantine agreement, clock synchronization, and reduction of communication complexity, and to show that they have quantum protocols which outperform any classical one. All these protocols use a single quantum system for communication instead of entanglement. We have realized these protocols in an optical fiber setup with sequential phase modulation on single photons.

" How long life will optical fibers have in service in the new applications (data centers, sensors, etc.) and in communications networks? "

Tarja Volotinen, expert, Ass. Prof., Tarja's Consulting AB, Hudiksvall

The mechanical and optical reliability during the past, over 35 years, in service are overviewed for optical fibers, splices and passive fiber components. The failure mechanisms that are possible in fibers, and also the methods how the risks for failures can be decreased or avoided, are presented. A description for the reliability course, available from Tarja's Consulting AB, is also given.

followed by Optopub 19:00-20:30, ADOPT, Linné center i Modern Optik och Fotonik, invites everyone who pre-registered for food and beverages.

OBS: Preregistration for food at:

<https://doodle.com/poll/3qudqsmcd74nwpj>

before kl.18:00 on Tuesday 31th January !!!

Welcome!

Lennart BM Svensson

Jens A Tellefsen, Jr

Gunnar Björk

Ilya Sutjugov

Sergei Popov

Optopubs are co-arranged by



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

