

# Salman Abdul Ghafoor

Professor

School of Electrical Engineering and Computer Science

Email: salman.ghafoor@seecs.edu.pk

Contact: 00000000

LinkedIn:



## About

Dr. Salman Abdul Ghafoor is working as Professor in the School of Electrical Engineering and Computer Science. Dr. Salman Abdul Ghafoor has a PhD in Fiber Optic Communications. Dr. Salman Abdul Ghafoor has published 88 research articles & conference papers having a citation count of 780, carried out 3 projects and filed 1 intellectual property.

## Qualifications

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| <b>PhD in Fiber Optic Communications</b><br>University of Southampton , United Kingdom | 2008 - 2012 |
| <b>MSc in Electrical Engineering</b><br>University of Nottingham , United Kingdom      | 2006 - 2007 |
| <b>BSc in Electrical Engineering</b><br>UET Peshawar , Pakistan                        | 2002 - 2006 |

## Experience

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|-------------------------------------------------------------------------------------|---------------|
| <b>Professor</b><br>School of Electrical Engineering and Computer Science           | 2022- Present |
| <b>Associate Professor</b><br>School of Electrical Engineering and Computer Science | 2019 - 2022   |
| <b>Assistant Professor</b><br>School of Electrical Engineering and Computer Science | 2017 - 2019   |
| <b>Assistant Professor</b><br>School of Electrical Engineering and Computer Science | 2013 - 2017   |
| <b>Assistant Professor</b><br>School of Electrical Engineering and Computer Science | 2012 - 2013   |

## Professional Memberships

|            |            |
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| <b>PEC</b> | Since 2015 |
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Research Projects

National Projects

Solar-Powered Desalination for Sustainable Freshwater Production

Funding Agency: N/A  
Amount: PKR 61,695.00  
Status: Completed

Design and Development of USV Swarm System for Enhanced Maritime Capabilities

2024

Funding Agency: RIC NUST  
Amount: PKR 1,000,000.00  
Status: Approved\_inprocess

Smart Helmet for Improved Safety

2020

Funding Agency: NUST  
Amount: PKR 199,000.00  
Status: Completed

International Projects

Research Articles

Increasing capacity of intra-datacenter communications using a novel combination of DQPSK and PAM-4 modulation formats

2025

Yuxuan Yi Salman Abdul Ghafoor Abdullah G. Alharbi Jawad Mirza Muhammad Imran  
Optical Fiber Technology , Volume:94, Article Number 104309  
Impact Factor: 2.700 | Quartile: 2  
DOI: <https://doi.org/10.1016/j.yofte.2025.104309>

DeepFins: Capturing dynamics in underwater videos for fish detection

2025

Ahsan Jalal Ahmad Salman Ajmal Mian Salman Abdul Ghafoor Faisal Shafait  
Ecological Informatics , Volume 86, Article Number 103013  
Impact Factor: 5.900 | Quartile: 1 | Citations: 5  
DOI: <https://doi.org/10.1016/j.ecoinf.2025.103013>

A ground-to-GEO-to-LEO satellite optical wireless communication link based on a spectrally efficient and secure modulation scheme

2025

Chen Xu Umair Ali Khan Salman Abdul Ghafoor Jawad Mirza Abdulah Jeza Aljohani Imran Aziz  
Frontiers in Physics , Volume 13, Article Number 1562799  
Impact Factor: 1.900 | Quartile: 2  
DOI: [10.3389/fphy.2025.1562799](https://doi.org/10.3389/fphy.2025.1562799)

Relay aided UWOC-SMF-FSO based hybrid link for underwater wireless optical sensor network

2025

Jawad Mirza Ahmad Atieh Benish Kanwal Salman Abdul Ghafoor Ahmad Almogren Firdos Kanwal Imran Aziz  
Optical Fiber Technology , Volume 89, Article Number 104045  
Impact Factor: 2.600 | Quartile: 2 | Citations: 8  
DOI: <https://doi.org/10.1016/j.yofte.2024.104045>

Single-longitudinal mode quadruple wavelength C+L-band erbium-doped fiber laser based on the pairs of reflective fiber bragg gratings

2024

Jawad Mirza Ahmed Atieh Benish Kanwal Salman Abdul Ghafoor Tasleem Kausar Muhammad Imran Ahmad Almogren Firdos Kanwal Imran Aziz  
Physica scripta , Volume 100, Number 1, Article Number 015507  
Impact Factor: 2.600 | Quartile: 2 | Citations: 3  
DOI: [10.1088/1402-4896/ad96fb](https://doi.org/10.1088/1402-4896/ad96fb)

Single laser based novel wavelength shift keying scheme for ground to satellite bidirectional links

2024

Faria Salman Abdul Ghafoor Jawad Mirza Abdulah Jeza Aljohani Imran Aziz  
Physica Scripta , Volume:99, Issue:12, Pages: 10  
Impact Factor: 2.6 | Quartile: 2 | Citations: 1  
DOI: <https://doi.org/10.1088/1402-4896/ad8e94>

A dual-band high-gain beam steering antenna array for 5G sub-6 GHz base station

2024

Salman Ilahi Siddiqui Shahid Bashir Awais Khan Salman Abdul Ghafoor Imran Aziz  
Scientific Reports , Volume 14, Issue 1, Article Number 26517  
Impact Factor: 3.800 | Quartile: 1 | Citations: 3

