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Academic and Professional Qualifications

2007 – 2011	University College Cork (UCC) & Tyndall National Institute (TNI).
Degree	PhD in Physics and Optical Communication
Thesis Title	<i>Data Retiming for Multi-Wavelength Regeneration</i>
2006 – 2007	University of Nottingham, United Kingdom.
Degree	MSc in Photonics Communication – Distinction
Thesis Title	<i>Waveform Replicator for Optical Sampling</i>
1998 – 2002	University of Moratuwa, Sri Lanka.
Degree	BSc.Eng in Electronics and Telecommunication
Grade	Second class upper division –Overall GPA – 3.73/4.0
2005 – 2005	University of Colombo, Sri Lanka.
Degree	Diploma in Linux/Unix System & Network administration
Grade	Pass
1999 – 2000	Australian Computer Society, Australia.
Degree	Diploma in Information Technology
Grade	Pass
1999 – 2000	London Business School, Sri Lanka Branch.
Degree	Diploma in computer hardware
Grade	pass
1982 – 1996	St/Aloysius College, Galle, Sri Lanka
G.C.E.(A/L)-1996	2 Distinctions and 2 Credits (Aggregate – 292/400)
G.C.E.(A/L)-1992	4 Distinctions, 3 Credit and a simple pass

Research Experience & Projects

2007 – 2010	Research work carried out in the European projects and Science foundation Ireland (SFI) <ul style="list-style-type: none">➤ <i>TRIUMPH</i> – Design and implementation of 42.7 Gb/s dual-gate “Asynchronous digital optical regenerator (ADORE)”. Collaborative works including field trials on WDM to OTDM converter and Transmultiplexing switch enabling OTDM mesh networking.➤ <i>Euro-fos</i> – ADORE data interoperability and OTDM experiments with field trial.➤ <i>PHASORS</i> – Design and implementation of simultaneous carrier recovery and synchronized pump generation scheme form a carrier-less BPSK data. Collaborative experiments with successful implementation of first black-box regenerative, dual-pump degenerate phase sensitive amplifier (PSA) which regenerate phase and amplitude simultaneously in addition to amplification of 42.7 Gb/s DPSK incoming data.
2006 – 2007	Design and implementation of an “Optical waveform replicator” used for optical sampling, which will be used in optical monitoring systems in high speed optical/photonic networks.
2002 – 2006	<i>NMS (Network Monitoring System)</i> – Successful design and implementation of NMS for microwave transmission network equipments distributed in a mesh network running on different propriety communication protocols.

- 2001 Successful implementation of an in-house programme of retrieving customer details using the designated flags in the telecommunication switch during industrial training at SLT.
- 1998 – 2002 Second and final year project – “Grain detector” and “Programmable security alarm”.

