University Academic Curriculum Vitae

Personal Information

- Name: Muhammad Azfar YAQUB

Education since leaving school

- 2007, BS Electrical (Telecommunication) Engineering, CIIT, Pakistan
- 2010, MSc Mobile Broadband Communication, Lancaster University, UK
- 2019, PhD Computer Science and Engineering, Kyungpook National University, South Korea

Present appointment

- Title of Appointment: Junior University Researcher With Fixed-Term Contract (RTDa)
- Start of Appointment: 15-02-2026
- Level of Appointment: Assistant Professor
- Employer: Free University of Bozen-Bolzano, Italy
- Responsibilities:
  - Teaching undergraduate courses and labs
  - Carried out research in the domain of Intelligent networks.
  - Co-Supervised of 2 PhD students and academic Tutor of an undergraduate student

- Title of Appointment: Visiting Lecturer
- Start of Appointment: 26-06-2024
- Level of Appointment: Assistant Professor
- Employer: Kyungpook National University, South Korea.
- Responsibilities: Teaching undergraduate courses and labs in summer.

Professional experience

From / to	Job title	Name of academic Institution	Academic level	Responsibilities
2023 - till date	Assistant Professor (RTDa)	Free University of Bozen-Bolzano, Italy	UG/Grad	Teaching UG courses, research and project management
2024 – till date	Visiting Lecturer	Kyungpook National University, South Korea	UG	Teaching summer courses
2021 - 2023	Assistant Professor	COMSATS University Islamabad, Pakistan	UG/Grad	Teaching, CRC Member
2008 - 2021	Lecturer	COMSATS University Islamabad, Pakistan	UG/Grad	Teaching, CRC Member
2014-2019	Research Assistant	Kyungpook National University, South Korea	UG/Grad	Research and assistance in courses

Participation in exhibitions (where applicable)

- SIGAPP Student Travel Award Program ($1500) for paper presentation at the 33rd ACM SAC, April 9-13, 2018, Pau, France.

Experience in academic teaching

- Data Communications course taught at undergraduate level at the Kyungpook National University, South Korea. (Summer 2025)
- Engineering of Mobile Systems course taught at undergraduate level at the Free university of Bolzano, Italy. (2023-2025)
- Fundamentals of Programming labs taught at undergraduate level at the Free university of Bolzano, Italy (2024-2025)
- Computer Networks course taught at undergraduate level at the Kyungpook National University, South Korea. (Summer 2024)
- Artificial Intelligence course taught at undergraduate level at the COMSATS University Islamabad, Pakistan (2022 - 2023)
- Introduction to Computing course at undergraduate level at the COMSATS University Islamabad, Pakistan (2022-2023)
- Engineering Professionalism course taught at undergraduate level at the COMSATS University Islamabad, Pakistan (2020 - 2022)

- Wireless Networks course taught at post-graduate/PhD level at the COMSATS University Islamabad, Pakistan (2020 - 2021)

- PhD co-supervision at the Free university of Bolzano, Italy:
  - Douzandeh Zenoozi Amirhossein (Neural network pruning strategies for industrial applications)
  - Aieb Amir (Data-Driven Models for Large-Scale High Resolution Climate Applications)

Other academic responsibilities

- Member Electrical Engineering program accreditation committee, COMSATS University Islamabad, Pakistan (Fall 2011 – Spring 2014)
- Undergraduate program coordinator, BS EE at COMSATS University Islamabad, Pakistan (Spring 2013)
- Member, Curriculum review committee, COMSATS University Islamabad, Pakistan (Spring 2013 – Fall 2013)
- Undergraduate program coordinator, BS EE at COMSATS University Islamabad, Pakistan (Fall 2011-Spring 2012)
- Member organizing committee, COMSATS Engineering Project Exhibition (CEPEX 2011) COMSATS University Islamabad, Pakistan (April 13-14, 2011)