DOI: <https://doi.org/10.1038/s41598-024-75822-2>

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| <b>Quantum long short-term memory (QLSTM) vs. classical LSTM in time series forecasting: a comparative study in solar power forecasting</b><br><i>Saad Zafar Khan Nazeefa Muzammil Salman Abdul Ghafoor Haibat Khan Niazi Syed Mohammad Hasan Zaidi Abdulah Jeza Aljohani Imran Aziz</i><br><i>Frontiers in Physics</i> , Volume 12, Article Number 1439180<br><b>Impact Factor:</b> 1.900   <b>Quartile:</b> 2   <b>Citations:</b> 5<br>DOI: <a href="https://doi.org/10.3389/fphy.2024.1439180">https://doi.org/10.3389/fphy.2024.1439180</a> | 2024 |
| <b>A bidirectional free space optical link for last-mile terrestrial access links employing a novel wavelength shift keying technique</b><br><i>Salman Abdul Ghafoor Arsalan Ahmad Jawad Mirza Abdulah Jeza Aljohani Changjia Qu Imran Aziz</i><br><i>Optical and Quantum Electronics</i> , Volume:56, Issue:8, Article Number: 1367, Pages: 12<br><b>Impact Factor:</b> 3.3   <b>Quartile:</b> 2   <b>Citations:</b> 4<br>DOI: 10.1007/s11082-024-07279-6                                                                                      | 2024 |
| <b>Underwater temperature and pressure monitoring for deep-sea SCUBA divers using optical techniques</b><br><i>Jawad Mirza Firdos Kanwal Umair Ahmad Salaria Salman Abdul Ghafoor Ahmad Atieh Ahmad Almogren Anwar-ul Haq Benish Kanwal</i><br><i>Frontiers in Physics</i> , Volume:12, Pages: 09<br><b>Impact Factor:</b> 1.9   <b>Quartile:</b> 2   <b>Citations:</b> 12<br>DOI: 10.3389/fphy.2024.1417293                                                                                                                                    | 2024 |
| <b>Modeling and analysis of single-mode widely tunable all-fiber Ho-doped CW master oscillator power amplifier system</b><br><i>Jawad Mirza Umair Ahmad Salaria Salman Abdul Ghafoor Ahmad Atieh Benish Kanwal Ahmad Almogren Imran Aziz</i><br><i>Physica Scripta</i> , Volume 99, No. 8, Article Number 085512<br><b>Impact Factor:</b> 2.600   <b>Quartile:</b> 2<br>DOI: 10.1088/1402-4896/ad5c18                                                                                                                                           | 2024 |
| <b>Remote monitoring of sleep disorder using FBG sensors and FSO transmission system enabled smart vest</b><br><i>Firdos Kanwal Ahmad Atieh Salman Abdul Ghafoor Anwar-ul Haq Khurram Karim Qureshi Imran Aziz Jawad Mirza</i><br><i>Engineering Research Express</i> , Volume 6, Issue 2, Article Number 025337<br><b>Impact Factor:</b> 1.500   <b>Quartile:</b> 2   <b>Citations:</b> 6<br>DOI: 10.1088/2631-8695/ad48da                                                                                                                     | 2024 |
| <b>Performance Enhancement of Er–Yb: Co-doped Waveguide Amplifier Employing Backward Pumping in the Presence of Energy Transfer Upconversion</b><br><i>Jawad Mirza Aadil Raza Ahmad Atieh Salman Abdul Ghafoor Abdullah J Alharbi Waqas Imtiaz</i><br><i>Arabian Journal for Science and Engineering</i> , Volume:49, Issue:5, Page:6707-6713<br><b>Impact Factor:</b> 2.9   <b>Quartile:</b> 2<br>DOI: 10.1007/s13369-023-08440-1                                                                                                              | 2024 |
| <b>Combined transmission of PPM and WSK modulated optical signal over free space optical link enabling physical layer security</b><br><i>Faria Jawad Mirza Abdulah Jeza Aljohani Muhammad Ijaz Salman Abdul Ghafoor</i><br><i>Optik</i> , Volume 302, Article Number 171748<br><b>Impact Factor:</b> 3.100   <b>Quartile:</b> 2   <b>Citations:</b> 8<br>DOI: <a href="https://doi.org/10.1016/j.ijleo.2024.171748">https://doi.org/10.1016/j.ijleo.2024.171748</a>                                                                             | 2024 |
| <b>Symbol error rate minimization using deep learning approaches for short-reach optical communication networks</b><br><i>Muhammad Iqbal Salman Abdul Ghafoor Arsalan ahmad Abdulah Jeza Aljohani Jawad Mirza Imran Aziz Luca Poti</i><br><i>Frontiers in Physics</i> , Volume: 12, Pages: 12<br><b>Impact Factor:</b> 3.1   <b>Quartile:</b> 2   <b>Citations:</b> 5<br>DOI: 10.3389/fphy.2024.1387284                                                                                                                                         | 2024 |
| <b>Pair induced quenching in high concentration Holmium-doped fiber amplifiers</b><br><i>Jawad Mirza Salman Abdul Ghafoor Ahmad Almogren Umair Ahmad Salaria Benish Kanwal Imran Aziz Ahmad Atieh</i><br><i>Physica Scripta</i> , Volume 99, Issue 5, Article Number 055513<br><b>Impact Factor:</b> 2.900   <b>Quartile:</b> 2   <b>Citations:</b> 2<br>DOI: 10.1088/1402-4896/ad36f5                                                                                                                                                          | 2024 |
| <b>Multi-modal LSTM network for anomaly prediction in piston engine aircraft</b><br><i>Waqas Rauf Khattak Ahmad Salman Salman Abdul Ghafoor Seemab Latif</i><br><i>Heliyon</i> , Volume 10, Issue 3, Article Number e25120                                                                                                                                                                                                                                                                                                                      | 2024 |

