

MEMORANDUM OF COOPERATION**BETWEEN**

**VEL TECH Dr. RR & Dr. SR TECHNICAL UNIVERSITY, INDIA
(VEL TECH RANGARAJAN DR. SAGUNTHALA R&D INSTITUTE OF
SCIENCE AND TECHNOLOGY,
UNIVERSITY U/S 3 OF UGC ACT, 1956)
(VEL TECH)**

AND

**UNIVERSITI TELEKOM SDN. BHD.
MALAYSIA**



This Memorandum of Cooperation ("MOC") dated this **5 DECEMBER**, 2014.

BETWEEN:

UNIVERSITI TELEKOM SDN. BHD. (436821-T) having its registered office at Level 51, North Wing, Menara TM, Jalan Pantai Baharu, 50672 Kuala Lumpur [as the registered owner of Multimedia University (Registration No. KP/JPS/DFT/US/B01), a Private University registered under the Private Higher Educational Institutions Act, 1996 (Act 555)] and having its business address at Jalan Multimedia, 63100 Cyberjaya, Selangor Darul Ehsan and Jalan Ayer Keroh Lama, 75450 Bukit Beruang, Melaka (hereinafter referred to as Multimedia University or "MMU")

AND

VEL TECH Dr. RR & Dr. SR TECHNICAL UNIVERSITY, INDIA
(Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, University U/S 3 of UGC Act, 1956), No. 42 & 60, Avadi Vel - Tech Road,
Avadi, Chennai (Tamilnadu) 600 062. India, (hereinafter referred to as Vel Tech).

WHEREAS:

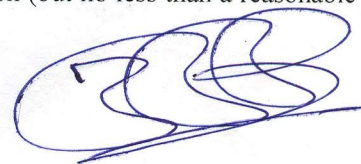
1. Vel Tech is a Technical University offering Undergraduate and Postgraduate courses in various disciplines of Engineering and in Business Administration and M Phil. and PhD programs. The University Departments have highly qualified Faculty and well equipped Laboratories having potential for carrying out high value R&D in various disciplines. Vel Tech has also entered into MoUs with Universities, R&D Organisations and Industries worldwide to foster growth in academic and R&D domains.
2. MMU is a university with two campuses (Cyberjaya and Melaka) in Malaysia, and provides university-level education and training in the areas of multimedia technology, engineering, information technology, creative multimedia and business management.
3. The Parties now wish to enter into a series of discussions for the mutual benefit of both Parties, and for purposes more particularly set forth herein.

The Parties hereby agree to the following:

1. **Scope of Cooperation:** The provisions stated in this MOC are statements of intent only. This is a **non-binding agreement** between the Parties (save for the confidentiality provisions below), and no such agreement shall exist until both Parties have negotiated, prepared and executed a separate written agreement establishing the binding obligations of the Parties and approved by each Party's Board of Directors in relation to specific objectives stated below.

This MOC is intended to establish a basis upon which Vel Tech and MMU may explore areas for cooperation, and the Parties will also explore cooperation on talent sourcing and development. The Parties believe that such endeavors would be in the interest of both Parties. In this regard, the Parties agree to discuss and explore the following :

- i.) Student & Staff Exchange
 - ii.) Joint Courses
 - iii.) Joint Research
 - iv.) Joint seminar & conference
 - v.) Exchange of facilities and resources
2. **Contact Persons:** MMU hereby appoints En. Ezral Mokhtar, Head of International Office (IO) and Vel Tech appoints Dr. P. Sarasu, Director R&D to co-ordinate and oversee all discussions between the Parties pursuant to this MOC.
3. **Mutual Expense and Reliance:** Each Party will be responsible for its own expenses during the discussions in connection with this MOC, and all discussions shall be done in good faith for the mutual benefit of both Parties involved. Any action taken in reliance on the Cooperation expressed in this MOC shall be at the Parties' own risk.
4. **Confidentiality:**
- a) All information exchanged between Parties in connection with this MOC or during discussions preceding this MOC and relating to this MOC or to any matter contemplated by this MOC, and any discussions held between the Parties are CONFIDENTIAL to them and may not be disclosed to any third party during the period of this MOC or anytime thereafter except :
 - i) with the written consent of the other Party;
 - ii) if required by law to be disclosed;
 - iii) in connection with legal proceedings by authority of a court of competent jurisdiction; or
 - iv) if the information is or becomes generally and publicly available but not as a result of breach by either Party and/or the employees of its respective subsidiaries, parent or related companies as aforesaid, of its obligations under this MOC.
 - b) Disclosure of confidential information to employees of either Party's subsidiary, parent or related companies (as defined under Malaysia Companies Act, 1965) is permitted provided it is necessary for the purposes of performing that Party's obligations under this MOC. Notwithstanding the aforesaid, the Party receiving any information shall ensure that any of its employees to whom information is disclosed by the Party disclosing any of its employees to whom information is disclosed by the Party disclosing pursuant to this MOC shall undertake to observe the confidentiality undertakings in this MOC. The Party receiving the information shall protect all confidential information of the disclosing Party using not less than the standard of care in which it treats its own confidential information (but no less than a reasonable

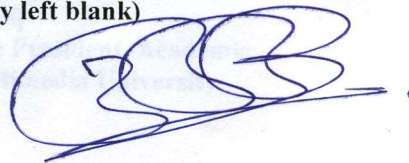


care in the circumstances) and shall ensure that the information is stored and handled in such a way as to prevent unauthorized disclosure.

- c) The obligation of confidentiality herein shall survive the termination of this MOC and remain binding on the Parties without limitation of time.

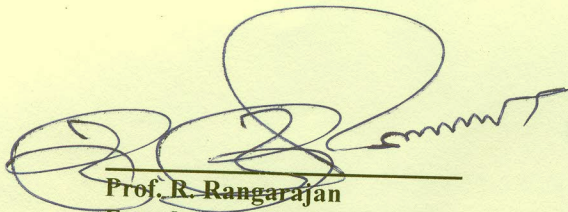
5. **Implementation and Termination:** This MOC will come into effect on the day on which it is signed by both Parties. It will continue for a period of Three Years, thereafter the MOC may be extended for a further period by written *agreement* between both Parties. Furthermore both parties acknowledge that either party may terminate this MOC for any reason by providing 30 days' notice in writing to the other Party. However even in case of such termination, the on-going programs will remain in force till their completion, to protect the interest of the students.
6. **Limitation of Liability:** In no event shall either Party be liable to the other for any damages whatsoever including, without limitation, direct, indirect, speculative, incidental, special or consequential damages in connection with performance under this MOC.
7. **Modifications:** No variations, modification or alteration of any provisions of this MOC shall be effective unless made with the prior written agreement of the Parties.
8. **Governing Law and Jurisdiction:** This MOC and any final agreement entered pursuant to this MOC shall be governed by and construed in accordance with the laws of Malaysia. Any dispute controversy or claim arising out of or relating to this MOC or the breach, termination or invalidity thereof, shall be decided and finally resolved by arbitration by one arbitrator in accordance with the Kuala Lumpur Regional Centre for Arbitration Rules. The language to be used in the arbitration proceedings shall be English.

(The rest of this page is intentionally left blank)



In witness whereof the parties hereto have caused this MOC to be duly executed on the day and year first above mentioned.

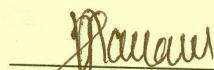
SIGNED BY:



Prof. R. Rangarajan
Founder President

Vel Tech Dr. RR & Dr. SR Technical University
Dr. R. Rangarajan
Founder-President
Vel Tech Rangarajan Dr. Sagunthala R&D
Institute of Science and Technology,
(Vel Tech Dr. RR & Dr. SR Technical University
42 & 60, Avadi-Vel Tech Road, Avadi,
Chennai-600 042

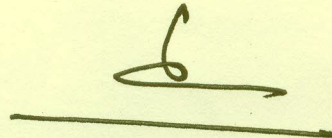
WITNESSED BY:



Dr. P. Sarasu,
Director, R&D
Vel Tech Dr. RR & Dr. SR Technical University

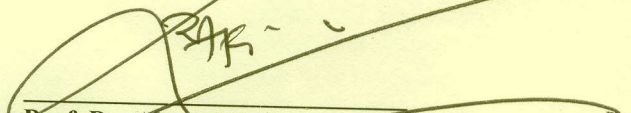
Date:

SIGNED BY:



Prof. Dr. Muhamad Rasat Muhamad
President
Multimedia University

WITNESSED BY:



Prof. Dr. Ahmad Rafi Bin Mohamed
Eshaq
Vice President, Academic
Multimedia University



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Multimedia University (MMU), Malaysia

Name of the Research Institute/University/ Organization	Country	Duration of the Agreement	Academic Year	Date of Signing	Date of Expiry	
Multimedia University (MMU)	Malaysia	3 Years	2014-15	05.12.2014	04.12.2017	Exchange Research, Conference and Reso

Actual Activities with Multimedia University (MMU), Malaysia

A.Y. 2017-18

Faculty Mobility (Incoming - Short Courses) - 1


MoU Coordinator





Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

School of Electrical & Communication
Department of Electronics & Communication Engineering

Specialized one credit course on
“Optical Fiber Communications”

by

Prof. Dr. Hairul Azhar Abdul Rashid
Multimedia University, Malaysia



Held on

Date: September 18 to 23, 2017



PROF. IR. DR. HAIRUL AZHAR BIN ABDUL RASHID

Position : Vice President, Research And Innovation / Professor

Address : FACULTY OF ENGINEERING (FOE)
Multimedia University, Persiaran Multimedia
Cyberjaya 63100
Selangor

Office : 03-83125747

Email : hairul@mmu.edu.my

General

Biography

Hairul obtained his PhD in Optical Communication Systems from Multimedia University (MMU) in 2007. He has since, led a team of researchers, collaborating with Telekom Research and Development Sdn. Bhd. (TMR&D) focusing on designing and fabrication of specialty optical fiber for communications and sensors. His research team has accumulatively attracted grants close to RM7.2 million from MOSTI, MOE and TM.