Memberships

- Guest Editor, IET ITS journal, SI on Advancements in 6G V2X Communication and Networking: Bridging the Gap for Connected and Autonomous Vehicles
- Guest Editor, MDPI Electronics journal, SI on Future Networks: New Advances and Challenges Vol 2
- Guest Editor, MDPI Electronics journal, SI on Future Networks: New Advances and Challenges Vol 1
- Guest Editor, MDPI Sensors journal, SI on Recent Advances in Internet of Things and Sensor Networks
- Publicity Chair, WCN track in ACM SAC (2017~2026)
- Reviewer/TPC member for several reputed IEEE/Elsevier journals and conferences. (Incomplete list)
  - IEEE Communication Magazine, IEEE ACCESS, IEEE Transactions on Industrial Informatics, Elsevier Computer Networks, Elsevier Vehicular Communications.
  - IEEE TSP, IEEE INFOCOM, IEEE GLOBECOM, IEEE ICC, IEEE CCNC, ACM SAC, ACM RACS.
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Young Professionals Society, IEEE Communication Society
- Pakistan Engineering Council (PEC # ELECT/23571)

Research and scholarships

Date granted	Award Holder(s)	Funding Body	Title	Amount received
02.2023 - 02.2026	PI: Antonio Liotta Project Manager: Muhammad Azfar Yaqub	Ministero dell'Università e della Ricerca	Self-optimizing Networked Edge Control for Cooperative Vehicle Autonomy (SELF4COOP)	€89.300,0
07.2022 - 05.2025	PI: Antonio Liotta Project Manager: Muhammad Azfar Yaqub	Ministero dell'Università e della Ricerca	Community oriented wearable computing systems (COMMON-WEARS)	€234.800,0
08.2021 – 01.2023	Muhammad Azfar Yaqub	National Electronics Complex of Pakistan/COMSATS University Islamabad	Exploration and Designing of Routing Algorithm for Mesh Modems	-
10.2016 – 07.2019	PI: Dongkyun Kim Members: Muhammad Azfar Yaqub, MTR Khan, J Seo, M Kim	Kyungpook National University, South Korea	Development underwater sensor network IoT technology to provide virtual research industry network	~~₩~~24,375,000
01.2015 -	PI: Dongkyun Kim Members:	Kyungpook National University, South	AUTOSAR-based vehicle internal and	~~₩~~24,161,260

12.2016	Muhammad Azfar Yaqub, S. Lee, SH Ahmed, M. Kim	Korea	external communication platform and application technology for smart vehicle	
01.2015 – 04.2015	PI: Dongkyun Kim Members: Muhammad Azfar Yaqub, S. Kim, SH Ahmed, G Kim	Adaptive Scheduling and Medium Access Control Techniques for Beacon Transmission for Application Level QoS Improvement in Vehicular Ad Hoc Networks	Kyungpook National University, South Korea	₩1,100,000
09.2014 – 08.2018	Muhammad Azfar Yaqub	Brain Korea (BK) Scholarship for pursuance of PhD studies	Kyungpook National University, Daegu, South Korea	₩71,200,000
09.2014 – 08.2016	Muhammad Azfar Yaqub	KNU International Graduate Scholarships (KINGS) for pursuance of PhD studies	Kyungpook National University, Daegu, South Korea	₩11,670,500
10.2009 – 09.2010	Muhammad Azfar Yaqub	Merit Scholarship for MSc in Mobile Broadband Communication at Lancaster University, UK	Comsats University Islamabad, Pakistan	£ 21,200

Publications

RESEARCH OUTCOMES

1. Google Scholar (Citations: 1018, H-index: 15) <Link>
2. Scopus Profile (Citations: 703, H-index: 13) <Link>

BOOK CHAPTER

1. *Muhammad Azfar Yaqub, S.H. Ahmed, S.H. Bouk and D. Kim*, "**Information-Centric Networks (ICN)**", Springer Briefs in Electrical and Computer Engineering. Springer, Singapore, March 2016. DOI: https://doi.org/10.1007/978-981-10-0066-9_2