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| <p><b>Impact Factor:</b> 4.0   <b>Quartile:</b> 2   <b>Citations:</b> 5<br/> <b>DOI:</b> 10.1016/j.heliyon.2024.e25120</p>                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |
| <p><b>A full duplex LG modes enabled millimeter-wave based FSO communication system for disaster zone</b><br/> <i>Saeed Iqbal Aadil Raza Mohammad Kaleem Muhammad Iqbal Muhammad Adeel Salman Abdul Ghafoor</i><br/> <i>Wireless Networks</i> , Volume 30, pages 961-971<br/> <b>Impact Factor:</b> 3   <b>Quartile:</b> 2<br/> <b>DOI:</b> 10.1007/s11276-023-03526-y</p>                                                                                                                                                                                       | 2024 |
| <p><b>Sparse Representations Optimization with Coupled Bayesian Dictionary and Dictionary Classifier for Efficient Classification</b><br/> <i>Muhammad Riaz-ud-din Salman Abdul Ghafoor Faisal Shafait</i><br/> <i>Applied Sciences</i> , Volume 14, Issue 1, Article Number 306<br/> <b>Impact Factor:</b> 2.7   <b>Quartile:</b> 2<br/> <b>DOI:</b> <a href="https://doi.org/10.3390/app14010306">https://doi.org/10.3390/app14010306</a></p>                                                                                                                  | 2024 |
| <p><b>Open Networking Engine (ONE): An Orchestration Tool for Open Optical Line System</b><br/> <i>Arsalan ahmad Salman Abdul Ghafoor Hafiz Mati Ur Rahman Rida Hanif</i><br/> <i>IEEE Access</i> , Volume 12, Pages 8940-8956<br/> <b>Impact Factor:</b> 3.9   <b>Quartile:</b> 2   <b>Citations:</b> 2<br/> <b>DOI:</b> 10.1109/ACCESS.2024.3354172</p>                                                                                                                                                                                                        | 2024 |
| <p><b>Pumping scheme for Holmium-doped fiber amplifiers using traditional 1480 nm pumps exploiting cascaded lasers implemented using fiber Bragg gratings</b><br/> <i>Benish Kanwal Ahmad Atieh Salman Abdul Ghafoor Muhammad Sajid Jawad Mirza</i><br/> <i>Microwave and Optical Technology Letters</i> , Volume: 66, Issue: 01, Article Number: e33899<br/> <b>Impact Factor:</b> 1.5   <b>Quartile:</b> 4   <b>Citations:</b> 1<br/> <b>DOI:</b> 10.1002/mop.33899</p>                                                                                        | 2024 |
| <p><b>A high power and repetition rate wavelength tunable actively mode-locked Holmium-doped fiber laser for bidirectional transmission between two HAPS</b><br/> <i>Jawad Mirza Ahmad Atieh Salman AlQahtani Salman Ghafoor</i><br/> <i>Optical and Quantum Electronics</i> , Volume 55, Issue 14, Article Number 1248<br/> <b>Impact Factor:</b> 3.0   <b>Quartile:</b> 2   <b>Citations:</b> 6<br/> <b>DOI:</b> <a href="https://doi.org/10.1007/s11082-023-05471-8">https://doi.org/10.1007/s11082-023-05471-8</a></p>                                       | 2023 |
| <p><b>Design of an efficient thulium-doped fiber amplifier for dual-hop earth to satellite optical wireless links</b><br/> <i>Jawad Mirza Ahmad Atieh Muhammad Ilyas Menhas Salman Ghafoor Musab Magam Laiq Jamal Sharif Iqbal Mitu Sheikh Khurram Karim Qureshi</i><br/> <i>Ain Shams Engineering Journal</i> , Volume 14, Issue 7, Article Number 101983<br/> <b>Impact Factor:</b> 4.790   <b>Quartile:</b> 1   <b>Citations:</b> 11<br/> <b>DOI:</b> <a href="https://doi.org/10.1016/j.asej.2022.101983">https://doi.org/10.1016/j.asej.2022.101983</a></p> | 2023 |
| <p><b>Design and performance of a repetition rate controllable and wavelength tunable L + U-band actively mode-locked erbium fiber laser</b><br/> <i>Benish Kanwal Ahmad Atieh Salman Ghafoor Muhammad Sajid Jawad Mirza</i><br/> <i>Journal of the Optical Society of America B</i> , Volume 40, Issue 6, Pages 1644-1651<br/> <b>Impact Factor:</b> 2.058   <b>Quartile:</b> 3   <b>Citations:</b> 6<br/> <b>DOI:</b> <a href="https://doi.org/10.1364/JOSAB.489410">https://doi.org/10.1364/JOSAB.489410</a></p>                                              | 2023 |
| <p><b>Electroabsorption Modulator-Based Relay for the Transmission of DPSK-Modulated Signals over the Free Space Optical Link</b><br/> <i>Salman Abdul Ghafoor Sher Afraz Aadil Raza Muhammad Fasih Uddin Butt</i><br/> <i>Arabian Journal for Science and Engineering</i> , Volume 48, Issue 5, Pages 6163-6173<br/> <b>Impact Factor:</b> 2.807   <b>Quartile:</b> 2   <b>Citations:</b> 2<br/> <b>DOI:</b> 10.1007/s13369-022-07277-4</p>                                                                                                                     | 2023 |
| <p><b>A novel technique for secure transmission of two channels using a single optical pulse position modulated signal for free space optical communication</b><br/> <i>Salman Ghafoor Abdullah Jeza Aljohani Jawad Mirza Awais Khan Shahid Bashir</i><br/> <i>Optical and Quantum Electronics</i> , Volume 55, Issue 4, Article Number: 350<br/> <b>Impact Factor:</b> 2.794   <b>Quartile:</b> 2   <b>Citations:</b> 5<br/> <b>DOI:</b> <a href="https://doi.org/10.1007/s11082-023-04633-y">https://doi.org/10.1007/s11082-023-04633-y</a></p>                | 2023 |
| <p><b>Isolation Enhancement in a Compact Four-Element MIMO Antenna for Ultra-Wideband Applications</b><br/> <i>Awais Khan Shahid Bashir Salman Ghafoor Hatem Rmili Jawad Mirza Ammar Ahmad</i></p>                                                                                                                                                                                                                                                                                                                                                               | 2023 |