Work Experience

2011-now	Department of Electronic and Telecommunication Engineering, University of Moratuwa
Position/s held	Senior Lecturer
Nature of Duty	<ul style="list-style-type: none"> ✚ Undergraduate Lecturing ✚ Postgraduate lecturing ✚ Research in Optical Communication (Photonic Systems) ✚ Postgraduate (MSc/MPhil) supervision ✚ PhD Supervision ✚ Department/Faculty/University Administrative duties ✚ Student mentoring
2011-now	Consultant/Resource person to Government and Private institutions
Position/s held	Consultant Technical/Evaluation Committee (TEC) Chairman/member
Projects Involved	<ul style="list-style-type: none"> ✚ CCTV system design and installation for Southern Expressway (STDP) ✚ CCTV system design and installation for Sri Lanka Railway (SLR) ✚ CCTV system design and installation for Outer Circular Highway (OCH) ✚ Resource person for evaluating the performance of the CCTV and toll collection network IN Colombo Katunayaka Expressway (CKE) ✚ Resource person for communication network redesign for Sri Lanka Police and lecturing in police officers academy on mobile and CCTV forensic analysis ✚ Resource person for communication network design and implementation monitoring for Coconut cultivation board ✚ Resource person for Industrial Development board (TEC) ✚ Resource person for Ministry of Mass Media and Information for Digital broadcasting systems ✚ Consultant for optical fibre network design activities telecom service providers and vendors specially for optical networks
2007 – 2010	Department of Physics, University College Cork, Ireland
Position/s held	Visiting instructor
Nature of Duty	Demonstrating lab experiments to the undergraduates
2002 – 2006	Dialog Telekom Ltd, Sri Lanka
Position/s held	Engineer (2002-2004), Specialist (2004-2006) –Transmission Operations
Nature of Duty	<ul style="list-style-type: none"> ➤ Maintenance and upgrading of the microwave transmission network (PDH & SDH) ➤ Maintenance and upgrading of the Satellite Earth Station ➤ Microwave network planning and new site acquisition ➤ Participate in designing the island wide optical transport network and technical evaluation. ➤ Redesign the Optimum Transmission Paths and PCM (E1) Routing and Re- routing. ➤ Implementing the Network monitoring system (Project Leader) for the Island wide microwave network. ➤ Customer Complaint management. ➤ Management Information Systems. ➤ Business Planning, ➤ Budget planning activities.

2002	Department of Electronics and Telecom., University of Moratuwa, Sri Lanka
Position/s held	Visiting instructor (2001/Jan- 2001/Aug)
Nature of Duty	Demonstrating lab experiments to the undergraduates
2001	Sri Lanka Telecom Ltd.
Position/s held	Apprentice (Industrial training) - 2001
Nature of Duty	<ul style="list-style-type: none"> ➤ International & local Transmission system ➤ International & local Switching system ➤ Maritime Transmission Systems ➤ Power and Air Conditioning
1996 – 1998	D. Samson Industries Ltd, Sri Lanka
Position/s held	Management trainee.
Nature of Duty	Accounting, costing and management related activities.

Training Courses

2009	<ul style="list-style-type: none"> ➤ Finisar Israel Ltd – Fibre optic transmission systems and modules. (Israel) ➤ Agilent – Vector Network Analyser (VNA) training course (Ireland) ➤ UCC – Manual handling course and fire extinguishing (Ireland)
2008	<ul style="list-style-type: none"> ❖ Bioptica – Laser safety course, (Ireland) ❖ National Instruments – NI LabVIEW one day course, (Ireland) ❖ Fujikura – Fusion splicer course, (Ireland) ❖ Agilent – RF connector care course, (Ireland)
2004	Telekom Malaysia– Fibre optic & Satellite Transmission (Malaysia)
2004	Harris Microwave Systems – Microwave Transmission & NMS (Canada)
2003	Ericsson AB – Microwave transmission & NMS (Sweden)

Extra-Curricular Activities

2008 – 2010	Vice president of the OSA, Cork Student Chapter, Ireland.
1988 – 1996	<ul style="list-style-type: none"> ➤ Member of rugby football team. ➤ Member of swimming team. ➤ Member of soccer team. ➤ Held senior ranks in School societies. ➤ Participated in track events at school sport meet and achieved colours.

Special Achievements and Awards

2011	Tyndall Best Paper Award
	European Union (EU) PhD Scholarship.
2008 – 2010	Science Foundation Ireland (SFI) PhD Scholarship. Excellence Scholarships (PhD) from University College Cork (UCC)
2006 – 2007	Developing Solutions Taught Masters Scholarship, University of Nottingham Institute of Engineering Technology (IET) Postgraduate Scholarship
1996-1998	Mahapola Higher Educational Scholarship (Merit)

Professional Memberships

2017-now	Senior Member of the Institution of Electrical and Electronic Engineers (IEEE), USA
2011-2017	Member of the Institution of Electrical and Electronic Engineers (IEEE), USA
2008 – now	Member of the Optical Society of America (OSA), USA
2003 – 2004	Member of the Institution of Electrical and Electronic Engineers (IEEE), USA
2000 – 2008	Member of the Institution of Engineering and Technology (IET), UK
2004 – 2006	Member of the Institution of Engineers, Sri Lanka (IESL)

