

Recent Publications

Journals:

J. Liu, L. Sun, L. Lou, H Wang, C McCorkell, "A simple test structure for directly extracting substrate network components in deep n well RF-CMOS modelling", IEEE Electron Device Letters, Nov. 2009, Vol 30, No 11, pp 1200 - 1202.

D.A. Reid, A.M. Clarke, X. Yang, R. Maher, R.P. Webb, R.J. Manning, and L.P. Barry, "Characterisation of a Turbo Switch SOA Wavelength Converter using Spectrographic Pulse Measurement", IEEE Journal of Selected Topics on Quantum Electronics, Volume 14, pp. 841 - 848, 2008.

Robert Maher, Prince M Anandarajah, Andrew D Ellis, Douglas Reid, Liam P. Barry, 'Optimization of a 42.7 Gb/s wavelength tunable RZ transmitter using a linear spectrogram technique', Optics Express, Vol. 16, pp.11281-11288, 2008.

Gabriel-Miro Muntean, "Adaptive Solutions for Quality-oriented Multimedia Streaming in Heterogeneous Network Environments", in "Heterogeneous Wireless Access Networks: Architectures and Protocols", E. Hossain (Ed), Springer-verlag, 2008

Gwenaelle Girault, Aisling M Clarke, Douglas Reid, Celine Guignard, Laurent Bramerie, Prince Anandarajah, Liam P Barry, Jean-Claude Simon, John Harvey, "Analysis of bit rate dependence up to 80 Gbit/s of a simple wavelength converter based on XPM in a SOA and a shifted filtering", accepted for publication in *Journal of Optics Communications*, 2008.

G. Grahovski and M. Condon: 'On the Caudry-Beals-Coifman System and the Gauge Group Action', *Journal of Nonlinear Mathematical Physics*, 2008

M. Condon, G. Grahovski and D. Deschrijver: 'A causal and stable reduced-order model for linear high-frequency systems', *IET Electronics Letters*, July, 2008, Vol. 44

Condon, E. Dautbegovic and T. Xu: 'Novel Padé-based algorithms for numerical integration of ODEs', Vol. 27 (6), *COMPEL* 2008

Gabriel-Miro Muntean, G. Ghinea, T. N. Sheehan, "Region of Interest-based Adaptive Multimedia Streaming Scheme", IEEE Trans. on Broadcasting, vol. 54, no. 2, June 2008

A. N. Danilewsky, J. Wittge, A. Rack, T. Weitkamp, R. Simon, T. Baumbach and P. McNally, "White beam topography of 300 mm Si wafers" *J. Mater. Sci: Mater. Electron.* 19 S269–S272 (2008) [DOI 10.1007/s10854-007-9480-5]

K. Horan, A. Lankinen, L. O'Reilly, N.S. Bennett, P.J. McNally, B.J. Sealy, N.E.B. Cowern and T.O. Tuomi, "Structural and electrical characterisation of ion-implanted strained silicon", *Mater. Sci. Eng. B*, (2008.). <http://dx.doi.org/10.1016/j.mseb.2008.09.007>

Ovidiu Ghita, Dana E Ilea and Paul F. Whelan (2008), "Image feature enhancement based on the time-controlled total variation flow formulation", *Pattern Recognition Letters* (accepted)

Dana, E. Ilea and Paul F. Whelan (2008), "CTex – An adaptive unsupervised segmentation algorithm based on colour-texture coherence", *IEEE Transactions on Image Processing* 17(10), pp. 1926-1939, October 2008.

Conferences:

Jun Liu, Charles McCorkell, Lingling Sun, Lileng Lou, Jincai Wen, "Equivalent circuit modelling for on-wafer interconnects on SiO₂-Si substrate", CICT 2009, Aug 2009.