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| <i>Computers, Materials and Continua</i> , Volume 75, Issue 1, Pages 911-925                                                                                 |      |
| <b>Impact Factor:</b> 3.860   <b>Quartile:</b> 2   <b>Citations:</b> 7                                                                                       |      |
| <b>DOI:</b> <a href="https://doi.org/10.32604/cmc.2023.033866">https://doi.org/10.32604/cmc.2023.033866</a>                                                  |      |
| <b>400 Gbps/λ PAM-4 data transmission over FSO link by employing space division multiplexing for data center interconnects using LG modes enabled VCSELs</b> | 2023 |
| <i>Aadil Raza Saeed Iqbal Muhammad Iqbal Jawad Mirza Salman Ghafoor Ahmad Atieh</i>                                                                          |      |
| <i>Optical and Quantum Electronics</i> , Volume 55, Issue 3, Article Number 283                                                                              |      |
| <b>Impact Factor:</b> 2.794   <b>Quartile:</b> 2   <b>Citations:</b> 9                                                                                       |      |
| <b>DOI:</b> <a href="https://doi.org/10.1007/s11082-023-04572-8">https://doi.org/10.1007/s11082-023-04572-8</a>                                              |      |
| <b>Radio over plastic optical fibers - A tutorial and review</b>                                                                                             | 2022 |
| <i>Usama Adnan Zaheer Abbas Aamir Gulistan Salman Ghafoor</i>                                                                                                |      |
| <i>Journal of Optical Communications</i> , Pages 1-12                                                                                                        |      |
| <b>Impact Factor:</b> N/A   <b>Citations:</b> 1                                                                                                              |      |
| <b>DOI:</b> <a href="https://doi.org/10.1515/joc-2022-0064">https://doi.org/10.1515/joc-2022-0064</a>                                                        |      |
| <b>A Robust Nonlinear Sliding Mode Controller for a Three-Phase Grid-Connected Inverter with an LCL Filter</b>                                               | 2022 |
| <i>Abu Sufyan Mohsin Jamil Salman Abdul Ghafoor Qasim Awais Hafiz Ali Ahmad Ashraf Ali Khan Hassan Abouobaida</i>                                            |      |
| <i>Energies</i> , Volume 15, Issue 24, Article Number 9428                                                                                                   |      |
| <b>Impact Factor:</b> 3.252   <b>Quartile:</b> 3   <b>Citations:</b> 20                                                                                      |      |
| <b>DOI:</b> <a href="https://doi.org/10.3390/en15249428">https://doi.org/10.3390/en15249428</a>                                                              |      |
| <b>Design and analysis of redundant optical comb for data center networks</b>                                                                                | 2022 |
| <i>Ahmad Atieh Benish Kanwal Salman Abdul Ghafoor Muhammad Sajid Jawad Mirza</i>                                                                             |      |
| <i>Optical and Quantum Electronics</i> , Volume 55, No. 1, Article Number 58                                                                                 |      |
| <b>Impact Factor:</b> 2.794   <b>Quartile:</b> 2   <b>Citations:</b> 3                                                                                       |      |
| <b>DOI:</b> <a href="https://doi.org/10.1007/s11082-022-04387-z">https://doi.org/10.1007/s11082-022-04387-z</a>                                              |      |
| <b>Performance Enhancement of Praseodymium Doped Fiber Amplifiers</b>                                                                                        | 2022 |
| <i>Abdullah G. Alharbi Jawad Mirza Mehak Raza Salman Abdul Ghafoor</i>                                                                                       |      |
| <i>Computers, Materials and Continua</i> , Volume 73, Issue 3, Pages 5411-5422                                                                               |      |
| <b>Impact Factor:</b> 3.860   <b>Quartile:</b> 2   <b>Citations:</b> 12                                                                                      |      |
| <b>DOI:</b> <a href="https://doi.org/10.32604/cmc.2022.029317">https://doi.org/10.32604/cmc.2022.029317</a>                                                  |      |
| <b>Design and Analysis of an O+E-Band Hybrid Optical Amplifier for CWDM Systems</b>                                                                          | 2022 |
| <i>Benish Kanwal Ammar Armghan Salman Abdul Ghafoor Ahmad Atieh Muhammad Sajid Tasleem Kausar Jawad Mirza Yun Lu</i>                                         |      |
| <i>Micromachines</i> , Volume 13(11), Article Number 1962                                                                                                    |      |
| <b>Impact Factor:</b> 3.523   <b>Quartile:</b> 2   <b>Citations:</b> 5                                                                                       |      |
| <b>DOI:</b> <a href="https://doi.org/10.3390/mi13111962">https://doi.org/10.3390/mi13111962</a>                                                              |      |
| <b>A Novel 60 Gbps Bidirectional Free Space Optical Link Based on a Single Laser Source</b>                                                                  | 2022 |
| <i>Salman Abdul Ghafoor Jawad Mirza Tasleem Kousar Khurram Karim Qureshi</i>                                                                                 |      |
| <i>Arabian Journal for Science and Engineering</i> , Volume 47, Issue 11, Pages 14721-14729                                                                  |      |
| <b>Impact Factor:</b> 2.807   <b>Quartile:</b> 2   <b>Citations:</b> 12                                                                                      |      |
| <b>DOI:</b> <a href="https://doi.org/10.1007/s13369-022-06975-3">https://doi.org/10.1007/s13369-022-06975-3</a>                                              |      |
| <b>Design of L + U-band Erbium-doped fiber amplifier based on a single S-band forward pump source</b>                                                        | 2022 |
| <i>Jawad Mirza Salman Abdul Ghafoor Ahmad Salman Nazish Habib Khurram Karim Qureshi</i>                                                                      |      |
| <i>International Journal of Communication Systems</i> , Volume 35, Issue13, Article Number e5250                                                             |      |
| <b>Impact Factor:</b> 1.882   <b>Quartile:</b> 3   <b>Citations:</b> 8                                                                                       |      |
| <b>DOI:</b> <a href="https://doi.org/10.1002/dac.5250">https://doi.org/10.1002/dac.5250</a>                                                                  |      |
| <b>Performance Enhancement of Ytterbium-doped Fiber Amplifier Employing a Novel Dual-stage in-band Asymmetrical Pumping</b>                                  | 2022 |
| <i>Jawad Mirza Salman Abdul Ghafoor Ammar Armghan Osama I. Elhamrawy Laiq Jamal Musab Magam Sharif Iqbal Mitu Sheikh Khurram Karim Qureshi</i>               |      |
| <i>Micromachines</i> , Volume 13(9), Article Number 1488                                                                                                     |      |
| <b>Impact Factor:</b> 3.523   <b>Quartile:</b> 2                                                                                                             |      |
| <b>DOI:</b> <a href="https://doi.org/10.3390/mi13091488">doi.org/10.3390/mi13091488</a>                                                                      |      |
| <b>Novel pumping scheme of Holmium doped fiber amplifiers operating around 2μm using 1.48μm lasers exploiting cascaded fiber lasers</b>                      | 2022 |
| <i>Jawad Mirza Ahmad Atieh Benish Kanwal Salman Abdul Ghafoor</i>                                                                                            |      |
| <i>Optik</i> , Volume 262, Article Number 169238                                                                                                             |      |