Personal Details

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Date of Birth 27th October 1976
Gender Male
Nationality Sri Lankan
Languages
English Good - Wide Knowledge
Sinhala Fluent - Full Knowledge
Fields of Interest Optical/Photonics Communication Systems,
Terrestrial and Satellite Communication,
Network Monitoring Systems,
Data Networking

Referees

Dr. Andrew D. Ellis
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I declare that the particulars mentioned above are True and Accurate.

Date : 09 July 2018

Signature: L.W.P. Ruwan Udayanga

LIST OF PUBLICATIONS

Journals

- [1] Selwan K. Ibrahim, Stylianos Sygletos, Danish Rafique, John A. O'Dowd, **Ruwan Weerasuriya**, and Andrew D. Ellis, "Novel synchronous DPSK optical regenerator based on a feed-forward based carrier extraction scheme", Optics Express, Vol. 19, Issue 10, pp. 9445-9452 (2011)
- [2] Selwan K. Ibrahim, Stylianos Sygletos, **Ruwan Weerasuriya**, and Andrew D. Ellis, "Novel real-time homodyne coherent receiver using a feed-forward based carrier extraction scheme for phase modulated signals", Optics Express, Vol. 19, Issue 9, pp. 8320-8326 (2011)
- [3] Stylianos Sygletos, Selwan K. Ibrahim, **Ruwan Weerasuriya**, Richard Phelan, L. Grüner Nielsen, Adonis Bogris, Dimitris Syvridis, James O'Gorman, and Andrew D. Ellis, "Phase synchronization scheme for a practical phase sensitive amplifier of ASK-NRZ signals", Optics Express, Vol. 19, Issue 13, pp. 12384-12391 (2011)
- [4] P. Frascella, S. Sygletos, F.G.C. Gunning, **R. Weerasuriya**, L. Gruner-Nielsen, R. Phelan, J. O'Gorman, A.D. Ellis, "DPSK Signal Regeneration With a Dual-Pump Nondegenerate Phase-Sensitive Amplifier", PTL, Vol 23, Issue 08, 2011.
- [5] **R. Weerasuriya**, S. Sygletos, S. K. Ibrahim, F. Gunning, R. J. Manning, R. Phelan, J. O'Carroll, B. Kelly, J. O'Gorman, A. D. Ellis, "Comparison of frequency symmetric signal generation from a BPSK input using fiber and semiconductor based non-linear elements", PTL, Vol 23, Issue 10, 2011.
- [6] **R. Weerasuriya**, S.K. Ibrahim, G. Zarris, D. Simeonidou, A.D. Ellis and D. Cotter, "Performance characterisation of 42.65 Gbit/s dual-gate asynchronous digital optical regenerator using single MZM", Elect.Lett, Vol 45, Issue 12, June 4 2009 Page(s):642 – 643
- [7] R. Slavík, F. Parmigiani, J. Kakande, C. Lundström, M. Sjödin, P. A. Andrekson, **R. Weerasuriya**, S. Sygletos, A. D. Ellis, L. Grüner-Nielsen, D. Jakobsen, S. Herstrøm, R. Phelan, J. O'Gorman, A. Bogris, D. Syvridis, S. Dasgupta, P. Petropoulos, D. J. Richardson, "All-optical phase and amplitude regenerator for next-generation telecommunications systems", Nature Photonics, DOI: 10.1038/NPHOTON.2010.203, (2010).
- [8] R. Bonk, P. Vorreau, D. Hillerkuss, W. Freude, G. Zarris, F. Parmigiani, P. Petropoulos, **R. Weerasuriya**, S. Ibrahim, A. D. Ellis, I. Tomkos, J. Leuthold, "An All-Optical Grooming Switch for Interconnecting Access and Metro Ring Networks", JOCN, Vol. 3 Issue 3, pp.206-214, 2011.
- [9] G. Zarris, E. Hugues-Salas, N. Amaya Gonzalez, **R. Weerasuriya**, F. Parmigiani, D. Hillerkuss, P. Vorreau, M. Spyropoulou, S. K. Ibrahim, A. D. Ellis, R. Morais, P. Monteiro, P. Petropoulos, D. J. Richardson, I. Tomkos, J. Leuthold, and D. Simeonidou, "Field Experiments with a Grooming Switch for OTDM Meshed Networking", Journal of Lightwave Technology, Vol 28, Issue 4,316-327,(2010).

