CURRICULUM VITAE

ASSOC. PROF. DR. SITI BARIRAH AHMAD ANAS

Department of Computer and Communication Systems Engineering. Faculty of Engineering. Universiti Putra Malaysia. 43400 Serdang. Selangor.

Tel. : 03-9679 6439
E-mail : barirah@upm.edu.my
ORCID : 0000-0002-5783-3981
Google Scholar : https://bit.ly/GS_SBAA
ResearchGate : https://www.researchgate.net/profile/Siti-Barirah-Ahmad-Anas

Education

1. Ph.D in Electronic Systems Engineering, 2009, University of Essex, UK
2. M.Sc. in Communication and Networks Engineering, 2003, Universiti Putra Malaysia
3. B.Eng. Computer and Electronic Systems, 1999, University of Strathclyde, UK

Areas of Interest

1. Optical Access Networks
2. Visible Light Communications and Positioning
3. Free Space Optical Communications
4. Optical Code Division Multiple Access

Professional Qualification/ Membership/ Affiliation

1. Senior Member, Institute of Electronics and Electrical Engineers (IEEE) (#41320048)
2. Chair (2023-2024), IEEE Photonics Society Malaysia Chapter
3. Member, Optical Society of America (OSA) (#958629)
4. Graduate Member, The Institution of Engineers Malaysia (IEM) (#25476)
5. Member, Board of Engineers Malaysia (BEM)

Appointments

Position	Duration
1. Head, Department of Computer and Communication Systems Engineering, UPM	1 March 2024 – Present
2. Coordinator, Master by Coursework (Communication Engineering) Department of Computer and Communication Systems Engineering, UPM	1 Jan 2015 – 31 Jul 2019 1 Sep 2020 – 31 Aug 2022
3. Associate Professor, Department of Computer and Communication Systems Engineering, UPM	1 November 2014 - present
4. Academic Coordinator, Department of Computer and Communication Systems Engineering, UPM	1 Aug 2011 – 31 Jul 2013
5. Senior Lecturer, UPM	1 Jan 2010 – 31 October 2014
6. Head, Photonics and Fiber Optics Systems Laboratory, Department of Computer and Communication Systems Engineering, UPM	1 Aug 2009 - 31 Jul 2011
7. Lecturer, UPM	15 Jul 2003 – 31 Dec 2009
8. Tutor, UPM	1 Mar 2000 - 14 Jul 2003
9. Assistant Manager, Internet Services, Telekom Malaysia Berhad	20 Sep1999 – 28 Feb 2000

Publications

Journals (10 recent journals)

1. H. Hisham, **S. Anas**, M. Bakar, M. Alresheedi, A. Abas, and M. Mahdi, (2023) "Parametric study of the transient period characteristics of distributed feedback laser diodes," J. Opt. Technol. vol. 90, pp. 68-74.
2. M. A. Riza, Y. I. Go, S W Harun, **S. B. Anas**, (2023) “Optimal etching process and cladding dimension for improved coating of porous hemispherical ZnO nanostructure on FBG humidity sensor”, Laser Physics, vol. 33, no. 7, art. no. 075901 (SA).
3. M. A. Riza, Y. I. Go, S W Harun, **S. B. Anas**, (2023), “Effect of additive concentration on crystalline surface of ZnO nanostructures morphology for enhanced humidity sensing”, Sensors International, vol. 4, art. no. 100211 (SA)
4. Alnassar, Ghusoon, Mohammed, Husam Abduldaem, Taiwo, Ambali, **Anas, Siti Barirah Ahmad** and Mokhtar, Makhfudzah Binti. (2022), "Deployment of multiservice code in FSO-based hybrid subcarrier system" Journal of Optical Communications https://doi.org/10.1515/joc-2022-0240.
5. Mohammed, H.A., Almamori, A., Girei, S., Abu Bakar, M.H., **Anas, S.B.A.**, Mahdi, M.A., Yaacob, M.H. (2022), “Performance Evaluation of Ammonia Sensors Using Cladding Modified Single-Mode Optical Fiber Coated with Polyaniline Nanofibers”, International Journal of Nanoscience and Nanotechnology, vol. 18, issue 2, pp. 135-141.
6. Mohammed, H.A., Abu Bakar, M.H., **Anas, S.B.A.**, Mahdi, M.A., Yaacob, M.H. (2022), “Optical fiber sensor network integrating SAC-OCDMA and cladding modified optical fiber sensors coated with nanomaterial”, Optical Fiber Technology, vol. 70, art. no. 102875.
7. Mahmood, R.M., Yaakob, S., Ahmad, F.A., **Anas, S.B.A.**, Kadir, M.Z.A., Beson, M.R.C. (2022) “Effect of Phase Noise on the Optical Millimeter-Wave Signal in the DWDM-RoF System”, Electronics (Switzerland), vol. 11, no. 3, art. no. 489.
8. Azarnia, A., Sahbudin, R.K.Z., Adzir, M., **Anas, S.B.A.** (2022), “Compensation of The Nonlinear Impairments in All-Optical OFDM Systems Based on The Optical Phase Conjugation (OPC) Module”, International Journal on Advanced Science, Engineering and Information Technology, vol. 12, no. 1, pp. 180 – 186.
9. Riza, M. A., Go, Y. I., Maier, R. R. J., Harun, S. W., Ahmad Anas, S. B. (2022), “Development of FBG Humidity Sensor via Controlled Annealing Temperature of Additive Enhanced ZnO Nanostructure Coating”, Optical Fiber Technology, vol. 68, art. no. 102802. (SA)
10. M. A. Riza, Y. I. Go, R. J. J. Maier, S W Harun, S. B. Anas, (2022), “Optical properties enhancement with multilayer coating technique of additive-enhanced zinc oxide nanostructure for fiber Bragg grating humidity sensor”, Microwave and Optical Technology Letters, vol. 64, no. 1, pp. 184–189. (SA)