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| <b>Impact Factor: 2.443   Quartile: 2   Citations: 8</b><br><b>DOI: <a href="https://doi.org/10.1016/j.ijleo.2022.169238">https://doi.org/10.1016/j.ijleo.2022.169238</a></b>                                                                                                                                                                                                                                                                                                                 |      |
| <b>Performance Optimization of Holmium Doped Fiber Amplifiers for Optical Communication Applications in 2–2.15 <math>\mu</math>m Wavelength Range</b><br><i>Abdullah G. Alharbi Firdous Kanwal Salman Ghafoor Nazish Habib Benish Kanwal Ahmad Atieh Tasleem Kousar Jawad Mirza Photonics</i> , Volume 9(4), Article Number 245<br><b>Impact Factor: 2.676   Quartile: 2   Citations: 10</b><br><b>DOI: <a href="https://doi.org/10.3390/photronics9040245">10.3390/photronics9040245</a></b> | 2022 |
| <b>A Mach–Zehnder modulator based novel regenerator for employment in relays used in free space optical communication</b><br><i>Zaheer Ahmad Jawad Mirza Abdulah Jeza Aljohani Ahmad Salman Salman Ghafoor Transactions on Emerging Telecommunications Technologies</i> , Volume 33, Issue 4, Article Number e4405<br><b>Impact Factor: 3.310   Quartile: 2   Citations: 6</b><br><b>DOI: <a href="https://doi.org/10.1002/ett.4405">10.1002/ett.4405</a></b>                                 | 2022 |
| <b>Widely tunable and switchable multiwavelength erbium-doped fiber laser based on a single ring cavity</b><br><i>Jawad Mirza Salman Abdul Ghafoor Ahmad Atieh Benish Kanwal Khurram Karim Qureshi Journal of the Optical Society of America B</i> , Volume 39, Issue 4, Pages 1118-1146<br><b>Impact Factor: 2.106   Quartile: 3   Citations: 10</b><br><b>DOI: <a href="https://doi.org/10.1364/JOSAB.447365">https://doi.org/10.1364/JOSAB.447365</a></b>                                  | 2022 |
| <b>Analog Radio Over Fiber-Aided Multi-Service Communications for High-Speed Trains</b><br><i>Yichuan Li Salman Abdul Ghafoor Mohammed El-Hajjar IEEE Open Journal of the Communications Society</i> , Volume 3, Pages 424-434<br><b>Impact Factor: N/A   Citations: 1</b><br><b>DOI: <a href="https://doi.org/10.1109/OJCOMS.2022.3156382">10.1109/OJCOMS.2022.3156382</a></b>                                                                                                               | 2022 |
| <b>Design of a Continuous-Wave Ytterbium-Doped Tunable Fiber Laser Pump for Thulium-Doped Fiber Amplifiers</b><br><i>Jawad Mirza Salman Abdul Ghafoor Anila Kousar Benish Kanwal Khurram Karim Qureshi Arabian Journal for Science and Engineering</i> , Volume 47, No. 3, Pages 3541-3549<br><b>Impact Factor: 2.334   Quartile: 3   Citations: 11</b><br><b>DOI: <a href="https://doi.org/10.1007/s13369-021-06440-7">10.1007/s13369-021-06440-7</a></b>                                    | 2022 |
| <b>A multi-hop free space optical link based on a regenerative relay</b><br><i>Jawad Mirza Abdulah Jeza Aljohani Aadil Raza Saeed Iqbal Salman Abdul Ghafoor Alexandria Engineering Journal</i> , Volume 61, No. 2, Pages 1459-1567<br><b>Impact Factor: 6.8   Quartile: 1   Citations: 14</b><br><b>DOI: <a href="https://doi.org/10.1016/j.aej.2021.06.050">https://doi.org/10.1016/j.aej.2021.06.050</a></b>                                                                               | 2022 |
| <b>All-optical 40 channels regenerator based on four-wave mixing</b><br><i>Salman Abdul Ghafoor Muhammad Usama Khan Aamir Gulistan Ahmad Salman Syed Muhammad Hassan Zaidi Telecommunication Systems</i> , Volume 79, Pages123-131<br><b>Impact Factor: 2.5   Quartile: 3   Citations: 1</b><br><b>DOI: <a href="https://doi.org/10.1007/s11235-021-00855-1">https://doi.org/10.1007/s11235-021-00855-1</a></b>                                                                               | 2022 |
| <b>Performance evaluation of praseodymium doped fiber amplifiers</b><br><i>Jawad Mirza Salman Ghafoor Nazish Habib Firdos Kanwal Khurram Karim Qureshi Optical Review</i> , Volume 28 , No. 6, Pages 611-618<br><b>Impact Factor: 0.890   Quartile: 4   Citations: 32</b><br><b>DOI: <a href="https://doi.org/10.1007/s10043-021-00706-z">10.1007/s10043-021-00706-z</a></b>                                                                                                                  | 2021 |
| <b>Performance Analysis of Fiber Nonlinearity Based Optical 2R-regenerators</b><br><i>Jawad Mirza Salman Ghafoor Kamran Siddiqi Benish Kanwal Wireless Personal Communications</i> , Volume 121, Pages 527-541<br><b>Impact Factor: 2.017   Quartile: 3   Citations: 4</b><br><b>DOI: <a href="https://doi.org/10.1007/s11277-021-08648-0">https://doi.org/10.1007/s11277-021-08648-0</a></b>                                                                                                 | 2021 |
| <b>Integrating ultra-wideband and free space optical communication for realizing a secure and high-throughput body area network architecture based on optical code division multiple access</b><br><i>Jawad Mirza Salman Abdul Ghafoor Waqas Ahmad Ahmad Salman Khurram Karim Qureshi Optical Review</i> , Volume 28, Pages 525-537<br><b>Impact Factor: 0.890   Quartile: 4   Citations: 12</b>                                                                                              | 2021 |