- [10] P. Vorreau, S. Sygletos, F. Parmigiani, D. Hillerkuss, R. Bonk, P. Petropoulos, D. J. Richardson, G. Zarris, D. Simeonidou, D. Klondis, I. Tomkos, **R. Weerasuriya**, S. Ibrahim, A. D. Ellis, D. Cotter, R. Morais, P. Monteiro, S. Ben Ezra, S. Tsadka, W. Freude, J. Leuthold, “*Optical Grooming Switch with Regenerative Functionality for Transparent Interconnection of Networks*”, Optics express, Vol. 17, Issue 17, pp. 15173-15185, (2009).
- [11] A. D. Ellis, D. Cotter, S. Ibrahim, **R. Weerasuriya**, C. W. Chow, J. Leuthold, W. Freude, S. Sygletos, P. Vorreau, R. Bonk, D. Hillerkuss, I. Tomkos, A. Tzanakaki, C. Kouloumentas, D. J. Richardson, P. Petropoulos, F. Parmigiani, G. Zarris, and D. Simeonidou, “*Optical interconnection of core and metro networks*”, (Invited), Journal of Optical Networking, Vol 7, Issue 11, 928–935 (2008)

Conference

- [1] Dulanja Samudika, Lahiru Jayasinghe, Kasun E Gunathilaka, Y Rumes, **Ruwan Weerasuriya**, Dileeka Dias, “Stereo audio streaming via Visible Light”, Moratuwa Engineering Research Conference (MERCon), pp. 132-136, IEEE 2016
- [2] Stylianos Sygletos, Selwan Ibrahim, **Ruwan Weerasuriya**, Richard Phelan, Lars Grüner-Nielsen, “Dual pump wave generation from NRZ-ASK signal enabling a “black-box phase sensitive amplifier”, Toggle navigation TEI Of Athens. 2015
- [3] Lakmini Malasinghe, **Ruwan Weerasuriya**, “*Modeling of Optical Carrier Recovery using Four Wave Mixing Technique for Binary Phase Shift Keying Systems*”, Moratuwa Engineering Research Conference (MERCon), pp. 251-254, IEEE 2015,
- [4] S.K.Ibrahim, S.Sygletos, **R. Weerasuriya**, A.D. Ellis, “*Real-time self-homodyne coherent receiver for BPSK signals using feed-forward carrier extraction*”,CLEO, JWA15, 2011
- [5] S.Sygletos, S.K. Ibrahim, **R. Weerasuriya**, R. Phelan, L.G. Nielsen, A. Bogris, J. O’Gorman, A.D. Ellis, "Dual pump wave generation from NRZ-ASK signal enabling a “black-box” phase sensitive amplifier", OFC, OWL7, 2011
- [6] **R. Weerasuriya**, Stylianos Sygletos, Selwan K. Ibrahim, Andrew D. Ellis, Richard Phelan, James O’Gorman, John O’Carroll, Brian Kelly, “*Generation of frequency symmetric signals from a BPSK input for Phase Sensitive Amplification*”, OFC’10, OWT6,(2010).
- [7] F. Parmigiani¹, R. Slavík, J. Kakande, C.Lundström , M. Sjödin, P. Andrekson, **R. Weerasuriya**, S. Sygletos, A.D. Ellis, L. Grüner-Nielsen, D. Jakobsen, S. Herstrøm, R. Phelan, J. O’Gorman, A. Bogris, D. Syvridis, S. Dasgupta, P. Petropoulos, D.J. Richardson, "All-optical phase regeneration of 40Gbit/s DPSK signals in a black-box phase sensitive amplifier", Proc. OFC’10, PDPC3 (2010).
- [8] F. Parmigiani, R. Slavik, J. Kakande, L. Gruner-Nielsen, D. Jakobsen, S. Herstrom, R. Weerasuriya, S. Sygletos, A.D. Ellis, P. Petropoulos, D.J. Richardson, "All-optical signal processing in highly nonlinear fibres," OECC (invited), 2010, pp. 486-487.