His current project is into new optical communication transmission band and its amplification methods, funded by Telekom Malaysia Bhd (TM). The output from this project leads to improvement in transmission bandwidth, allowing greater broadband experience. The project has started to strike commercialization interest from industry like FiberHome (China) and Alnair Labs (Japan).

In parallel, his team is collaboratively working on doped optical fiber as Radiation Dosimeters. The project is led by University of Malaya (UM) and funded by Ministry of Education. Working with Nuclear Malaysia, this project aims at allowing better measurement of radiation dose at various energy levels corresponding to applications ranging from environmental, diagnostics, radiotherapy to industrial.

Resulting from these research endeavours, Hairul has published 71 peer-reviewed journals and 56 conference papers. He has filed 2 patents and granted 6 Industrial Designs (ID). The research team has collaborated extensively, both nationally and internationally, spanning across academia and industry. His research leadership and expertise has also been recognised through invited speeches at international conferences, chairmanship of IEEE Photonics Society Malaysia Chapter and appointment as RMC Director at MMU since March 2013.

CURRICULUM VITAE

Education Background

2010

Executive Certificate,
Strategy and Innovation, MIT Sloan School of Management

2002-2007

Multimedia University, Cyberjaya, Malaysia
Ph.D. in Optical Communication Systems
Thesis title: Design and Performance Analysis of Subcarrier Multiplexing Passive Optical Networks

1998-2001

Multimedia University, Cyberjaya, Malaysia
M.Eng.Sc
Thesis title: Performance Enhancement of Cell-Based Echo Canceller during Cell Losses

1994-1997

University College London, United Kingdom
B.Eng. Electronic and Electrical Engineering [Second Class (Upper Division)]

1987-1991

Kolej Melayu Kuala Kangsar
Sijil Rendah Pelajaran (Lower Certificate of Education)
Sijil Pelajaran Malaysia (Higher Certificate of Education)

Award and Recognition

Awards, Scholarship, Internship

1992

Biasiswa Telekom Malaysia Berhad, Pengajian Luar Negeri

2000

Malaysian Youth Delegate to Second Global Knowledge Conference (GKII), awarded by the National Information Technology Council (NITC)

2002

Internship placement at Bell Laboratories, Lucent Technologies, Holmdel, New Jersey, USA

2005

Ph.D. Scholarship from Yayasan Sultan Iskandar Johor

2005

Research Scholar at University of Nevada, Reno, USA

2007

MMU Excellent Teaching Award 2007

2007

Silver Medal, International Invention, Innovation and Technology Exhibition 2007 (ITEX 2007), Kuala Lumpur

2007

CURRICULUM VITAE

Malaysian Youth Delegate, International Youth Symposium on Islamic Science, Technology and Innovation, Kuala Lumpur

2009

Skim Latihan Pengurusan R&D Luar Negara (MGT), Ministry of Science, Technology and Innovation (MOSTI)

Working Experience

1st August 1997 – 31st January 1998

Management Trainee, Telekom Malaysia Berhad

1st February 1998 – 28th February 2002

Tutor, Faculty of Engineering, Multimedia University

July 2001 – July 2002

Internship placement at Bell Laboratories, Lucent Technologies, Holmdel, New Jersey, USA

1st March 2002 – April 2005

Lecturer, Faculty of Engineering, Multimedia University

1st May 2005 – November 2010

Senior Lecturer, Faculty of Engineering, Multimedia University

July 2005 – August 2005

Research Scholar Exchange Program, University of Nevada, Reno

Placement at Advanced Photonics Laboratory, Department of Electrical Engineering

January 2008 – October 2008

Director, R&D Collaborations Office, Multimedia University

October 2008 – February 2011

Dean of Research, Engineering, Multimedia University

March 2011 – May 2011

Director, Research and Collaborations, Multimedia University

December 2010 – June 2012

Associate Professor, Faculty of Engineering, Multimedia University

1st March 2012

Assistant General Manager, Performance Management Office, Multimedia University

July 2012

Professor, Faculty of Engineering, Multimedia University

March 2013

Director, Research Management Center, Multimedia University

Expertise

- Fabrication of Rare-Earth doped Optical Fibers in modified Silica host
- Modified Chemical Vapour Deposition
- Chelate Delivery System

- Optical Antennas
- Optical Fiber Dosimetry
- High Speed and Broadband Networks
- Thulium Doped Fibre Amplifier and Laser

Publication

Book and Chapter in Book

Books and Books Chapter

1. "Engineers in Society", Hairul Azhar Abdul Rashid, R. Logeswaran, Pau Kiu Nai and Sim Hock Kheng, Mc-Graw Hill (Malaysia) Sdn. Bhd., 2004, ISBN: 983-2679-95-8.
2. "Engineers in Society – Second Edition", R. Logeswaran, Hairul Azhar Abdul Rashid, Pau Kiu Nai and Sim Hock Kheng, Mc-Graw Hill (Malaysia) Sdn. Bhd., 2005, ISBN: 983-3219-36 5.
3. "Thulium-doped fiber amplifiers for amplification in S-band region", Book chapter contribution in "Advances in Mechanical Engineering Research", ISBN 978-1-61761-9847, edited by David E. Malach, Nova Science Publishers (2010)
4. "Doped Fiber Amplifier Characteristic Under Internal and External Perturbation", Book chapter contribution in "Selected Topics on Optical Amplifiers in Present Scenario", ISBN 978-953-51-0391-2, edited by Sisir Kumar Garai, Nova Science Publishers (2010)

Journal

1. 'Tandem Single Sideband Communication Systems using Orthogonal Carriers (TSSB-OC)', **Hairul Abdul-Rashid**, Moncef B. Tayahi, Bell Laboratories Technical Memo, July 2002
2. 'Improving Spectral Efficiency in Single Sideband Subcarrier Multiplexed Systems by Spectral Overlapping using Orthogonal Carriers' **Hairul Abdul-Rashid**, Moncef B. Tayahi, Bell Laboratories Technical Memo, Bell Laboratories, July 2002
3. "BER Estimation of Optical WDM, RZ-DPSK Systems through the Differential Phase Q", C.C. Hiew, F.M. Abbou, H.T.Chuah, S.P. Majumder and **A. A. R. Hairul**, IEEE Photonics Technology Letter, Volume 16, Issue 12, Dec. 2004 Page(s): 2619 - 2621
4. "Intracavity Loss Control Effect on Tuning Range of Tunable Dual Erbium-Doped Fiber Laser", F. Abdullah, A.S.M. Noor, M.Z. Jamaludin, M.A. Mahdi, **H. A. Abdul Rashid**, M.K. Abdullah, Laser Physics Letter, Volume 2, Issue 11, November 2005, pp. 535-537
5. "Characterization of Multiwavelength Brillouin/Erbium Fiber Laser Based-on a Linear Cavity Configuration", M.H. Al-Mansoori, S. Saharudin, **H. Abdul-Rashid**, M.A. Mahdi and M.K. Abdullah, Journal of Applied Optics, OSA, Volume 44, Issue 14, 2827-2831, May 2005.
6. "An orthogonal subcarrier based optical tandem single sideband system", **Hairul A. Abdul-Rashid**, Hean-Teik Chuah, Moncef B. Tayahi, Malik T. Al-Qdah and Ruen-Chung Lee, IEICE Electronics Express, Vol. 1 (2004), No. 16, November 2004, pp.490-494
7. "Chromatic Dispersion Power Penalties in Orthogonal Subcarrier - Optical Tandem Single Sideband Systems", **Hairul A. Abdul-Rashid**, Hean-Teik Chuah, Moncef B. Tayahi, Malik T. Al-Qdah and Ruen-Chung Lee, IEICE Electronic Express, Vol. 2 (2005), No. 9, May 2005, pp.305-310
8. "Chromatic Dispersion Measurement Using Relative Power of Two Beating Frequencies", M.T. Al-Qdah, **H. A. Abdul-Rashid**, M. K. Abdullah, B. M. Ali, Microwave and Optical Technology