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|--------------------------------------------------------------------------------------------------------------------------------|------|
| DOI: 10.1007/s10043-021-00683-3                                                                                                |      |
| <b>Millimeter-wave enabled PAM-4 data transmission over hybrid FSO-MMPOF link for access networks</b>                          | 2021 |
| Saeed Iqbal Aadil Raza Muhammad Fasih Uddin Butt Jawad Mirza Muhammad Iqbal Salman Ghafoor Mohammed El-Hajjar                  |      |
| <i>Optical Review</i> , Volume 28, Pages 278–288                                                                               |      |
| <b>Impact Factor:</b> 1.047   <b>Quartile:</b> 4   <b>Citations:</b> 11                                                        |      |
| DOI: <a href="https://doi.org/10.1007/s10043-021-00659-3">https://doi.org/10.1007/s10043-021-00659-3</a>                       |      |
| <b>A High Bit Rate Free Space Optics Based Ring Topology Having Carrier-less Nodes</b>                                         | 2021 |
| Jawad Mirza Waqas A Imtiaz Abdulah Jeza Aljohani Salman Ghafoor                                                                |      |
| <i>IET Communications</i> , Pages 1-9                                                                                          |      |
| <b>Impact Factor:</b> 1.345   <b>Quartile:</b> 4   <b>Citations:</b> 21                                                        |      |
| DOI: <a href="https://doi.org/10.1049/cmu2.12174">https://doi.org/10.1049/cmu2.12174</a>                                       |      |
| <b>A novel wideband radio frequency measurement based on photonic signal processing</b>                                        | 2021 |
| Ammar Khalid Abdulah Jeza Aljohani Salman Abdul Ghafoor                                                                        |      |
| <i>Microwave and Optical Technology Letters</i> , Volume 63(4), Pages 1152-1159                                                |      |
| <b>Impact Factor:</b> 1.311   <b>Quartile:</b> 4   <b>Citations:</b> 1                                                         |      |
| DOI: <a href="http://dx.doi.org/10.1002/mop.32734">http://dx.doi.org/10.1002/mop.32734</a>                                     |      |
| <b>Design and optimization of a microwave photonic filter exploiting differential mode group delay of a multi-mode fiber</b>   | 2021 |
| Jawad Mirza Ahmad Atieh Abdulah Jeza Aljohani Salman Ghafoor                                                                   |      |
| <i>Optical Review</i> , Volume 28, No. 2, Pages 199-206                                                                        |      |
| <b>Impact Factor:</b> 1.047   <b>Quartile:</b> 4   <b>Citations:</b> 2                                                         |      |
| DOI: <a href="https://doi.org/10.1007/s10043-021-00650-y">https://doi.org/10.1007/s10043-021-00650-y</a>                       |      |
| <b>Self restorable intra data center interconnect based on multimode fiber and free-space optics</b>                           | 2021 |
| Salman Ghafoor Jawad Mirza Aadil Raza Ahmad Atieh Saeed Iqbal                                                                  |      |
| <i>Optical Engineering</i> , Volume 60(3), Article Number 036113                                                               |      |
| <b>Impact Factor:</b> 1.352   <b>Quartile:</b> 4   <b>Citations:</b> 5                                                         |      |
| DOI: <a href="https://doi.org/10.1117/1.OE.60.3.036113">https://doi.org/10.1117/1.OE.60.3.036113</a>                           |      |
| <b>Mutual Coupling Reduction Using Ground Stub and EBG in a Compact Wideband MIMO-Antenna</b>                                  | 2021 |
| Awais Khan Shahid Bashir Khurram Karim Qureshi Salman Ghafoor Awais Khan Shahid Bashir Khurram Karim Qureshi                   |      |
| <i>IEEE Access</i> , Volume 9, Pages 40972-40979                                                                               |      |
| <b>Impact Factor:</b> 3.476   <b>Quartile:</b> 2   <b>Citations:</b> 98                                                        |      |
| DOI: 10.1109/ACCESS.2021.3065441                                                                                               |      |
| <b>All-Optical Multi-Wavelength Regenerator Based on Four-Wave Mixing</b>                                                      | 2021 |
| Muhammad Usama Khan Abdulah J. Aljohani Aamir Gulistan Salman Ghafoor                                                          |      |
| <i>Optical Engineering</i> , Volume 60, No.3, Article Number 036102                                                            |      |
| <b>Impact Factor:</b> 1.352   <b>Quartile:</b> 4   <b>Citations:</b> 3                                                         |      |
| DOI: 10.1117/1.OE.60.3.036102                                                                                                  |      |
| <b>A Novel Regeneration Technique for Free Space Optical Communication Systems</b>                                             | 2021 |
| Abdulah Jeza Aljohani Jawad Mirza Salman Ghafoor                                                                               |      |
| <i>IEEE Communications Letters</i> , Volume 25, No. 1, Pages 196-199                                                           |      |
| <b>Impact Factor:</b> 3.553   <b>Quartile:</b> 2   <b>Citations:</b> 27                                                        |      |
| DOI: 10.1109/LCOMM.2020.3029591                                                                                                |      |
| <b>Design and Analysis of a 32 x 5 Gbps Passive Optical Network Employing FSO Based Protection at the Distribution Level</b>   | 2020 |
| Jawad Mirza Waqas A Imtiaz Abdulah Jeza Aljohani Ahmed Atieh Salman Ghafoor                                                    |      |
| <i>Alexandria Engineering Journal</i> , Volume 59, Issue 6, Pages 4621-4631                                                    |      |
| <b>Impact Factor:</b> 3.732   <b>Quartile:</b> 1   <b>Citations:</b> 38                                                        |      |
| DOI: <a href="https://doi.org/10.1016/j.aej.2020.08.020">https://doi.org/10.1016/j.aej.2020.08.020</a>                         |      |
| <b>A full duplex ultrawideband over free-space optics architecture based on polarization multiplexing and wavelength reuse</b> | 2020 |
| Jawad Mirza Ashiq Hussain Salman Ghafoor                                                                                       |      |
| <i>Microwave and Optical Technology Letters</i> , Volume 62, Issue 12, Pages 3999-4006                                         |      |
| <b>Impact Factor:</b> 1.392   <b>Quartile:</b> 4   <b>Citations:</b> 25                                                        |      |
| DOI: 10.1002/mop.32483                                                                                                         |      |

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| <p><b>Linearly polarised modes enabled PAM-4 data transmission over few-mode fibre for data centre interconnect</b></p> <p><i>Saeed Iqbal Muhammad Iqbal Aadil Raza Jawad Mirza Salman Ghafoor M F U Butt M. El Hajjar</i></p> <p><i>Electronics Letters</i> , Volume 56 , No. 21, Pages 1125-1127</p> <p><b>Impact Factor:</b> 1.314   <b>Quartile:</b> 4   <b>Citations:</b> 5</p> <p><b>DOI:</b> 10.1049/el.2020.1848</p>                                                                                                                                             | 2020 |
| <p><b>A Full-Duplex Ultra-Wideband Over Multimode Fiber Link for Internet of Things Based Smart Home Applications</b></p> <p><i>Jawad Mirza Ashiq Hussain Salman Ghafoor</i></p> <p><i>Transactions on Emerging Telecommunications Technologies</i>, Volume 31, Issue 10, Article Number e4050</p> <p><b>Impact Factor:</b> 2.638   <b>Quartile:</b> 3   <b>Citations:</b> 8</p> <p><b>DOI:</b> <a href="https://doi.org/10.1002/ett.4050">https://doi.org/10.1002/ett.4050</a></p>                                                                                      | 2020 |
| <p><b>A full-duplex radio over fiber architecture employing 12 Gbps 16 × 16 optical multiple input multiple output for next-generation communication networks</b></p> <p><i>Salman Ghafoor Saeed Iqbal Aadil Raza Muhammad Fasih Uddin Butt Mohammed El-Hajjar</i></p> <p><i>Transactions on Emerging Telecommunications Technologies</i>, Volume 31, Issue 8, Article Number e3910</p> <p><b>Impact Factor:</b> 2.638   <b>Quartile:</b> 3   <b>Citations:</b> 7</p> <p><b>DOI:</b> <a href="https://doi.org/10.1002/ett.3910">https://doi.org/10.1002/ett.3910</a></p> | 2020 |
| <p><b>Microwave photonic notch filter based on polarisation multiplexing and cross gain modulation in a semiconductor optical amplifier</b></p> <p><i>B. Kanwal Jawad Mirza Salman Ghafoor</i></p> <p><i>Electronics Letters</i> , Volume 56, No. 4, Pages 189-192</p> <p><b>Impact Factor:</b> 1.314   <b>Quartile:</b> 4   <b>Citations:</b> 5</p> <p><b>DOI:</b> 10.1049/el.2019.3157</p>                                                                                                                                                                             | 2020 |
| <p><b>Microwave photonic filtering based on optical carrier suppression modulation</b></p> <p><i>Faizan Umar Jawad Mirza Salman Abdul Ghafoor</i></p> <p><i>Microwave and Optical Technology Letters</i>, Volume 62, Issue 1, Pages 60-66</p> <p><b>Impact Factor:</b> 1.392   <b>Quartile:</b> 4   <b>Citations:</b> 3</p> <p><b>DOI:</b> 10.1002/mop.32024</p>                                                                                                                                                                                                         | 2020 |
| <p><b>All-Optical Regenerative Technique for Width Tunable Ultra-Wideband Signal Generation</b></p> <p><i>Jawad Mirza Ashiq Hussain Salman Ghafoor</i></p> <p><i>Photonic Network Communications</i> , Volume 38, Issue 1, Pages 98-107</p> <p><b>Impact Factor:</b> 1.750   <b>Quartile:</b> 3   <b>Citations:</b> 8</p> <p><b>DOI:</b> 10.1007/s11107-018-0818-0</p>                                                                                                                                                                                                   | 2019 |
| <p><b>Polarization Multiplexing-Based Ultra-Wideband Over Fiber Communication Employing Direct Modulation and Carrier Re-Use</b></p> <p><i>Salman Ghafoor</i></p> <p><i>IEEE Communications Letters</i> , Vol. 23 , No. 6, PP. 1008-1011</p> <p><b>Impact Factor:</b> 3.419   <b>Quartile:</b> 2   <b>Citations:</b> 4</p> <p><b>DOI:</b> 10.1109/LCOMM.2019.2914049</p>                                                                                                                                                                                                 | 2019 |
| <p><b>All-optical generation and transmission of multiple ultrawideband signals over free space optical link</b></p> <p><i>Jawad Mirza Ashiq Hussain Salman Ghafoor</i></p> <p><i>Optical Engineering</i> , Volume 58, Issue 5, Article Number 056103</p> <p><b>Impact Factor:</b> 1.113   <b>Quartile:</b> 3   <b>Citations:</b> 31</p> <p><b>DOI:</b> 10.1117/1.OE.58.5.056103</p>                                                                                                                                                                                     | 2019 |
| <p><b>Integration of millimeter-wave and optical link for duplex transmission of hierarchically modulated signal over a single carrier and fiber for future 5G communication systems</b></p> <p><i>Rizwan Ahmad Afnan Riaz Salman Ghafoor</i></p> <p><i>Telecommunication Systems</i> , DOI 10.1007/s11235-019-00558-8, pp. 1-9</p> <p><b>Impact Factor:</b> 1.734   <b>Quartile:</b> 3   <b>Citations:</b> 4</p> <p><b>DOI:</b> DOI 10.1007/s11235-019-00558-8</p>                                                                                                      | 2019 |
| <p><b>Analogue Wireless Beamforming Exploiting the Fiber-Nonlinearity of Radio Over Fiber-Based C-RANs</b></p> <p><i>Yichuan Li Katla Satyanarayana Mohammed El-Hajjar Lajos Hanzo Salman Ghafoor</i></p> <p><i>IEEE Transactions on Vehicular Technology</i>, Volume 68, Issue 3, Pages 2802-2813</p> <p><b>Impact Factor:</b> 5.339   <b>Quartile:</b> 1   <b>Citations:</b> 21</p> <p><b>DOI:</b> 10.1109/TVT.2019.2893589</p>                                                                                                                                        | 2019 |