- [9] S. Sygletos, **R. Weerasuriya**, S. Ibrahim, F. Gunning, A. Ellis, R. Phelan, J. O’Gorman, J. O’Carroll, B. Kelly, *"A novel method of pump and idler signal generation for nondegenerate FWM based phase sensitive amplification"*, CLEO 2010
- [10] F. Parmigiani, R. Slavík, J. Kakande, L. Grüner-Nielsen, D. Jakobsen, S. Herstrøm, **R. Weerasuriya**, S. Sygletos, A. D. Ellis, P. Petropoulos, D. J. Richardson, *"All-Optical Phase and Amplitude Regeneration of a 40Gbit/s DPSK Black-Box Phase Sensitive Amplifier"*, ECOC 2010, pp. 116-118.
- [11] Stylianos Sygletos, **Ruwan Weerasuriya**, Selwan K. Ibrahim, Fatima Gunning, Richard Phelan, James O’Gorman, John O’Carroll, Brian Kelly, Antonis Bogris, Dimitris Syvridis, Carl Lundström, Peter Andrekson, Francesca Parmigiani, David J. Richardson, Andrew D. Ellis, *"Phase Locking and Carrier Extraction Schemes for Phase Sensitive Amplification"*, ICTON 2010, MO.C1.3 (Invited)
- [12] S. K. Ibrahim, S. Sygletos, **R. Weerasuriya**, A. D. Ellis, *"Novel Carrier Extraction Scheme for Phase Modulated Signals Using Feed-Forward Based Modulation Stripping"*, ECOC 2010, pp. 661-663.
- [13] A.D. Ellis, F.C.Garcia Gunning, J. Zhao, S.K. Ibrahim, P. Frascella, N. MacSuibhne, F. Parmigiani, R. Slavík, J. Kakande, C. Lundström, M. Sjödin, P. Andrekson, **R. Weerasuriya**, S. Sygletos, L. Grüner-Nielsen, D. Jakobsen, S. Herstrøm, R. Phelan, J. O’Gorman, A. Bogris, D. Syvridis, S. Dasgupta, P. Petropoulos, and D.J. Richardson, *"Future Directions to Realize Ultra-High Bit-Rate Transmission Systems"*, Proceedings of Opto-Electronics and Communications Conference, OECC 2010, Sapporo, Japan, 5-9 July 2010, Invited paper 8B3-1.
- [14] J. Leuthold, R. Bonk, P. Vorreau, S. Sygletos, D. Hillerkuss, W. Freude, G. Zarris, D. Simeonidou, C. Kouloumentas, M. Spyropoulou, I. Tomkos, F. Parmigiani, P. Petropoulos, D.J. Richardson, **R. Weerasuriya**, S. Ibrahim, A.D. Ellis, R. Morais, P. Monteiro, S. Ben Ezra, S. Tsadka, *"All-Optical Grooming for 100 Gbit/s Ethernet"*, SPIE Photonics West Conference, 23 - 28 January 2010, The Moscone Center, San Francisco, California, United States, Invited Paper 7621-7.
- [15] **R. Weerasuriya**, S.K. Ibrahim, A.D.Ellis, D.Hillerkuss and D. Cotter, *"Chromatic Dispersion Tolerance of 42.65Gbit/s Dual Gate Asynchronous Digital Optical Regenerator"*, Photonics Ireland, A44, (2009)
- [16] G. Zarris, F. Parmigiani, E. Hugues-Salas, **R. Weerasuriya**, D. Hillerkuss, N.A. Gonzalez, M. Spyropoulou, P. Vorreau, R. Morais, S.K. Ibrahim, D. Klondis, P. Petropoulos, A.D. Ellis, P. Monteiro, A. Tzanakaki, D. Richardson, I. Tomkos, R. Bonk, W. Freude, J. Leuthold, D. Simeonidou, *"Field Trial of WDM/OTDM Transmultiplexing Employing Photonic Switch Fabric-Based Buffer-less Bit-Interleaved Data Grooming and All-Optical Regeneration"*, OFC’09, PDPC10, (2009)
- [17] G. Zarris, P. Vorreau, D. Hillerkuss, S. K. Ibrahim, **R. Weerasuriya**, A. D. Ellis, J. Leuthold, D. Simeonidou, *"WDM-to-OTDM Traffic Grooming by Means of Asynchronous Retiming"*, OFC, OThJ6 (2009)
- [18] J. Leuthold, R. Bonk, P. Vorreau, S. Sygletos, D. Hillerkuss, W. Freude, G. Zarris, D. Simeonidou, C. Kouloumentas, M. Spyropoulou, I. Tomkos, F. Parmigiani, P. Petropoulos, D.J. Richardson, **R. Weerasuriya**, S. Ibrahim, A.D. Ellis, C. Meuer, D.

