



Project: FP7-22457 PHASORS

**PH**ase sensitive **A**mplifier **S**ystems and **O**ptical **R**egenerator and their  
application**S**

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**Publications List 2011**

## PHASORS project publications 2011

“Noise Performance of a Frequency Non-degenerate Phase-sensitive Amplifier with Un-equalized Inputs,” Z. Tong, C. Lundström, M. Karlsson, M. Vasilyev and P. A. Andrekson, *Optics Letters*, vol. 36, n. 5, pp. 722-724 (2011).

“Optical Modulation Signal Enhancer Using a Phase Sensitive Amplifier,” C. Lundström, Z. Tong and P.A. Andrekson in *OFC'2011*, Paper OWL6, Los Angeles, CA

“Progress in Phase-Sensitive Fiber-Optic Parametric Amplifiers and Their Applications,” P.A. Andrekson, Conference on Lasers and Electro-Optics (CLEO), paper CWD1, Baltimore, USA, May 2011 (invited paper).

“Silica-Based Highly Nonlinear Fibers with a High SBS Threshold”, Lars Grüner-Nielsen, Søren Herstrøm, Sonali Dasgupta, David Richardson, Dan Jakobsen, Carl Lundström, Peter A. Andrekson, Martin E. V. Pedersen, and Bera Pálsdóttir; Invited paper, Paper MD4.2; IEEE Photonics Society Winter Topical meeting; 2011

“All-solid highly nonlinear singlemode fibers with a tailored dispersion profile”F.Poletti, X.Feng, G.M.Ponzo, M.N.Petrovich, W.H.Loh, D.J.Richardson, , *Optics Express* Vol.19(1), pp.66-80, 2011.

“Near-zero dispersion, highly nonlinear lead silicate W-type fiber for applications at 1.55 $\mu\text{m}$ ” A.Camerlingo, X.Feng, F.Poletti, G.M.Ponzo, F.Parmigiani, P.Horak, M.N.Petrovich, P.Petropoulos, W.H.Loh, D.J.Richardson, , *Optics Express* 2010 Vol.18(15) pp.15747-15756

“Field-trial of an all-optical PSK regenerator in a 40Gbit/s 38 channel DWDM transmission experiment,” R.Slavík, J.Kakande, F.Parmigiani, L.Grüner-Nielsen, R.Phelan, J.Vojtěch, P.Petropoulos, D.J.Richardson, *OFC 2011* Los Angeles 6-10 Mar 2011 PDPA7 (Postdeadline).

“All-optical regeneration based on phase sensitive amplification”, R.Slavík, J.Kakande, F.Parmigiani, P.Petropoulos, D.J.Richardson, *CLEO/QELS 2011* Baltimore 1-6 May 2011 (Invited).

“Stable and efficient generation of high repetition rate (>160 GHz) subpicosecond optical pulses,” R.Slavík, F.Parmigiani, L.Grüner-Nielsen, D.Jakobsen, S.Herstrøm, P. Petropoulos, D.J.Richardson, *IEEE Photonics Technology Letters* Vol.23(9) pp.540-542, 2011.

“Robust design of all-optical PSK regenerator based on phase sensitive amplification,” R.Slavík, F.Parmigiani, J.Kakande, M.Westlund, M.Sköld, L.Grüner-Nielsen, R.Phelan, P.Petropoulos, D.J.Richardson, *OFC 2011* Los Angeles 6-10 Mar 2011.

“QPSK phase and amplitude regeneration at 56 Gband in a novel input-idler-free non-degenerate phase sensitive amplifier.”, J. Kakande, A.Bogris, R.Slavík, F.Parmigiani, D.Syvidis, P.Petropoulos, D.J.Richardson, *OFC 2011* Los Angeles 6-10 Mar 2011.

“Coherent all-optical phase and amplitude regenerator of binary phase-encoded signals”, R. Slavík, A. Bogris, F. Parmigiani, J. Kakande, M. Westlund, M. Sköld, L.Grüner-Nielsen, R. Phelan, D. Syvidis, P. Petropoulos, D.J. Richardson, to appear in *IEEE Journal of Selected Topics in Quantum Electronics*

“Potential and practical implementations of phase sensitive amplifiers for all-optical signal regeneration” F.Parmigiani, J.Kakande, R.Slavik, P.Petropoulos, D.J.Richardson, , CLEO-Europe/EQEC Munich, 22-26 May 2011, paper CII.3 (Invited).

“Phase regeneration of optical signals”,P. Petropoulos, J. Kakande, R. Slavík, F. Parmigiani, A. Bogris, D. Syvidis, D.J. Richardson, *Information Photonics 2011*, 17-21 May 2011 (Invited).

“Comparison of frequency symmetric signal generation from a BPSK input using fibre and semiconductor based non-linear elements,” R. Weerasuriya, S. Sygletos, S. K. Ibrahim, F. C.G. Gunning, R. J. Manning, R. Phelan, J. O'Carroll, B. Kelly, J. O'Gorman, A. D. Ellis, *IEEE Photon. Technol. Lett* Vol. 23 (8) 2011

“DPSK Signal Regeneration with a dual pump non degenerate phase sensitive amplifier” P. Frascella, S. Sygletos, F. C. Garcia Gunning, L. Gruner Nielsen, R. Phelan, J. O’Gorman, A. D. Ellis, IEEE Photon. Technol. Lett. Vol. 23 (8), pp. 516-518, 2011

“Novel Real-time Homodyne Coherent Receiver using a Feed-Forward based Carrier Extraction Scheme for Phase Modulated Signals”, S. K. Ibrahim, S. Sygletos, R. Weerasuriya, A. D. Ellis, Optics Express vol. 19, Issue 9, pp. 8320-8326 (2011).

“Amplitude Regeneration of Phase Encoded Signals Using Injection Locking in Semiconductor Lasers,” A. Fragkos, A. Bogris, D. Syvridis, R.Phelan, J. O’Carroll, B.Kelly and J.O’Gorman, in Proc Optical Fiber Communication Conference (OFC/NFOEC 2011), Los Angeles (USA).

“Towards the Ultra-Sensitive Optical Link Enabled by Low Noise Phase-Sensitive Amplifiers,” Zhi Tong, Carl Lundström, Peter A. Andrekson, Colin J. McKinstrie, Magnus Karlsson, Ekawit Tipsuwannakul, Daniel J. Blessing, Benjamin J. Puttnam, Hiroyuki Toda and Lars Grüner-Nielsen, *Nature Photonics June 2011*.

***This is a key paper showing the low noise features of PSAs as well as their potential practical use in real optical transmission systems.***