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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Polarization multiplexing based duplex radio-over-fiber link for millimeter wave signal transmission to a ring of multiple radio access units</b><br><i>Tayyab Mehmood Hina Qayyum Salman Ghafoor</i><br><i>Frontiers of Information Technology &amp; Electronic Engineering</i> , Volume 20, Issue 2, Pages 300-306<br><b>Impact Factor:</b> 1.604   <b>Quartile:</b> 2   <b>Citations:</b> 3<br><b>DOI:</b> 10.1631/FITEE.1700056                                           | 2019 |
| <b>Millimeter-Wave Signal Generation and Transmission to Multiple Radio Access Units by Employing Nonlinearity of the Optical Link</b><br><i>Tayyab Mehmood Salman Ghafoor</i><br><i>International Journal of Communication Systems</i> , NULL<br><b>Impact Factor:</b> 1.278   <b>Quartile:</b> 3   <b>Citations:</b> 9<br><b>DOI:</b> <a href="https://doi.org/10.1002/dac.3830">https://doi.org/10.1002/dac.3830</a>                                                          | 2018 |
| <b>All-optical 2R-regeneration and continuous wave to pulsed signal wavelength conversion based on fiber nonlinearity</b><br><i>Jawad Mirza Salman Ghafoor Ashiq Hussain</i><br><i>Optical and Quantum Electronics</i> , NULL<br><b>Impact Factor:</b> 1.547   <b>Quartile:</b> 3   <b>Citations:</b> 11<br><b>DOI:</b> <a href="https://doi.org/10.1007/s11082-018-1633-7">https://doi.org/10.1007/s11082-018-1633-7</a>                                                        | 2018 |
| <b>SER estimation method for 56 GBaud PAM-4 transmission system</b><br><i>Aadil Raza Kangping Zhong Salman Ghafoor Saeed Iqbal Shahid Habib Chao Lu Muhammad Adeel Muhammad Fasih Uddin Butt Chao Lu</i><br><i>Chinese optics letters</i> , NULL<br><b>Impact Factor:</b> 1.907   <b>Quartile:</b> 3<br><b>DOI:</b> <a href="https://www.osapublishing.org/col/abstract.cfm?uri=col-16-4-040604">https://www.osapublishing.org/col/abstract.cfm?uri=col-16-4-040604</a>          | 2018 |
| <b>MIMO-enabled integrated MGDW-WDM distributed antenna system architecture based on plastic optical fibers for millimeter-wave communication</b><br><i>Aadil Raza Salman Ghafoor Muhammad Fasih Uddin Butt</i><br><i>Photonic Network Communications</i> , Volume 35, Pages 265–273<br><b>Impact Factor:</b> 1.328   <b>Quartile:</b> 3   <b>Citations:</b> 16<br><b>DOI:</b> <a href="https://doi.org/10.1007/s11107-017-0741-9">https://doi.org/10.1007/s11107-017-0741-9</a> | 2018 |
| <b>Raman amplification by employing data modulated pump signals for bi-directional communication</b><br><i>Muhammad Ahmad Farooq Salman Ghafoor</i><br><i>Microwave and Optical Technology Letters</i> , NULL<br><b>Impact Factor:</b> 0.933   <b>Quartile:</b> 4<br><b>DOI:</b> <a href="https://doi.org/10.1002/mop.31051">https://doi.org/10.1002/mop.31051</a>                                                                                                               | 2018 |
| <b>A novel time and wavelength interleaved optical pulsed signal for a high resolution photonic analogue to digital converter</b><br><i>Hira Ali Jamal Salman Abdul Ghafoor</i><br><i>Optical and Quantum Electronics</i> , Volume 50, Article Number 98<br><b>Impact Factor:</b> 1.547   <b>Quartile:</b> 3   <b>Citations:</b> 3<br><b>DOI:</b> <a href="https://doi.org/10.1007/s11082-018-1358-7">https://doi.org/10.1007/s11082-018-1358-7</a>                              | 2018 |
| <b>UWB over fiber transmission to multiple radio access units using all-optical signal processing</b><br><i>Tayyab Mehmood Bilal Aziz Salman Abdul Ghafoor</i><br><i>Photonic Network Communications</i> , Volume 34, Pages 280-287<br><b>Impact Factor:</b> 1.203   <b>Quartile:</b> 3   <b>Citations:</b> 7<br><b>DOI:</b> 10.1007/s11107-017-0695-y                                                                                                                           | 2017 |
| <b>The "Rap" on ROF</b><br><i>Varghese Antony Thomas Salman Ghafoor Mohammed El-Hajjar Lajos Hanzo</i><br><i>IEEE Microwave Magazine</i> , Volume 16, Issue 9, Pages 64-78<br><b>Impact Factor:</b> 1.975   <b>Quartile:</b> 1   <b>Citations:</b> 14<br><b>DOI:</b> 10.1109/MMM.2015.2453852                                                                                                                                                                                    | 2015 |
| <b>Self-phase modulation-based multiple carrier generation for radio over fiber duplex baseband communication</b><br><i>Aamir Gulistan Salman Ghafoor</i><br><i>Photonic Network Communications</i> , Volume 29, Issue 2, Pages 133-137<br><b>Impact Factor:</b> 0.557   <b>Quartile:</b> 3   <b>Citations:</b> 12<br><b>DOI:</b> 10.1007/s11107-014-0479-6                                                                                                                      | 2015 |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Baseband radio over fiber aided millimeter-wave distributed antenna for optical/wireless integration</b><br><i>Varghese A. Thomas Salman Abdul Ghafoor Mohammed El-Hajjar Lajos Hanzo</i><br><i>IEEE Communications Letters</i> , Volume 17, Issue 5, Pages 1012-1015<br><b>Impact Factor:</b> 1.463   <b>Quartile:</b> 2   <b>Citations:</b> 12<br><b>DOI:</b> 10.1109/LCOMM.2013.030413.122841                 | 2013 |
| <b>A full-duplex diversity-assisted hybrid analogue/digitized radio over fibre for optical/wireless integration</b><br><i>Varghese A. Thomas Salman Abdul Ghafoor Mohammed El-Hajjar Lajos Hanzo</i><br><i>IEEE Communications Letters</i> , Volume 17, Issue 2, Pages 409-412<br><b>Impact Factor:</b> 1.463   <b>Quartile:</b> 2   <b>Citations:</b> 21<br><b>DOI:</b> 10.1109/LCOMM.2012.122012.120975           | 2013 |
| <b>Duplex digitized transmission of 64-QAM signals over a single fiber using a single pulsed laser source</b><br><i>Salman Abdul Ghafoor Varghese A. Thomas Lajos Hanzo</i><br><i>IEEE Communications Letters</i> , Volume:16, Issue:8, Page:1312-1315<br><b>Impact Factor:</b> 1.160   <b>Quartile:</b> 2   <b>Citations:</b> 9<br><b>DOI:</b> 10.1109/LCOMM.2012.060112.120415                                    | 2012 |
| <b>Sub-Carrier-Multiplexed Duplex 64-QAM Radio-over-Fiber Transmission for Distributed Antennas</b><br><i>Salman Ghafoor Lajos Hanzo</i><br><i>IEEE Communications Letters</i> , Volume 15 , No. 12, Pages 1368-1371<br><b>Impact Factor:</b> 0.982   <b>Quartile:</b> 2   <b>Citations:</b> 27<br><b>DOI:</b> 10.1109/LCOMM.2011.101711.111794                                                                     | 2011 |
| <b>Imperfect Digital Fibre Optic Link Based Cooperative Distributed Antennas with Fractional Frequency Reuse in Multicell Multiuser Networks</b><br><i>Xinyi Xu Rong Zhang Salman Ghafoor Lajos Hanzo</i><br><i>IEEE Transactions on Vehicular Technology</i> , Volume 60, No. 9, Pages 4439-4449<br><b>Impact Factor:</b> 1.921   <b>Quartile:</b> 1   <b>Citations:</b> 9<br><b>DOI:</b> 10.1109/TVT.2011.2171012 | 2011 |