- Letters (MOTL), Vol. 46, No. 3, August 2005, pp. 268-271, 2005
9. "Impact of a Post-OTDM-Demultiplexing Optical Filter on dense OOK OTDM-WDM Transmission", C.C. Hiew, F.M. Abbou, H.T.Chuah, S.P. Majumder and **A. A. R. Hairul**, Fiber & Integrated Optics, Vol. 24, No. 5, pp. 457 – 470, September-October 2005
 10. "Effect of Optical Beat Interference in SCM/WDM Optical Networks in Presence of FWM", M.T. Al-Qdah, **H.A. Rashid**, K. Dimyati, B.M. Ali, M. Khazani, KMITL Science and Technology Journal, Vol. 5 No. 3, pp. 552-558 Jul.-Dec. 2005
 11. "CD and OBI Penalties In MOC-SCM Optical Networks In Presence Of FWM", M. T. Al-Qdah, **H. A. Abdul-Rashid**, K. Dimyati, M. H. Yaacob , B. M. Ali, M. Khazani, WSEAS TRANSACTIONS ON COMMUNICATIONS, Issue 3, Volume 5, March 2006, pp.593-598.
 12. "Employing Dispersion-Flattened Fiber For CD Measurement", M. T. Al-Qdah, **H. A. Rashid**, K. Dimyati, , B. M. Ali, M. Khazani, Journal Of Optical Engineering, Vol. 45, No. 5, May 2006.
 13. "A technique to improve optical time division multiplexing - wavelength division multiplexing performance", C. C. Hiew, F. M. Abbou, T. H. Chuah and **Hairul A. Abdul-Rashid**, IEICE Electronics Express, Vol. 2 (2005), No. 24, pp.589-594
 14. "Nonlinear BER Performance of Dense Optical WDM Manhattan Street Network with Deflection Routing", C.C. Hiew, F.M. Abbou, H.T. Chuah, S.P. Majumder and **A. A. R. Hairul**, IEEE Photonics Technology Letters, Vol. 18, Issue 9, pp. 1031 – 1033, 2006.
 15. "A new optical modulator chirp measurement technique using differential frequency beating", M. T. Al-Qdah, M. Khazani, **H. A. Abdul-Rashid**, K. Dimyati and B. M. Ali, Journal of Optics A: Pure and Applied, Opt. 8 (2006), pp. 315-318
 16. "The effects of Drive Level Errors on Optical SSB System Performance", **Hairul A. Abdul-Rashid**, Hean-Teik Chuah, Moncef B. Tayahi, Malik T. Al-Qdah and Ruen-Chung Lee, IEICE Electronic Express, Vol. 3, No. 8, pp.156-162, (2006).
 17. "The effects of Phase Errors on Optical SSB System Performance", R. C. Lee, **H. A. Abdul-Rashid**, M. T. Al-Qdah, H. T. Chuah, M. B. Tayahi and S. Lanka, Microwave and Optical Technology Letters, Volume 48, Issue 8, pp. 1574-1578, August 2006.
 18. "System Performance Optimization in SCM-WDM Passive Optical Networks in the presence of XPM and GVD", **H. A. Abdul-Rashid**, F. M. Abbou, Hean-Teik Chuah, Moncef B. Tayahi, Malik T. Al-Qdah and Sivakumar Lanka, IEEE Communication Letters, Volume 10, Issue 9, Sept. 2006, pp. 670 – 672.
 19. "Optimization of Chromatic Dispersion Measurement Technique Using Relative Power of Two Beating Frequencies", **H. A. Abdul-Rashid**, M. T. Al-Qdah, H. T. Chuah, M. B. Tayahi and M. K. Abdullah, Microwave and Optical Technology Letters, Volume 48, Issue 11, pp. 2154-2156, November 2006.
 20. "Dual-stage Er/Yb doped fiber amplifier for gain and noise figure enhancements", S. W. Harun, **H. A. Abdul-Rashid**, S. Z. Muhd-Yassin, M. K. Abd-Rahman, M. R. Tamjis and H. Ahmad, IEICE Electronics Express, Vol. 3 (2006), No. 23, pp.517-521, December 2006.
 21. "Packet based echo cancellation for VoIP networks", G. Periakarruppan, **H. A. Abdul-Rashid**, Computers and Electrical Engineering, Vol. 33, pp. 139–148, 2007.
 22. "Numerical Analysis and Optimization of Remotely Pumped Double Pass Erbium Doped Fiber Amplifier", Nadir Hossain, Ahmed W. Naji, Faiz A. Rahman, Vivekanand Mishra, **Hairul A. Abdul-Rashid**, IEICE Electronics Express (ELEX), Vol. 4, No. 5. pp. 172-178, March 2007.
 23. "37.2 dB small signal gain from Er/Yb Co-doped fiber amplifier with 20 mW pump power", S. W. Harun, **H. A. Abdul-Rashid**, S. Z. Muhd-Yassin, M. K. Abd-Rahman, K. K. Jayapalan and H. Ahmad, Optics & Laser Technology, Volume 40, Issue 1, February 2008, Pages 88-91
 24. "Optimization of Optical Modulator Chirp Measurement Technique using Differential Frequency

- Beating”, **H. A. Abdul-Rashid**, M. T. Al-Qdah, H. T. Chuah, M. Tayahi and M. K. Abdullah, Microwave and Optical Technology Letters, Volume 49, Issue 9, pp. 2306-2309, September 2007.
25. “Numerical and Experimental Analysis of Remotely Pumped Dual-Function EDFA”, Nadir Hossain, A. W. Naji, V. Mishra, F. M. Abbou, **A. A. R. Hairul**, and A. R. Faidz, International Journal of Microwave and Optical Technology, Vol. 2, No. 2, pp. 162-171, 2007.
26. “Theoretical Analysis, Optimization and Experimental Evaluation of Dual Function DP R-EDFA”, Nadir Hossain, A. W. Naji, V. Mishra, F. M. Abbou, **A. A. R. Hairul**, and A. R. Faidz, Journal of Russian Laser Research, Volume 28, Number 3, pp. 293-303, May 2007.
27. “An efficient EYDFA with a 54 dB small signal gain”, S. W. Harun, S. Z. Muhd-Yassin, **H. A. Abdul-Rashid**, M. K. Abd-Rahman, F. Rahman and H. Ahmad, Microwave and Optical Technology Letters. Vol. 49, no. 10, pp. 2337-2339. Oct. 2007.
28. “An experimental investigation of double-pass erbium-doped optical amplifier with tunable band-pass filter”, Shankar S. Pathmanathan, **Hairul A. Abdul-Rashid** and P. K. Choudhury, Asian Journal of Physics, Vol. 17, No. 2, pp. 241-244, 2008.
29. “OBI Reduction Method using Optical Carrier Suppression”, M. T. Al-Qdah, **H. A. Abdul-Rashid**, M. B. Tayahi, H. T. Chuah and M. K. Abdullah, Microwave and Optical Technology Letters, Volume 50, Issue 1, pp. 256-259, January 2008
30. “The performance of a fiber optic displacement sensor for different types of probes and targets”, Laser Physics Letters, M. Yasin, S.W. Harun, **H.A. Abdul-Rashid**, Kusminarto, Karyono, and H. Ahmad, Volume 5, Issue 1, Pages: 55-58, January 2008.
31. “Chromatic Dispersion measurement using optical beating null frequency”, **H. A. Abdul-Rashid**, V. Gopinathan, M. R. Mokhtar, Z. Yusoff, M. T. Al-Qdah and F. A. Rahman, Optical Engineering, Optical Engineering, vol. 47, no. 2, pp. 025007, February 2008.
32. “The effect of spurious reflections on the performance of Er-Yb doped fiber amplifier”, S. W. Harun, **H. A. Abdul-Rashid**, F. Abd Rahman, S. Z. Muhd-Yassin, M. K. Abd-Rahman and H. Ahmad, Accepted in Multimedia Cyberscape Journal, Sept 2007.
33. “Performance of optical displacement sensor using a pair type bundled fiber from a theoretical and experimental perspective”, M. Yasin, S. W. Harun, **H. A. Abdul-Rashid**, Kusminarto, Karyono, A. H. Zaidan, H. Ahmad, Journal Optoelectronics and Advanced Materials – Rapid Communications, JOAM-RC, Vol.1, No.11, Nov 2007, p. 549-553
34. “Multi-wavelength Brillouin-erbium fibre laser utilizing fibre Bragg Grating filter”, Mohd Nasir, M. N.; Al-Mansoori, M. H.; **Abdul Rashid, H. A.**; Choudhury, P. K.; Yusoff, Z., Laser Physics, 18(3), 1-3, 2008.
35. “An experimental investigation of Er³⁺-doped optical amplifiers with very low 1480 nm pump power”, S. S. Pathmanathan, **H. A. Abdul-Rashid** and P. K. Choudhury, International Journal of Microwave and Optical Technology, vol. 3, no. 2, April 2008, pp. 134-138.
36. “Effects of an auxiliary pump on the performance of TDFA”, S. D. Emami, S. W. Harun, F. Abd-Rahman, **H. A. Abdul-Rashid**, S. A. Daud and H. Ahmad, Accepted in Laser Physics
37. “Gain and Noise Figure Improvements In a Shorter Wavelength Region of EDFA Using A Macro-Bending Approach”, S. A. Daud, S. D. Emami, K. S. Mohamed, N. M. Yusoff, L. Aminudin, **H. A. Abdul-Rashid**, S. W. Harun, H. Ahmad, M. R. Mokhtar, Z. Yusoff and F. A. Rahman, Accepted in Laser Physics
38. “An experimental investigation of the gain spectrum of erbium-doped fiber amplifiers under various system configurations”, S. S. Pathmanathan, S. Z. Muhd-Yassin, **H. A. Abdul-Rashid** and P. K. Choudhury, Accepted in Optik
39. “Broadly Tunable Multi-wavelength Brillouin-Erbium Fiber Laser in a Fabry-Perot Cavity”, M.N. Mohd Nasir, Z. Yusoff, M.H. Al-Mansoori, **H. A. Abdul Rashid**, and P.K. Choudhury, Laser