- Bimberg, R. Morais, P. Monteiro, S. Ben-Ezra, S. Tsadka, “*An all-optical grooming switch with regenerative capabilities*”, ICTON,2009, Page(s):1 – 4
- [19] P. Vorreau, D. Hillerkuss, S. Sygletos, R. Bonk, F. Parmigiani, P. Petropoulos, D. Richardson, G. Zarris, D. Simeonidou, D. Klondis, I. Tomkos, **R. Weerasuriya**, S. Ibrahim, A. Ellis, R. Morais, P. Monteiro, S. Ben Ezra, S. Tsadka, W. Freude, J. Leuthold, “*2R/3R optical grooming switch with time-slot interchange*”, ECOC, Th.3.F.4, (2008)
- [20] S. K. Ibrahim, D. Hillerkuss, **R. Weerasuriya**, G. Zarris, D. Simeonidou, J. Leuthold, A. Ellis, “*Novel 42.65 Gbit/s Dual Gate Asynchronous Digital Optical Regenerator Using a Single MZM*”, ECOC 2008, Paper Tu.4.D.3
- [21] S. K. Ibrahim, **R. Weerasuriya**, D. Hillerkuss, G. Zarris, D. Simeonidou, J. Leuthold, D. Cotter, A. Ellis, “*Experimental Demonstration of 42.6 Gbit/s Asynchronous Digital Optical Regenerators*”, ICTON, Paper We.C3.3, 22-26 June 2008 (Invited)
- [22] J. Leuthold, W. Freude, S. Sygletos, P. Vorreau, R. Bonk, D. Hillerkuss, I. Tomkos, A. Tzanakaki, C. Kouloumentas, D.J. Richardson, P. Petropoulos, F. Parmigiani, A. Ellis, D. Cotter, S. Ibrahim, **R. Weerasuriya**, “*An all-optical grooming switch to interconnect access and metro ring networks*”, Proc ICTON’08, Athens, Greece, Invited Paper We.C3.4, (2008).

Patent Application

Patent No/Date: EP10175752.4, filed on 8 September 2010.

Inventors: Andrew D. Ellis, Stylianos Sygletos, Fatima C. Garcia Gunning, Paola Frascella, Selwan K. Ibrahim, **Ruwan Weerasuriya**.

Title: “*Multi-carrier System and Method for use in an Optical Network*”.