## Conference Proceedings

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| <b>A Single Laser and Fiber Based Duplex Data Transmission to Multiple Users in a Passive Optical Link</b><br><i>Maawa Khalid Salman Abdul Ghafoor</i><br><i>2021 International Conference on Frontiers of Information Technology (FIT)</i> , res.country(177,)<br><b>Citations:</b> N/A<br><b>DOI:</b> 10.1109/FIT53504.2021.00035                                                       | 2021 |
| <b>Routing and Spectrum Allocation Heuristic for Sliced Elastic Optical Network System</b><br><i>Shahzad Alam Ihtesham Khan M Umar Masood Arsalan Ahmad Salman Abdul Ghafoor Vittorio Curri</i><br><i>2021 IEEE Photonics Society Summer Topicals Meeting Series (SUM)</i> , res.country(156,)<br><b>Citations:</b> N/A<br><b>DOI:</b> 10.1109/SUM48717.2021.9505                         | 2021 |
| <b>Modeling Off-line Routing and Spectrum Allocation Problem in Elastic Optical Network</b><br><i>Shahzad Alam M Umar Masood Ihtesham Khan Arsalan Ahmad Salman Ghafoor Vittorio Curri</i><br><i>International Conference on Electrical, Communication and Computer Engineering (ICECCE)</i> , res.country(157,)<br><b>Citations:</b> N/A<br><b>DOI:</b> 10.1109/ICECCE52056.2021.9514112 | 2021 |
| <b>Duplex Dual-Ring Radio Over Fiber System with Centralized Light Source and Local Oscillator for millimeter-wave Transmission</b><br><i>Anisa Qasim Tayyab Mehmood Usman Ali Qasim Umar Khan Salman Ghafoor</i><br><i>2017 International Multi-topic Conference (INMIC 2017)</i> , res.country(177,)<br><b>Citations:</b> N/A<br><b>DOI:</b> 10.1109/INMIC.2017.8289469                 | 2017 |

Editorial Activities

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| <b>Optics and Laser Technology</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 4.939     | 2022 |
| <b>Applied Sciences-Basel</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 2.838          | 2022 |
| <b>Optics and Laser Technology</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 4.939     | 2022 |
| <b>Optics and Laser Technology</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 4.939     | 2022 |
| <b>IET Communications</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 1.345              | 2022 |
| <b>IEEE Access</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 3.476                     | 2022 |
| <b>Journal of Lightwave Technology</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 4.439 | 2022 |
| <b>Scientific Reports</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 4.996              | 2021 |
| <b>ETRI Journal</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 1.622                    | 2021 |
| <b>IEEE Photonics Journal</b><br>Reviewed Papers for Journals<br><b>Impact Factor:</b> 2.250          | 2021 |

Intellectual Property

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| <b>Patents</b>                                                                                         |      |
| <b>Method for Regenerating Optical Signals over Free Space Optical Links</b><br><b>Status:</b> Granted | 2022 |
| <b>Industrial Designs</b>                                                                              |      |
| <b>Trademarks</b>                                                                                      |      |