- Physics Letters, Vol. 5, No. 11, pp. 812–816, 2008.
40. “Multiwavelength Source Using Brillouin Fiber Laser”, S. W. Harun, M. R. Shirazi, **H. A. Abdul Rashid** and H. Ahmad, Volume No.17, Issue No.2, Journal of Nonlinear Optical Physics & Materials, June 2008, pp. 199 – 203.
 41. “Low threshold and efficient multi-wavelength Brillouin Erbium fiber laser incorporating a fiber Bragg grating filter with intra-cavity pre-amplified Brillouin pump”, M.N. Mohd Nasir, Z. Yusoff, M.H. Al-Mansoori, **H. A. Abdul Rashid**, and P.K. Choudhury, Laser Physics Letters, vol. 6, Issue 1, Aug 2008, pp. 54 – 58.
 42. “SNR Improvements in Self-Heterodyne Detection Technique for Laser Linewidth Measurements”, M. Ramakrishnan and **H.A. Abdul-Rashid**, ASM Science Journal, 2(2) 2008, pp. 21 – 25
 43. “A theoretical study on double-pass Thulium doped fiber amplifier”, S.D. Emami, S.W. Harun, F. Abd-Rahman, **H.A. Abdul-Rashid**, S.A. Daud, Z.A. Ghani and H. Ahmad, Accepted in OPTIK
 44. “Simultaneous Sensing System for Identical Long-Period Gratings Sensors Using Subcarrier Multiplexing”, H.S. Lin, M.R. Mokhtar, **H.A. Abdul Rashid**, and F.A. Rahman, Laser Physics, Volume 19, Number 7, July 2009, pp. 1453-1456.
 45. “Ring cavity multiwavelength Brillouin-erbium fiber laser with partially reflective fiber Bragg grating”, Mohammad I. Johari, Azin Adamiat, Nurul S. Shahabuddin, Mohd N. M. Nasir, Zulfadzli Yusoff, **Hairul A. Abdul Rashid**, Mohammed H. Al-Mansoori, and Pankaj K. Choudhury, Journal OSA B, Vol. 26, Issue 9, 2009, pp. 1675-1678.
 46. Widely Tunable Multi-wavelength Brillouin-Erbium Fiber Laser Utilizing Low SBS Threshold Photonic Crystal Fiber, Mohd Nasir MN, Yusoff Z, Al-Mansoori MH, **Abdul Rashid HA**, Choudhury PK.; Optics Express, 2009 Jul 20;17(15), pp. 12829-34.
 47. “Optimization Of The 1050nm Pump Power And Fiber Length In Single-Pass And Double-Pass Thulium Doped Fiber Amplifiers”, S. D. Emami, S. W. Harun, F. Abd-Rahman, **H. A. Abdul-Rashid**, S. A. Daud, and H. Ahmad, Progress In Electromagnetics Research B, Vol. 14, pp. 431-448, 2009.
 48. “Minimal optimization technique for radio over fibre WLAN transmission in IMDD optical link”, Syamsuri Yaakob, M. R. Mokhtar, Muhammad Zamzuri Abdul Kadir, Romli Mohamad, Mohamed Razman Yahya, **Hairul Azhar Abdul Rashid**, Microwave Optical Technology Letter, Vol. 52, No. 4, pp.812-815, 2010
 49. "Optimization of Gain flattened C-band EDFA using macrobending", P. Hajireza, S. Abassi, S.D. Emami, **H.A. Abdul-Rashid**, Laser Physics, Vol. 20, No. 6, pp. 1433–1437, 2010.
 50. “Linear all-fiber temperature sensor based on macro-bent erbium doped fiber”, P. Hajireza, S.D. Emami, C.L. Cham, D. Kumar, S.W. Harun and **H.A. Abdul-Rashid**, Laser Physics Letters, Vol. 7, No. 10, pp. 739-742, 2010.
 51. “Application of Macro-Bending for Flat and Broad Gain EDFA”, P. Hajireza, S. Abassi, S.D. Emami, D. Kumar, S.W. Harun, **H.A. Abdul-Rashid**, accepted to Journal of Modern Optics, Volume: 57 Issue: 16 pp: 1534-1541, 2010.
 52. “Cyclic Prefix Reduction for 20.48 Gb/s Direct-Detection Optical OFDM Transmission Over 2560 Km of SSMF”, M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**, International Journal of Communication Systems, Vol 24, Issue 11, pp. 1407–1417, January 2011
 53. “Apodized fibre Bragg grating with modulated refractive index change for transmissive gain equalization”, M.R. Mokhtar, E.S.A. Rahman, M. Ibsen, **H.A. Abdul Rashid**, H.Y. Wong, M.Z.R.M. Zulkifly and N.A.M. Arif, accepted in OPTIK, Optik - International Journal for Light and Electron Optics, Vol. 122, Issue 17, pp. 1569-1571, September 2011.

54. "Temperature Insensitive Broad And Flat Gain C-Band Edfa Based On Macro-Bending", P. Hajireza, S. Abassi, S.D. Emami, D. Kumar, S.W. Harun, **H.A. Abdul-Rashid**, accepted in PIER C, 2010.
55. "Cyclic Prefix Reduction Technique for OFDM System Over Multipath Fading Channels", Mohammad Ghanbarisabagh, M. Y. Alias and **H. A. Abdul-Rashid**. International Journal of Microwave and Optical Technology (IJMOT), vol.5, no.4, pp.241-247, July 2010.
56. "Application of high concentration thulium-doped fiber for achieving S-band gain flattened hybrid optical amplifier", Emami, SD; Hajireza, P; Abd-Rahman, F; **H. A. Abdul Rashid**, S. W. Harun and H. Ahmad, Journal Of Optoelectronics And Advanced Materials, Volume: 12 Issue: 7, pp. 1446-1451, 2010
57. "A theoretical study of double-pass thulium-doped fiber amplifiers", Emami, SD; Harun, SW; Abd-Rahman, F; **H. A. Abdul-Rashid**, H. Ahmad, OPTIK, Volume 121, Issue 14, pp. 1257-1262, 2010
58. "Comparison of LMS-TEQ and DF-TEQ to reduce cyclic prefix length in direct detection optical OFDM system", Mohammad Ghanbarisabagh, M. Y. Alias and **H. A. Abdul-Rashid**, Ghanbarisabagh, Optik - International Journal for Light and Electron Optics, Available online August 2011.
59. "Simultaneous spectral recovery of long-period grating sensor array using optical time-division multiplexing", H.S. Lin, M.R. Mokhtar, F.A. Rahman, **H.A. Abdul-Rashid**, M. Roslina, N.A.M. Arif, Optik - International Journal for Light and Electron Optics, Jul 2011
60. "New Design of a Thulium–Aluminum-Doped Fiber Amplifier Based on Macro-Bending Approach", Siamak Dawazdah Emami, **Hairul Azhar Abdul-Rashid**, S. Z. M. Yasin, K. A. M. Shariff, M. I. Zulkifli, Zulfadzli Yusoff, Harith Ahmad, and Sulaiman Wadi Harun, Journal of Lightwave Technology, Vol. 30, Issue 20, pp. 3263-3272 (2012)
61. "Effect of transverse distribution profile of thulium on the performance of thulium-doped fibre amplifiers", Emami S.D., **Abdul-Rashid H.A.**, Ahmad H., Ahmadi A. and Harun S.W., Ukrainian Journal of Physical Optics, vol. 13, pp. 74 – 81, 2012
62. "Micro-bending based optical band-pass filter and its application in S-band Thulium-doped fiber amplifier", S. D. Emami, **H. A. A. Rashid**, A. Zarifi, A. Zarei, M. R. K. Soltanian, S. Z. M. Yasin, H. Ahmad, and S. W. Harun, Optics Express, Vol. 20, Issue 28, pp. 29784-29797, 2012
63. "S-band gain and noise figure improvements in thulium-doped fiber amplifier by using macro-bending approach", SD Emami, HA Abdul-Rashid, SZM Yasin, KAM Shariff, SE Mirnia, A Parvizi, H Ahmad, Applied Physics B 108 (4), 807-813, 2012
64. "56dB Gain EYDFA with improved noise figure with dual-stage partial double pass configuration", SZ Muhd-Yassin, K Anuar, MI Zulkifli, SW Harun, HA Abdul-Rashid, MK Abd-Rahman, Optik-International Journal for Light and Electron Optics, 2012
65. "Temperature-Insensitive Bend Sensor using Entirely Centred Erbium Doping in the Fibre Core", Harith Ahmad, Mohd Zulkifli, Farah Muhammad, Julian Samangun, Hairul Abdul-Rashid, Sulaiman Harun, Accepted Sensors, In press, 2013

Proceedings

1. 'Cell-based Echo Cancellation techniques for transmitting voice over ATM Networks', **Hairul A. Abdul Rashid**, S. M. Beg and K. Takahashi, National Conference on Telecommunication Technologies '98, UPM Malaysia, Dec 1998
2. 'A Cell Loss recovery Method for Cell-Based Echo Cancellation For Voice Communication over ATM Networks', **Hairul A. Abdul Rashid**, S. M. Beg and K. Takahashi, International Wireless and Telecommunication Symposia/Exhibition '99, ITM Malaysia, May 1999

3. 'Performance Comparison of Cell-based Echo Cancellation In Representative Cell Loss Recovery Techniques', **Hairul A. Abdul Rashid**, S. M. Beg and K. Takahashi, Asia Pacific Symposium on Information and Telecommunication Technologies '99, Ulaanbaatar, Mongolia, Aug 1999
4. 'Cell Loss Recovery methods for improving Performance of ATM Echo Canceller during cell losses', **Hairul A. Abdul Rashid**, S. M. Beg and K. Takahashi, National Conference on Telecommunication Technologies 2000, Johor Bharu, 20-21st November 2000
5. 'Improvements for Cell-based Echo Canceller's performance during cell losses', **Hairul A. Abdul Rashid**, S. M. Beg and K. Takahashi, International Conference on Advance Computing and Communications, Kochin, India, 14th -16th December 2000
6. 'Novel Technique for Tandem Single Sideband Communication Systems using Orthogonal Carriers (TSSB-OC)', **Hairul Azhar Abdul Rashid**, Moncef B. Tayahi, ITCOM 2002, Boston, July 2002
7. 'Improving Spectral Efficiency in Single Sideband Subcarrier Multiplexed Systems by Spectral Overlapping using Orthogonal Carriers' **Hairul Azhar Abdul Rashid**, H. T. Chuah, Moncef B. Tayahi, Asia-Pacific Conference on Communications 2003 (APCC2003), Penang, 21st – 24th September 2003
8. "OTDM-WDM Propagation Impairments and Techniques to Improve Performance", C.C. Hiew, F.M. Abbou, H.T.Chuah, S.P. Majumder and **A. A. R. Hairul**, The IASTED International Conference on COMMUNICATION SYSTEMS AND NETWORKS (CSN), September 1-3, 2004, Marbella, Spain.
9. "EFFECT OF OPTICAL BEAT INTERFERENCE IN MOC-SCM OPTICAL NETWORKS IN PRESENCE OF FWM", M. T. Al-Qdah, **H. A. Abdul-Rashid**, K. Dimyati, M. K. Abdullah, Australian Telecommunication Network and Application Conference (ATNAC), pp. 156-161, 8-10 December 2004, Sydney Australia
10. "Chromatic Dispersion Penalties in Orthogonal Subcarrier – Optical Tandem Single Sideband Systems (OTSSB)", **H. A. Abdul-Rashid**, H. T. Chuah, M. B. Tayahi, M. T. Al-Qdah, R. C. Lee and S. Lanka, Proceedings of Malaysia International Conference on Communications / International Conference on Networking MICC-ICON 2005, November 16-18, 2005, Kuala Lumpur, Malaysia.
11. 'Adopting Electroabsorption Modulator for the WLAN 802.11a Radio Over Fibre System', Syamsuri Yaakob, Mohd Azmi Ismail, Romli Mohamad, Mohamed Razman Yahya, Abd.Fatah Awang Mat, Mohd. Ridzuan Mokhtar, **Hairul Azhar Abdul Rashid**, Proceedings of International Conference on Semiconductor Electronics 2006 (ICSE2006), Kuala Lumpur, Malaysia, 2006.
12. 'Numerical Analysis of R-EDFA for Long Haul Optical Fiber Communication System', N. Hossain, V. Mishra, **A.A.R. Hairul**, F.M. Abbou, A.R. Faidz, S.M.M Qadir, M.H. Al-Mansoori, M.A. Mahdi and A.W. Naji, Proceedings of the International Conference: Sciences of Electronic, Technologies of Information and Telecommunications, Tunisia, March 25-29, 2007.
13. 'Packet based echo cancellation for voice over Internet protocol', Periakarruppan, G.; **Abdul Rashid, H.A.**, 2005 IEEE 7th Malaysia International Conference on Communication, 2005 13th IEEE International Conference on Networks, Volume 1, 16-18 Nov. 2005.
14. 'Distributed Raman Amplifiers for Long-Haul OFCS', N. Hossain, V. Mishra, **A.A.R. Hairul**, F.M. Abbou, A.R. Faidz, H. Al-Mansoori, M.A. Mahdi and A.W. Naji, Proceedings of Multimedia University Symposium on Information and Communications 2006 (M2USIC 2006), Kuala Lumpur, Malaysia, 2006.
15. "Semi-Analytical Performance Analysis of an SCM-WDM PON in the presence of XPM and GVD", **H. A. Abdul-Rashid**, F. M. Abbou, M. T. Al-Qdah, H. T. Chuah and M. B. Tayahi,