Conference Proceedings/Invited Talk

Conference Proceedings (10 recent Conference Proceedings)

1. Vailet Hikmat Faraj Al Khattat, **Siti Barirah Ahmad Anas** and Abdu Saif (2023) “Comprehensive Investigation and Evaluation of an Indoor 3D System Performance Based on Visible Light Communication”, 2023 3rd International Conference on Emerging Smart Technologies and Applications (eSmarTA), 25-26 October 2023.

2. Vailet Hikmat Faraj Al Khattat, **Siti Barirah Ahmad Anas** and Abdu Saif (2022) “An Efficient 3D Indoor Positioning System Based on Visible Light Communication”, 2022 2nd International Conference on Emerging Smart Technologies and Applications (eSmarTA), 25-26 October 2022.
3. Rawa Muayad Mahmood, Syamsuri Yaakob, Faisul Arif Ahmad, **Siti Barirah Ahmad Anas**, Zuraidah Zan, Ahmed Hassan, Muhammad Zamzuri Abdul Kadir, Mohd Rashidi Che Beson and Azwan Mahmud (2022), “Effect of phase imbalance on the mm-wave signal in the DWDM-RoF system”, 2022 IEEE 9th International Conference on Photonics (ICP2022), 8 – 10 Aug, 2022, pp. 15 - 17.
4. R. Amran, A. H. Hussein, **S. B. A. Anas**, M. S. Ghazali, S. Yaakob, M. H. Abu Bakar and K. Khairi, “Mitigating Backscattered Light of Stimulated Raman Scattering in OTDR Active Monitoring”, 2022 IEEE 9th International Conference on Photonics (ICP2022), 8 – 10 Aug, 2022, pp. 25 - 26.
5. Duraikannan, S., **Anas, S.B.A.**, Ali, B.M., Zan, Z., Thiruchelvam, V. (2018) Cascaded Dual Drive MZM and Dual Parallel MZM Architecture for Optical Linearization of MZM Nonlinearity, 2018 IEEE 7th International Conference on Photonics, ICP 2018, number 8533182, Langkawi, Kedah, Malaysia, 9 April 2018 to 11 April 2018.
6. Nor, M.H.M., Kanesan, T., Maskuriy, F., Yusof, A., Fatah, F.A., **Anas, S.B.A**., Experimental realization of multi-service RoF system using OCS-PolMux techniques, (2017) International Conference on Advanced Communication Technology (ICACT), pp. 148-151.
7. Idriss, Y., Sahbudin, R.K., Hitam, S., **Ahmad Anas, S.B.**, “Performance comparison of indoor VLC system employing SAC-OCDMA technique”, 2016 IEEE 6th International Conference on Photonics, ICP 2016, Kuching, Sarawak, Malaysia, March 2016.
8. Moghaddasi, M., Sahbudin, R., Mokhtar, M., **Anas, S.B.A.**, “Investigation of circulation noise effect on SAC-OCDMA system with ring topology”, 2016 IEEE 6th International Conference on Photonics, ICP 2016, Kuching, Sarawak, Malaysia, March 2016.
9. Mas Izyani Md Ali, Mohd Adzir Mahdi, Ahmad Shukri Muhammad Noor, **Siti Barirah Ahmad Anas**, Muhammad Hafiz Abu Bakar, “Stable dual-wavelength fiber laser utilizing tapered-EDF as comb filter in hybrid Raman-EDF gains”, IEEE 5th International Conference on Photonics, Kuala Lumpur, Malaysia, ICP2014, 2-4 September 2014.
10. Majid Moghaddasi, Salasiah Hitam, Ahmad Fauzi Abas, Ahmad Shukri Muhammad Noor, **Siti Barirah Ahmad Anas**, “OCDMA Multi Service with Zero Cross Correlation Code in Free Space Optics”, IEEE 5th International Conference on Photonics, Kuala Lumpur, Malaysia, ICP2014, 2-4 September 2014.