Brendan P. Byrne, John Mallon, Paul F. Whelan (2009), "Efficient Planar Camera Calibration via Automatic Image Selection", VISAPP 2009 – International Conference on Computer Vision Theory and Applications, 5-8 February 2009, Lisboa, Portugal (full paper accepted)

Dahai Yu, Ovidiu Ghita, Alistair Sutherland, Paul Whelan (2009), "A Novel Visual Speech Representation and HMM Classification for Visual Speech Recognition", The 3rd Pacific-Rim Symposium on Image and Video Technology (PSIVT2009), Tokyo, Japan, January 13th-16th (full paper accepted)

C. O'Riordan, M. J. Connelly, P. M. Anandarajah, R. Maher, L. P. Barry, "Triple-wavelength fiber ring laser based on a hybrid gain medium actively mode-locked at 10 GHz" Proceedings of the 6th International Symposium Communication Systems, Networks and Digital Signal Processing, Graz, 23-25 June 2008.

P. M. Anandarajah, "Wavelength Tunable Lasers in Future Optical Communication Systems", Invited paper, *IEEE 10th International Conference on Transparent Optical Networks*, Athens, 22-26th June 2008.

Kieran O'Donoghue and Anthony M. Holohan, "Control of a highly non-linear multi-variable thermal processing furnace" Proc. Irish Signals and Systems Conference, Galway, June 2008.

Fernando Tadeo, Anthony Holohan, Pastora Vega, "Two-Degree-of-Freedom Compensators for Systems with Commands Bounded in Slope", Third IFAC Symposium on System, Structure and Control, Foz do Iguassu, Brazil, October 2007

Kelly, C., McMullin, B. and O'Brien, D. (2008). Enrichment of interaction rules in a string-based artificial chemistry. In S. Bullock, J. Noble, R. Watson, and M. A. Bedau (eds.) *Artificial Life XI: Proceedings of the Eleventh International Conference on the Simulation and Synthesis of Living Systems*, pp. 313-320. MIT Press, Cambridge, MA.

M. Condon and G. Grahovski, 'Model reduction of a perturbative representation of a weakly nonlinear system', *WCE 2008*, July 2008, London

C. Brennan, B. Babu, M. Condon and M. Mullen, 'Rapidly convergent integral equation modelling of EM wave propagation through inhomogeneous media', *CICT 2008*, Beijing, China, Sept. 2008

Piotr Szczechowiak, Leonardo Oliveira, Michael Scott, Martin Collier and Ricardo Dahab, "NanoECC: Testing the Limits of Elliptic Curve Cryptography in Sensor Networks," Fifth European conference on Wireless Sensor Networks (EWSN 2008), Bologna, Italy, Jan. 30 - Feb. 1, 2008.

Surre, S.Latkowski, P.Landais, "Generation of THz signal from four-wave mixing in multimodes Lasers due to material non-linearities," *International Conference on Optical, Optoelectronic and Photonic Material and Applications, ICOOPMA'07*, London, UK.

S. Latkowski, F. Surre, Pascal Landais, "RF or THz Signals Generated from DC Biased Multimode Lasers," *ICTON'06*, Rome, July 2007, invited talk, pp. We, D3.1.

Yan Li and Martin Collier, "Optical Slotted Circuit Switched Network: A Bandwidth Efficient Alternative to Wavelength-Routed Networks", SPIE Asian-Pacific Optical Communications Conference, Wuhan, China, November 2007.

B. Kirkpatrick, D. O'Brien and R. Scaife, "Feature transformation applied to the detection of discontinuities in concatenated speech," in *Proc. of the 6th ISCA Workshop on Speech Synthesis (SSW6)*, Bonn, Germany, August 2007.

B. Kirkpatrick, D. O'Brien, R. Scaife, and A. Errity, "On the role of spectral dynamics in unit selection speech synthesis," in *Proc. of Interspeech 2007 - Eurospeech*, Antwerp, Belgium, August 2007.

Book Chapters

Decraene, J., Mitchell, G.G., McMullin, B., *Evolving Artificial Cell Signaling Networks: Perspectives and Methods*. In F. Dressler, I. Carreras, editors, *Advances in Biologically Inspired Information Systems: Models, Methods, and Tools*. Series Studies in Computational Intelligence, Vol. 69, pp 165-184, Springer Verlag, 2007

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