- Proceedings of 14th International Conference on Telecommunications (ICT 2007) and 8th Malaysia International Conference on Communications (MICC 2007), Bayview Beach Resort, Penang, 14th – 17th May 2007.
16. “Subcarrier Multiple Access System using a single optical source to suppress Optical Beat Interference”, **H. A. Abdul-Rashid**, M. T. Al-Qdah, H. T. Chuah and M. B. Tayahi, Proceedings of 14th International Conference on Telecommunications (ICT 2007) and 8th Malaysia International Conference on Communications (MICC 2007), Bayview Beach Resort, Penang, 14th – 17th May 2007.
 17. “Low Cost Optical Fiber Communication LinkBased on a VCSEL and Bandwidth EfficientModulation 16-QAM Signaling”, Moncef B. Tayahi,**Hairul A. Rashid**, Andrzej Trzynadlowski, WillNorris, Sivalanka Kumar, Peter Seibel, Mitchel Harris and Banmali Rawat, Proceedings of 14th International Conference on Telecommunications (ICT 2007) and 8th Malaysia International Conference on Communications (MICC 2007), Bayview Beach Resort, Penang, 14th – 17th May 2007.
 18. “Numerical Analysis of remotely pumped EDFA incorporated with a CFBG”, Nadir Hossain, M. A. Hasnayeem, A. W. Naji, V. Mishra, F. M. Abbou, **A. A. R. Hairul**, and A. R. Faidz, Proceedings of the seventh IASTED International Conferences on Wireless and Optical Communications (WOC’07), May, 30 - June,1, 2007, Montreal, Quebec, Canada.
 19. “Numerical Analysis of Pump Propagation Direction in Distributed Raman Amplifiers”,Nadir Hossain, A.W. Naji, V. Mishra, F.M. Abbou, M. A. Hasnayeem, **A. A. R. Hairul**, and A. R. Faidz, Proceedings of the fourth International Conference organized by Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI) Association, Thailand (ECTI-CON’07), May 9-12, 2007, Chiang-Rai, Thailand.
 20. “Multi-wavelength Brillouin-Erbium Fiber Laser Utilizing a TunableBand-pass Filter”, M.N. Mohd Nasir, M.H. Al-Mansoori, **H. A. Abdul Rashid**, P.K. Choudhury, andZ. Yusoff, IEEE 2007 Regional Symposium on Microelectronics, 3-6 December 2007, Penang, pp. 340-343
 21. “Numerical Modeling of Dual-Wavelength (1050 nm + 1560 nm) pumped Thulium Doped Fiber Amplifier”, S. D. Emami, S. A. Daud,F. A. Rahman, **H. A. Abdul-Rashid**, S. W. Harun, Proceedings of Multimedia University Symposium on Information and Communications 2007 (M2USIC 2007), Kuala Lumpur, Malaysia, 2007.
 22. “An Experimental Study on S-band Depressed Cladding EDFA”, S. A. Daud, S. D. Emami, **H. A. Abdul Rashid**, M. R. Mokhtar, Z. Yusoff and F. A. Rahman, Malaysia Conference on Photonics 2008, Putrajaya, Malaysia, 2008.
 23. “Shorter Wavelength Gain Shift In EDFA Using AMacro-Bending Approach”, S. A. Daud, S. D. Emami, K. S. Mohamed, **H. A. Abdul-Rashid**, S. W. Harun, H. Ahmad, M. R. Mokhtar, Z.Yusoff and F. A. Rahman, IEEE Photonics Global Singapore 2008, Singapore, 2008.
 24. “Performance of a High-Concentration Erbium-Doped Fiber Amplifier with 100nm Amplification Bandwidth”, P. Hajireza, N.S. Shahabuddin, S. Abbasi-Zargaleh, S.D. Emami, **H.A. Abdul-Rashid** and Z. Yusoff, Persidangan Fizik Kebangsaan 2010 (PERFIK 2010)
 25. “Performance Analysis of Least Mean Square Time-Domain Equalizer for 20.48 Gb/s Direct-Detection Optical OFDM Transmission Over 2560 km of SMF”, M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**, Malaysia International Conference on Communications 2009 (MICC 2009), Kuala Lumpur, December 2009.
 26. “Optimization of Fiber Length and Bending Diameter in Depressed Cladding Erbium-doped Fiber Amplifier”, C.E. Chan, S.D. Emami, P. Hajireza, H.Y. Beh, S.A. Daud, S.S. Pathmanathan, **H.A. Abdul Rashid**, S.W. Harun, H. Ahmad, Malaysia International Conference on Communications 2009 (MICC 2009), Kuala Lumpur, December 2009.
 27. “Cyclic Prefix Reduction in Long-Haul Direct-Detection Optical OFDM Transmission”, M.

- Ghanbarisabagh, M. Y. Alias and **H. A. Abdul-Rashid**, 12th International Symposium on Microwave and Optical Technology (ISMOT-2009), New Delhi, December 2009.
28. "Optimization of Fiber Length and Bending Diameter in macro-bent S-band EDFA", H.Y. Beh, S.D. Emami, C.E. Chan, P. Hajireza, S.A. Daud, S.S. Pathmanathan, S.W. Harun, H. Ahmad and **H.A. Abdul Rashid**, 12th International Symposium on Microwave and Optical Technology (ISMOT-2009), New Delhi, December 2009.
 29. "Performance Analysis of Least Mean Square Time-Domain Equalizer in Direct- Detection Optical OFDM High-Speed Transmission", Mohammad Ghanbarisabagh, M.Y. Alias, **H.A. Abdul-Rashid**, International Conference on Recent and Emerging Advanced Technologies in Engineering (iCREATE 2009), 23-24, November 2009, Pan Pacific KL International Airport Hotel, Malaysia.
 30. "Numerical Study of Macro Bending Effect on High Concentration EDFA", P. Hajireza , S. D. Emami, S. Abbasizargaleh, D. Kumar, S. W. Harun and **H. A. Abdul-Rashid**, International IEEE Conference on Computer & Communication Engineering, Malaysia (ICCCE10).
 31. "Cyclic Prefix Reduction for OFDM over Fast Rayleigh Fading Channel", M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**. WIRELESS WORLD RESEARCH FORUM (WWRF), WWRF Meeting 24, 12-14, April 2010, Penang Island, Malaysia.
 32. "Performance analysis of decision feedback time domain *equalizer for direct-detection optical OFDM transmission in long-distance SSF*", M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**. 3rd International Conference on Computer and Communication Engineering 2010 (ICCCE10), 11-13, May 2010, Prince KL Hotel, Kuala Lumpur, Malaysia, pp.1-4.
 33. "Performance Analysis of Decision Feedback Time-Domain Equalizer for 20.48 Gb/s Direct-Detection Optical OFDM Transmission Over 2560 km of SMF", M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**. The 1st IEEE International Conference on Photonics 2010 (ICP2010), 5-7, July 2010, Holiday Villa, Langkawi, Malaysia.
 34. "Performance Analysis of Least Mean Square Time-Domain Equalizer in Long-Haul Direct-Detection Optical OFDM Transmission", M. Ghanbarisabagh, M. Y. Alias, **H. A. Abdul-Rashid**. The 1st IEEE International Conference on Photonics 2010 (ICP2010), 5-7, July 2010, Holiday Villa, Langkawi, Malaysia.
 35. "Broad multiwavelength source using spectral slicing technique", NS Shahabuddin, A Mansoor, M Othman, Z Yusoff, HAA Rashid, Research and Development (SCORED), 2011 IEEE Student Conference on, 241-243, 2011
 36. "Double-frequency spaced multiwavelength Brillouin-Erbium fiber laser in a hybrid linear-ring configuration", A Mansoor, YN Phua, M Othman, NS Shahabuddin, Z Yusoff, Photonics (ICP), 2011 IEEE 2nd International Conference on, 1-3, 2011
 37. "Study of eigen value equation of hyperbolic waveguide under slow wave consideration", D Kumar, S Pillay, HA Abdul-Rashid, Photonics (ICP), 2011 IEEE 2nd International Conference on, 1-5, 2011
 38. "On the initial development of Rare Earth doped fiber using chelate delivery system", SZ Muhd-Yassin, K Anuar, MI Zulkifli, MH Safar, N Tamchek, HA Abdul-Rashid, Photonics (ICP), 2011 IEEE 2nd International Conference on, 1-4, 2011
 39. "Ultrashort pulse laser generation in ring-type EDFL using carbon-nanotube saturable absorber", H Mohamad, NM Yusoff, MH Abu Bakar, NS Shahabuddin, HA Abdul-Rashid, Z Yusoff, Photonics (ICP), 2011 IEEE 2nd International Conference on, 1-3, 2011
 40. "Sensitivity analysis on effects of bias drifting in subcarrier multiplexed transmission system employing OSSB modulation", SC Lim, HA Abdul-Rashid, WS Cheong, Communications (APCC), 2011 17th Asia-Pacific Conference on, 213-217, 2011