Research Grants			
Grant Title **(Project Leader)**	**Year**	**Source of Fund**	**Amount (RM)**
Double Carrier Modulation (DCM) for Free Space Laser (FSL) Communication (09-02-04-0877-EA001)	2004 – 2006	IRPA (MOSTI)	RM183,000
Fibre impairment effects on variable weight OCDMA Systems (05-02-10-0947RU)	2010 – 2012	RUGS (UPM)	RM118,000
Design and Development of Service Differentiated ROADM Based on OCDM (01-01-04-SF1366)	2012 – 2014	Sciencefund (MOSTI)	RM187,100
Mitigating Fiber Nonlinearity Using Nonlinear Companding Technique in CO-OFDM (GP-IPS/2013/9399819)	2014 – 2016	Geran Putra IPS (UPM)	RM15,000
Optical CDMA Provision in Wireless Optical Communication Networks Using Spectral Amplitude Coding (GP-IPS/2013/9399808)	2014 – 2016	Geran Putra IPS (UPM)	RM15,000
Polarity Encoded Optical OFDM for IM/DD in LiFi System (GP /2018/9628000)	2018 – 2022	Geran Putra (UPM)	RM50,000
Mitigating Backscattered Raman Scattering of Optically Amplified Link in Active Optical Time Domain Reflectometer Monitoring	2020 – 2024	FRGS (MOHE)	RM177,800
(Project Member)			
Fundamental Studies of Metal Nanoparticles for Surface Plasmon Resonance	2010 – 2012	FRGS (MOHE)	RM44,000
Derivation and Analysis of Correlation Bound based on Gaussian Mizture Models	2011 – 2013	RUGS (UPM)	RM32,000
Development of Semiconductor Optical Amplifier (SOA) functionality for all-optical wavelength conversion and noise reduction	2012 – 2014	Sciencefund (MOSTI)	RM152,800
Multi-transceiver Free Space Optical 3-Dimensional Structures for The Last- Mile	2012 – 2014	Sciencefund (MOSTI)	RM150,240
Highly Reliable and Robust Security in WSN for Military Application	2012 – 2014	Sciencefund (MOSTI)	RM189,000
Development of High Dimensionality Carrierless Amplitude Phase (CAP) Modulation in Radio over Fiber (RoF) for Access and In-Home Networks.	2013 – 2016	FRGS (MOHE)	RM149,900
Compensating the nonlinearity effects in all-optical orthogonal frequency-division multiplexing (AO-OFDM) systems	2013 – 2016	ERGS (MOHE)	RM97,750
Investigation of Short Period, Apodized Fiber Bragg Grating (FBG) for Thermal-Optic Sensitive Conditions	2019 – 2021	FRGS (MOHE)	RM92,000
OptiM: Characterisation of Optical Millimetre-wave (mm-wave) Signal for 5G Transportation Communication System	2019 – 2021	FRGS (MOHE)	RM136,200
Optimization of Multi-Element Array Omnidirectional Structure for Lifi Communication Systems	2020 - 2021	Princess Noura University	SAR 71,150
Sustainable Aquatic Resource Management in Mangrove Ecosystem via Internet of Things Application	2020 - 2021	Asi@Connect (TEIN)	RM974,286
Laser based Underwater Visible Light Communication (UVLC) All Optical Orthogonal Frequency Division Multiplexing (AO-OFDM) for Optical Internet of Things	2020 – 2024	FRGS (MOHE))	RM103,900

(OIoT)

Efficient Load Balancing for Densed Cellular Network Using Radio Over Fiber System	2023 - 2025	FRGS (MOHE))	RM145,582
Investigation of New Hygroscopic Nanostructure via Additive-Enhanced Technique to Achieve High Precision Fiber Bragg Grating Sensing for Humidity Controlled Industries	2023 - 2026	FRGS (MOHE))	RM159,500

Professional Services / Consultation (Journal Reviewer, editorial works, etc.)

Consultation

No	Title	Institution	Amout	Year
1	Telecommunication Fundamentals Short Course	ZOHL Consultancy Sdn Bhd	RM6000	2010 –2011

Journal Reviewer

No	Title	Level	Year
1	IEEE Access	International	2022
2	Optik	International	2020
3	SPIE Optical Engineering	International	2011 – 2023
4	Journal of Optical Communication	International	2020
5	Optical and Quantum Electronics (OQEL)	International	2019
6	Optical Fiber Technology	International	2018, 2022, 2023
7	International Journal of Communication Systems	International	2018, 2020
8	Optics Communication	International	2015
9	Chinese Optics Letters	International	2015
10	IEEE Transaction on Communication	International	2007
11	Pertanika Journal	Local	2015
12	Journal of Engineering Science and Technology	Local	2014
13	Jurnal Teknologi, UTM	Local	2012
14	Jurnal Elektrika, UTM	Local	2010 – 2012

Teaching Experience

- Computer Programming
- Signals and Systems
- Advanced Optical Fiber Networks
- Optical Communications
- Access Networks Technologies
- Wireless Networks
- Computer Networks
- Mobile and Cellular Communications
- Mobile and Satellite Communications
- Engineering Mathematics II
- Dissertation
- Final Year Project