41. "Effect of Fiber Bragg Grating Reflectivity in Linear Cavity Brillouinâ•• Erbium Fiber Laser", NS Shahabuddin, H Kaur, HAA Rashid, Z Yusoff, AIP Conference Proceedings 1328, 124, 2011
42. "Compact Widely Tunable Câ€•Plus Lâ€•Band Erbiumâ€•Doped Laser and Amplifier", NS Shahabuddin, B Bouzid, S Ali, M Othman, Z Yusoff, HA Abdulâ€•Rashid, AIP Conference Proceedings 1328, 133, 2011
43. "System tolerance of NRZ-DQPSK all-optical OFDM in long-haul transmission system using DCF", SE Mirnia, A Zarei, SD Emami, SW Harun, HAA Rashid, Photonics (ICP), 2012 IEEE 3rd International Conference on, 312-315, 2012
44. "Performance comparisons of a linear BEFL with and without a tunable bandpass filter", A Mansoor, M Othman, HAA Rashid, Z Yusoff, Photonics (ICP), 2012 IEEE 3rd International Conference on, 34-37, 2012
45. "Fano resonance on plasmonic nanostructures", SD Emami, H Ahmad, SW Harun, SE Mirnia, MRK Soltanian, HA Rashid, Photonics (ICP), 2012 IEEE 3rd International Conference on, 144-148, 2012
46. "On the fabrication of aluminum doped silica preform using MCVD and solution doping technique", SM Aljamimi, MS Anuar, SZ Muhd-Yasin, MI Zulkifli, N Tamchek, Z Yusoff, HA Abdul-Rashid, Photonics (ICP), 2012 IEEE 3rd International Conference on, 235-238, 2012
47. "All fiber optical band-pass filter using macro-bending approach", SZ Muhd-Yassin, SD Emami, MS Anuar, MI Zulkifli, N Tamchek, CJ Leong, HA Abdul-Rashid, Photonics (ICP), 2012 IEEE 3rd International Conference on, 242-245, 2012
48. "Strain effect on spectral response of biconic tapered fiber interferometer", HS Lin, YN Phua, MR Mokhtar, HA Abdul-Rashid, M Othman, Z Yusoff, Photonics (ICP), 2012 IEEE 3rd International Conference on, 107-109, 2012
49. "Thermoluminescence characteristics of flat optical fiber in radiation dosimetry under different electron irradiation conditions", A Alawiah, AM Intan, S Bauk, HA Abdul-Rashid, Z Yusoff, MR Mokhtar, SPIE Optics+ Optoelectronics, 87750S-87750S-12, 2013
50. "Radiation dose to radiosensitive organs in PET/CT myocardial perfusion examination using versatile optical fibre", M Salasiah, AJ Nordin, ASF Fikri, H Hishar, N Tamchek, K Taiman, AKA Bazli, SPIE Optics+ Optoelectronics, 87750U-87750U-8, 2013

Research and Development

Project and Consultancy

Research Project

1. Subcarrier Multiplexing Passive Optical Network

Role: Member

Period: December 2003 – December 2005

Amount funded: RM 163,000

Funding Agency: IRPA

Status: Successfully completed

2. CD and Chirp Measurement using FWM- OBI

Role: Member

Period: June 2004 – December 2007

Amount funded: -

CURRICULUM VITAE

Funding Agency: -
Status: Successfully completed

3. Coarse Wavelength Division Multiplexing – Passive Optical Networks

Role: Team Leader
Period: December 2004 – March 2005
Amount funded: -
Funding Agency: -
Status: Terminated

4. Orthogonal Carrier – Optical Tandem Single Sideband (OC-OTSSB)

Role: Team Leader
Period: December 2003 – December 2004
Amount funded: -
Funding Agency: -
Status: Successfully completed

5. Thullium-Doped Fiber Amplifier for S-Band

Role: Member
Period: December 2004 – December 2005
Amount funded: RM 200,000
Funding Agency: MMU Internal Fund
Amount funded: RM 30,000
Funding Agency: Malaysia Toray Science Foundation
Period: December 2005 – December 2007
Status: Completed

6. Echo Canceller for VoIP NEtworks

Role: Co-ordinator
Period: December 2003 – December 2005
Amount funded: -
Funding Agency: -
Status: Successfully completed

7. Study and Design of Optical Single Sideband and Subcarrier Multiplexing using QPSK Modulation

Role: Co-ordinator
Period: December 2003 – December 2005
Amount funded: -
Funding Agency: -
Status: Completed

8. Performance Analysis and design of an Optical TDM-WDM Transmission System and network

Role: Co-ordinator
Period: June 2004 – December 2005
Amount funded: RM 116,000
Funding Agency: IRPA funding from Ministry of Science, Technology & Education, Government of Malaysia
Collaboration: Alcatel Systems (M) Sdn. Bhd.
Status : Completed

9. S-Band Optical Amplifier

Role: Project member
Period: Dec 2006 –

CURRICULUM VITAE

Amount funded: RM 250,000

Funding Agency: Science Fund, Ministry of Science, Technology and Innovation, Government of Malaysia

Status : Completed

10. Multi-wavelength Brillouin-ErbiumHoley Fiber Laser

Role: Project member

Period: Dec 2006 – November 2008

Amount funded: RM 120,000

Funding Agency: eScience Fund from Ministry of Science, Technology &Innovation, Government of Malaysia

Status : Completed

11. Reconfigurable FBG for sensors

Role: Project member

Period: Dec 2005 – November 2007

Amount funded: RM 230,000

Funding Agency: Science Fund, Ministry of Science, Technology and Innovation, Government of Malaysia

Status : Completed

12. Optical and Electrical Testing for Optical Transceiver Chip

Role: Project Leader

Period: December 2005 – December 2006

Amount funded: RM 198,000

Funding Agency: SiRES LABS Sdn. Bhd.

Status : Terminated

13. Design, fabrication and characterizationof rare-earth doped fiber with optimizeddopant distribution profile

Role: Project Leader

Period: January 2009 – December 2010

Amount funded: RM 231,000

Funding Agency: Science Fund, Ministry of Science, Technology and Innovation, Government of Malaysia

Status : Completed

14. Design, Development and Characterization of a Discrete PCF Raman Amplifier

Role: Project Member

Period: January 2009 – December 2010

Amount funded:

Funding Agency: Science Fund, Ministry of Science, Technology and Innovation, Government of Malaysia

Status : Completed

15. R&D Management and Marketing

Role: Project Leader

Period: September 2009 – September 2010

Amount funded: RM 86,808

Funding Agency: MGT (HCD-STI), Ministry of Science, Technology and Innovation, Government of Malaysia

Status : Completed

16. Development of visible fiber laser using modified silica host

Role: Project Leader

Period: April 2010 – June 2012

Amount funded: RM 312,100

Funding Agency: Brain Gain Program, Ministry of Science, Technology and Innovation, Government of Malaysia

CURRICULUM VITAE

Status : Completed

17. Research and Development for Reducing Geo-Hazard Damage in Malaysia caused by Landslide and Flood: Geo-Hazard Remote Analysis & Monitoring Stations (GRAMS)

Role: Project Member

Period: October 2010 – September 2015

Amount funded: RM 3.2 million

Funding Agency: JICA-JST SATREPS Program (Natural Disaster Prevention Program)

Status: On-going

18. Design, Fabrication and Characterization of Thulium doped in Modified

Role: Project Leader

Silica Host for S-band Amplifiers

Period: January 2011 – December 2012

Amount funded: RM 990,000

Funding Agency: TMR&D

Status: Completed

19. Thermo-Luminescence Characteristics of Radiated Germanium Doped Silica Optical Fiber

Role: Project Leader

Period: June 2012 – May 2015

Amount funded: RM115,000

Funding Agency: MOHE-FRGS

Status: On-going

20. Doped Silica Optical Fiber as Thermoluminescence Radiation Dosimeters

Role: Project member

Period: January 2013 – January 2016

Amount funded: RM 4,486,000

Funding Agency: UM-HIR Fund

Status: On-going

21. Amplifier Fiber for New Optical Communication Band (New Band)

Role: Project Leader

Period: April 2013 – March 2014

Amount funded: RM 1,146,000

Funding Agency: TMR&D

Status: On-going

Consultancy

1. Chembell Technologies Sdn. Bhd.

Duration: April 2003 - June 2003

Technical Expert Witness on Frame Relay and Data communications. Prepared a technical report for court proceedings in Singapore

2. Significant Technologies Sdn. Bhd.

Duration: June 2004 - Dec 2008

Conducted short courses on Optical Communication Systems

3. SiRES LABS Sdn. Bhd.

Duration: Aug 2004 - Dec2004

Carried out compliance testing for optical interconnect ICs for Very Short Reach (VSR) applications

4. EduXplore Sdn. Bhd.
Training consultant on Research Methodology, 2009
5. Alternate representative to Penang State Government for the Penang Professorship Chair, 2009
6. MMU representative to ISIS on “RM10 Strategic Planning for MOSTI”, July 2009
7. Programme Advisor for the field of Telecommunication Engineering at IKIP International College, Kuantan, Pahang. Appointment between August 2009 – August 2010.
8. Member of Advisory Panel to the Benevolent Fund for Outstanding Students (BFOS) and Hadhramout University of Science and Technology, Yemen in April 2010
9. Member of Expert Review Panel (ERP) for Brain Gain Malaysia (Nanotechnology), Academy Science Malaysia (ASM) & MOSTI, from January – June 2010.
10. Council of Malaysia, 2010. (In cooperation with Byte Craft Sdn. Bhd., CORE, UNITEN and HLA Associates Sdn. Bhd.)
11. Consultant to MDEC for Researcher-Academic Attachment Program (RAP) at Significant Technologies Sdn. Bhd. In 2010
12. Subject Matter Expert Reviewer, R,D&C Funds, MOSTI
13. Subject Matter Expert Panel, Telecommunication Sector, MIGHT-METEOR Advanced Manufacturing Institute
14. Representative of MMU at “Workshop for National Policy for Science, Technology and Innovation” by MOSTI, 2013

Teaching and Supervision

Teaching Undergraduate and Postgraduate

1. Fabrication of Rare-Earth doped Optical Fibers in modified Silica host
2. Modified Chemical Vapour Deposition
3. Chelate Delivery System
4. Optical Antennas
5. Optical Fiber Dosimetry
6. High Speed and Broadband Networks
7. Passive Optical Networks
8. Signal Processing in Communication systems
9. Subcarrier Multiplexing
10. Optical Single Sideband Systems
11. Chromatic Dispersion Compensation
12. Erbium Doped Fibre Amplifier and Laser
13. Thulium Doped Fibre Amplifier and Laser
14. Ytterbium-Erbium Co-doped Fibre Amplifier and Laser
15. Optical Orthogonal Frequency Division Multiplexing

CURRICULUM VITAE

16. Optical Fibre Sensors
17. Generation of Slow-Light

Supervision Undergraduate and Postgraduate

Postgraduate Supervision

Ph.D

1. Mr. Mohammad Ghanbarisabagh
Thesis title: Performance Analysis of OFDM Systems
Date of Registration: November 2008
Graduated: 2011

2. Ms. Roslina Mokhtar
Thesis title: Design ,Development and
Characterization Of Network Hybrid Optical Sensor
Date of Registration: December 2010

3. Mr. Shahrin Zen Bin Muhamad Yassin
Thesis title: Development Of Visible Up Conversion
Fiber Based On Modified Silica Glass Host
Date of Registration: May 2011

4. Ms. Shamini Pillay
Thesis title: Performance Analysis Of Offset
Launching Into Multimode Fiber
Date of Registration: January 2011

5. Mr. Phua Yeong Nan
Thesis title: Investigation Of The All -Optical
Generation Of Multi Wavelength Fiber Based On
Nonlinear Effects
Date of Registration: February 2011

M. Eng. Sc.

1. Mr. Ganesan Periakaruppan.
Thesis title: Echo Cancellation for Voice over Internet Protocol (VoIP) Networks
Date of registration: 13 November 2003"
Graduated: 2006

2. Mr. Simon Lee Ruen Chung
Thesis title: Study And Design Of Optical Single Sideband Subcarrier Multiplexing Using
Qpsk Modulation
Date of registration: 13 November 2003
Graduated: 2006

3. Mr. Shankar Patmanathan
Thesis title: Investigation of EDFA Characteristics and their possible application in all Optical Communications
Channels
Date of registration: June 2004

CURRICULUM VITAE

Graduated: 2009

4. Mr. Syamsuri Yaakob

Thesis title: Broadband Signal Transmission Using The Radio Over Fiber (ROF) System

Date of registration: July 2006

Graduated: 2010

5. Mr. Mohammad Mahadi Hassan

Thesis title: Performance Analysis Of Contention Resolution, Routing And Wavelength Assignment In Optical Burst Switching Network

Date of registration: July 2009

Graduated: 2012

6. Mr. Muhammad Ali Toor

Thesis title: Experimental And Theoretical

Investigation Of Brillouin Scattering In Polymer Optical Fibers

Date of Registration: August 2011

7. Ms. Amilia Mansoor

Thesis title: Generation Of Multiwave Length Laser By Utilising Brillouin Scattering In Optical Fiber

Date of Registration: December 2011

8. Mr. Salah Mohammed Salah Abdullah

Thesis title: Thulium Doped Fiber Fabrication And Characterisation

Date of Registration: March 2012

9. Mr. Yeap Soon Heng

Thesis title: Investigation Of Optimized Methods For Generating Slow Light In Optical Waveguides

Date of Registration: November 2010

10. Mr. Leong Chia Jian

Thesis title: Design, Development and Characterization Of S-Band Optical Amplifier

Date of Registration: December 2010

M.Eng. Photonics

1. Mr. Beh Hock Yau

Project title: Characterization and Optimization of S-Band Optical Amplifier using Macro-bending in EDFA

Status: Completed - 2010

2. Mr. Chan Choon Earn

Project title: Characterization and Optimization of S-Band Optical Amplifier using Depressed Cladding EDFA".

Status: Completed - 2010

3. Ms. Suzie Lim

Project title: Chromatic Dispersion Compensation Using Pseudo Optical Single Sideband

Status: Completed- 2011

4. Mr. Sasei Kumar

CURRICULUM VITAE

Project title: Characterization Of Erbium-Doped Fiber Amplifier With Selective Doping
Status: Completed -2012

M.Eng. Telecom.

1. Mr. Manimaran Ramakrishnan

Project title: Laser Linewidth Measurement using Self-Heterodyne Technique

Status: Graduated -2008

2. Ms. Ameneh Ahmadi

Project title: Transversal Design of an Efficient TDFA

Status: Graduated– 2012

3. Ms. Tai Hui Jue

Project title: Numerical Modelling of TDFA in Silica host co-doped with Alumina

Status: On going

4. Ms. Amy Lim

Project title: Transversal Design of an Efficient EDFA

Status: On going

Academic Recognition and Leadership

[Assessor and Examiner](#)

Thesis Examination

M. Sc.

1. Ms. Zaineb A. Taki

Thesis title: Nonlinear Stimulated Raman Scattering Effects in Optical Code-Division Multiple-Access Transmission System

Institution: Universiti Putra Malaysia

Date: 19 July 2007

2. Ms. Zulzilawati Jusoh

Thesis title: C-Band Bismuth based Erbium-doped Fiber Amplifier

Institution: Universiti Malaya

Date: 21 January 2008

3. Mr. Mohamed Al-Butti

Thesis title: Bismuth Fiber Laser PCF

Ph.D.

1. Mr. Hakim Mellah

Thesis title: Design and Performance Analysis of a WDM Packet Switching Network

Institution: MultimediaUniversity

Date: 28 May 2008

2. Ms. Tan Saw Chin

CURRICULUM VITAE

Thesis title: WDM Packet Switching Networks: Routing and Wavelength Aware Amplifier Spontaneous Emission Noise and Four Wave Mixing
Institution: MultimediaUniversity
Date: 29 June 2008

Technical Paper Reviewer/Editorial

Journal

1. *Technical Paper Reviewer* Journal Optics and Laser Technology, ELSEVIER, ISSN: 0030-3992
2. *Technical Paper Reviewer* Journal Optics and Laser Technology, ELSEVIER, ISSN: 0030-3992
3. *Editorial Board Member*
Recent Patents on Signal Processing
Bentham Open
4. *Technical Paper Reviewer*
Optics Express

Conference

1. MMU International Symposium on Information and Communication Technologies (M2USIC) 2005 - 2007
2. Asia Pacific Conference on Communication (APCC) 2003
3. IEEE Malaysia International Conference on Communications (MICC) 2003
4. International Conference on Information and Communications Technology (ICT) 2007
5. IEEE Malaysia International Conference on Communications (MICC) 2005
6. Malaysian Conference on Photonics 2008
7. IEEE Malaysia International Conference on Communications (MICC) 2007
8. International Conference on Multimedia, Signal Processing, And Communication Technologies (IMPACT-2009)
9. International Conference on Information, Communications and Signal Processing (ICICS) 2009, Macau
10. IEEE Malaysia International Conference on Communications (MICC) 2009
11. International Conference on Photonics 2010 (ICP2010)
12. International Conference on Photonics 2011 (ICP2011)
13. International Conference on Photonics 2012 (ICP2012)
14. International Conference on Photonics 2012 (ICP2013)
15. International Conference on Multimedia, Signal Processing and Communication Technologies
16. (IMPACT2013)

Referee and Evaluation Committee

Technical Paper Reviewer/ Editorial

Journal

1. Technical Paper Reviewer

Journal Optics and Laser Technology, ELSEVIER, ISSN: 0030-3992

2. Technical Paper Reviewer

Optical Engineering, SPIE

ISSN: 0091-3286

3. Editorial Board Member

Recent Patents on Signal Processing

Bentham Open

4. Technical Paper Reviewer

Optics Express

Conference

1. MMU International Symposium on Information and Communication Technologies (M2USIC) 2005 - 2007
2. Asia Pacific Conference on Communication (APCC) 2003
3. IEEE Malaysia International Conference on Communications (MICC) 2003
4. International Conference on Information and Communications Technology (ICT) 2007
5. IEEE Malaysia International Conference on Communications (MICC) 2005
6. Malaysian Conference on Photonics 2008
7. IEEE Malaysia International Conference on Communications (MICC) 2007
8. International Conference on Multimedia, Signal Processing, And Communication Technologies (IMPACT-2009)
10. International Conference on Information, Communications and Signal Processing (ICICS) 2009, Macau
11. IEEE Malaysia International Conference on Communications (MICC) 2009
12. International Conference on Photonics 2010 (ICP2010)
13. International Conference on Photonics 2011 (ICP2011)
14. International Conference on Photonics 2012 (ICP2012)
15. International Conference on Photonics 2012 (ICP2013)
16. International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT2013)

Academic and Professional Association

Professional Membership

1. Registered with Board of Engineers Malaysia (BEM)
2. Member, The Institution of Engineers, Malaysia (IEM)
3. Senior Member, The Institute of Electrical and Electronic Engineers, Inc. (IEEE)
4. Senior Member, Communication Society IEEE
5. Senior Member, Laser and Electro-Optic Society IEEE
6. Student Member, The International Society for Optical Engineering (SPIE)

Professional Activities

1. Member of Organizing Committee, 5th Malaysia International Conference on Communications (MICC 2001)
2. Member of Organizing Committee, Asia-Pacific Conference on Communications 2003 (APCC'2003), in conjunction with 6th Malaysia International Conference on Communications (MICC 2003)
3. Secretary, IEEE Communications Society Malaysian Chapter (2002 – 2004)
4. Committee member, IEEE Communications Society Malaysian Chapter (2004 – 2005)
5. Technical Paper Reviewer, Technical Program Committee, 7th Malaysia International Conference on Communications, International Conference on Networking 2005 (MICC-ICON 2005)
6. Committee member, IEEE Photonics Society, Malaysia Chapter (2008 – 2010)
7. Chair, Organising Committee, International Conference on Photonics (ICP 2010)
8. Co-Chair, Organising Committee, International Conference on Photonics (ICP 2011)
9. Technical Programme Committee, International Conference on Photonics (ICP 2012)
10. Technical Programme Committee, International Conference on Photonics (ICP 2013)

Referees

Prof. Dato' Muhammad Rasat Muhammad

President,

Multimedia University,

63100 Cyberjaya.

Phone: 03-8312-5000

Fax : 03-8312-5445

E-mail: rasat@mmu.edu.my

Prof. Moncef B. Tayahi, Ph.D.

Department of Electrical Engineering, Mail Stop 260

University of Nevada, Reno

Reno, NV89557

Phone: +1 775 784-6927

Fax: +1 775 784-6627

E-mail: moncef@ee.unr.edu

*This curriculum vitae (CV) is generated from The Directory of Expertise website.
Copyright 2017 Multimedia University*

Prof. Dr. Hairul Azhar Abdul-Rashid (CV attached)
Vice President (Research & Innovation)
Professor, Fiber Optics Research Center,
Faculty of Engineering, Multimedia University, Malaysia.

Optical Communication Systems

Day1

Physics of light

Basics of communication, optical communications

Basics of optical fiber, optical components

Day 2

Issues

Attenuation

Dispersion

Non-linearities

Day 3

Optical amplifiers

Dispersion compensation

Day 4

System performance

System design

Day 5

Multiplexing - WDM, TDM, OCDM

Optical networks

Professor:

HAIRUL AZHAR ABDUL-RASHID, PhD, P.Eng

Vice President (Research & Innovation)

Multimedia University

Professor,

Fiber Optics Research Center,

Faculty of Engineering,

Multimedia University,

Cyberjaya 63100,

Selangor

<http://www.mmu.edu.my>

2017-07/17/10

Veltech Dr.RR & Dr.SR University

(Estd. u/s 3 of UGC Act, 1956)

Office of International Programmes

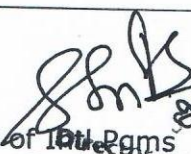
Visiting Professor Programmes

Details of Professor & Course:

Name of the Professor (Profile attached)	Prof. Dr.Hairul Azhar Abdul Rashid (CV Attached) Vice President (Research & Innovation)
University & Country	Multimedia University, Malaysia
Title of the Course	Optical Fibre Communications
No. of Credits	1
Department	Department of Electronics & Communication Engineering
Dates of the Course	September 18- 23, 2017
Total No. of Hours	20
Course Contents	Attached

Prepared by: 
28/7/17

Coordinator – Office of Intl. Pgms

Forwarded by: 
28/07/17

Director – Office of Intl. Pgms

Veltech Dr. RR & Dr. SR University
(Estd. u/s 3 of UGC Act, 1956)


HoD

Dean

Director (Academic)

Vice Chancellor

Veltech Dr.RR & Dr.SR University

(Estd. u/s 3 of UGC Act, 1956)

Professor's Feedback

Name& University	Prof. Dr. Hairul Azhar Abdul-Rashid Vice President (Research & Innovation) Professor, Fiber Optics Research Center, Faculty of Engineering, Multimedia University, Malaysia
Course Title	Optical Fibre Communication
Training Program date	17 th to 22 nd September 2017
Course Duration	20 Hrs
No of Participants	2014-2018, 85 Students
Venue	Michael Faraday Engineering Hive

Your feedback about course offered (Such as level of Students Participation, arrangements, Coordination etc.,).

The students were prepared to take the course with all the sufficient background. Participation was good. However, they were too noisy. Very bad signal to noise ratio.

Overall experience at Veltech

Very pleasant stay and warm hospitality. From food to traveling and accommodation was well organized.

Would you like to visit Veltech again? Why?

Yes, to explore research opportunities,
collaboration

Any other Suggestions:

can expand to other faculties in
Multimedia University, enhance
collaboration, widen scope of
collaboration.



(Signature of Professor)

To.
VEL TECH RANGARAJAN DR. SAGUNTHALA R&
NO 42 AVADI VEL TECH ROAD
VELLANUR CHENNAI 62

VIJAYA BANK
EGMORE CHENNAI
P B NO 3025
123 R L ROAD DUGAR TOWERS
CHENNAI, TAMIL NADU -600008
Phone No : +91-44-28544242 Fax No : 2855348
Swift Code : VIJBINBBFGM
Branch Email Id : che.edmore3005@VIJAYABANK.co.in
Email Id :

FOREIGN BILLS TRANSACTION ADVICE

13-10-2017

Our Reference No. 3005ORTIX170516
Amount in Foreign Currency: USD 1006.78

Operation : Realisation

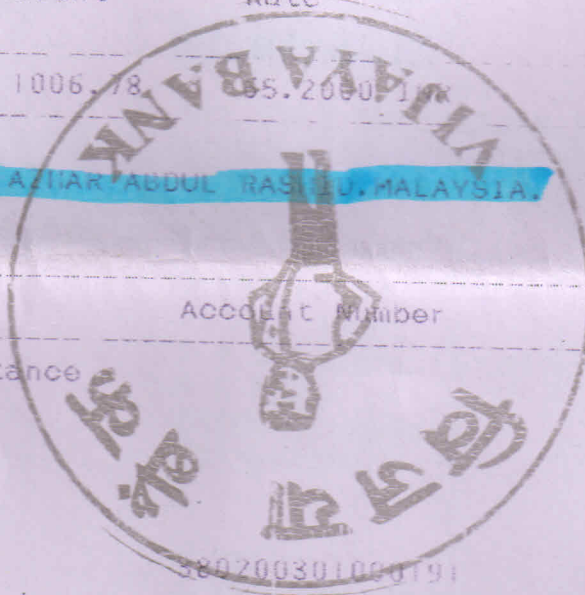
Currency Conversion Details:

P/S	CUR	FCY Amount	Rate	Rupees Equivalent	Forward Contract
1	USD	1006.78	65.2000	65642.00	READY

Beneficiary Details : HAIRUL AZHAR ABDUL RASID, MALAYSIA

Transaction Details :

Account Name	Account Number	Amount	CUR	Cr / Dr
Commission on outward remittance		295.00	INR	Cr
SWIFT Charges		500.00	INR	Cr
POSTAGE & TELEPHONE Charges		100.00	INR	Cr
Charges purchase/sale of fcy		59.00	INR	Cr
Post/ugst payable		59.25	INR	Cr
Post payable		59.25	INR	Cr
Current Account		66714.50	INR	Dr



PRINTED BY TurboSwift AT: 2017.10.16 10:27:45

FOR: VIJBINBBACPC

ACK

Message Name: SINGLE CUSTOMER CREDIT TRANSFER

Message Type: F 103

Direction: Input

Priority: Normal

Session: 4071

Sequence: 582876

RECEIVER: IRVTUS3NXXXX

THE BANK OF NEW YORK MELLON
ONE WALL STREET
NEW YORK, NY

MIR: 171013VIJBINBBACPC4071582876

MOR:

MUR: 3005ORTTX170516

Input Time	Output Time	ACK Flag	NAK Code	DUP Flag	AUTH Code
1947		0			SP--

F01VIJBINBBXCPC4071582876

I103IRVTUS3NXXXXN

3005ORTTX170516

4: MESSAGE TEXT

:20: Sender's Reference..... 3005ORTTX170516

:23B: Bank Operation Code..... CRED

:32A: Value Date, Currency code..... 171013

:50K: Interbank Settled Amount..... MYR 4'142,40

/380200301000191

VEL TECH RANGARAJAN DR. SAGUNTHALA
NO 42 AVADI VEL TECH ROAD
VELLANUR CHENNAI 62
INDIA

:52A: Ordering Institution.....

VIJBINBBEGM
VIJAYA BANK
P B NO 3025, 123 DURGA TOWERS
R L ROAD
CHENNAI (MADRAS)
/8033161825

:53B: Sender's Correspondent.....

:57A: Account With Institution.....

CIBBMYKL
CIMB BANK BERHAD
BANGUNAN CIMB
JALAN SEMANTAN, DAMANSARA HEIGHTS
KUALA LUMPUR
/12420000018207
HAIRUL AZHAR ABDUL RASHID
MULTIMEDIA UNIVERSITY MMU MALAYSIA
MALAYSIA

:59: Beneficiary Customer.....

:70: Remittance Information.....

:71A: Details of Charges.....

A52FC2CBD001

**** END OF MESSAGE ****

PRINTER: PEGM.1387.013618 QUEUE: PRINTEGM BY: PEGM
DATABASE KEY: 201710131617260101 USER KEY: 201710131617260100

PAGE: 1