JOURNAL ARTICALS

1. *[Q1] Buriro, A., Buriro, A.B., Ahmad, T., Luccio F., Yaqub M.A., Zankar M.*, "**SENTINEL-DL: a forensic framework for device attribution using motion sensor data**," Scientific Report, 2026. https://doi.org/10.1038/s41598-025-34734-5
2. *[Q1]S. Hamid, I. Khosa, M.A. Iftikhar, Muhammad Azfar Yaqub, D. Kim, M.R. Usman,* "**A hybrid neural network approach to gait analysis for remote patient care**," ICT Express, 2026. https://doi.org/10.1016/j.icte.2026.01.012
3. **[Q1] A. Aieb, A. Liotta, A. Jacob, I.F. Ferrario, Muhammad Azfar Yaqub,* "**An Innovative Approach for Calibrating Hydrological Surrogate Deep Learning Models,**" Remote Sensing 2025. [IF: 4.1] DOI: https://doi.org/10.3390/rs17111916
4. [Q1] *M.R. Minhas, Q. Shafi, S.H. Khan, T. Ahmad, S. Ullah, A. Buriro, Muhammad Azfar Yaqub,* "**F-OSFA: A Fog Level Generalizable Solution for Zero-Day DDOS Attacks Detection**," IEEE ACCESS 2024. [IF: 3.6] DOI: https://doi.org/10.1109/ACCESS.2025.3557822
5. [Q1] *Abdul Baseer Buriro, Attaullah Buriro, Muhammad Ali Jamshed, Wali Ullah Khan, Muhammad Azfar Yaqub*, "**Securing Military IoT: Context-Aware Biometrics at the Edge**," IEEE Internet of Things Magazine, 2025. DOI: https://doi.org/10.1109/IOTM.001.2400147
6. *[Q1] *R. Khan, M. Sohail, I. Usman, M. Sandhu, M. Raza, Muhammad Azfar Yaqub, Antonio Liotta,* "**Comparative study of deep learning techniques for DeepFake video detection**", ICT Express 2024. [IF: 4.2] DOI: https://doi.org/10.1016/j.icte.2024.09.018
7. *[Q1] *M.U. Saleem, M.R. Usman, Muhammad Azfar Yaqub, Antonio Liotta, Atif Asim*, "**Smarter Grid in the 5G Era: Integrating the Internet of Things with a Cyber-**

Physical System," IEEE ACCESS 2024. [IF: 3.6] DOI: https://doi.org/10.1109/ACCESS.2024.3372379

8. *[Q1] *M. Sohail, I.A Shoukat, H. Fatima, M.R. Jafri, Muhammad Azfar Yaqub, Antonio Liotta*, "**Deep learning based multi pose human face matching system**," IEEE ACCESS 2024. [IF: 3.6] DOI: https://doi.org/10.1109/ACCESS.2024.3366451
9. *[Q1] *Adnan Fida, Adnan Ifthikhar, Muhammad Azfar Yaqub, and Dongkyun Kim*, "**Coordinated Throughput Optimization for Mobile Sensor Networks under Heterogeneous Fading Conditions**", Transactions on Emerging Telecommunications Technologies, 2022. [IF: 3.310] DOI: https://doi.org/10.1002/ett.4096
10. [Q2] *Muhammad Azfar Yaqub, Syed Hassan Ahmed, and Dongkyun Kim,* "**An Improved Push-based Protocol for Critical Data Dissemination in Vehicular Named Data Networks,**" Journal of Information Science and Engineering, 2020. [IF: 0.78] DOI: https://doi.org/10.6688/JISE.202007_36(4).0009
11. [Q2] *Sungwon Lee, Muhammad Azfar Yaqub, Dongkyun Kim*," **Neighbor Aware Protocols for IoT Devices in Smart Cities—Overview, Challenges and Solutions**," Electronics, 2020. [IF: 2.69] DOI: https://doi.org/10.3390/electronics9060902
12. *[Q1] *Muhammad Azfar Yaqub, S.H. Ahmed, S.H. Bouk and D. Kim*, "**Towards Energy Efficient Duty Cycling in Underwater Wireless Sensor Networks**," Multimedia Tools and Applications, 2018. [IF: 2.101] DOI: https://doi.org/10.1007/s11042-018-6924-2
13. *[Q1] *Muhammad Azfar Yaqub, S.H. Ahmed, and D. Kim*, "**Asking Neighbors a Favor: Cooperative Video Retrieval using Cellular Networks in VANETs**", Vehicular Communications, 2018. [IF: 3.530] DOI: https://doi.org/10.1016/j.vehcom.2017.12.002
14. *[Q1] *S.H. Ahmed, S.H. Bouk, Muhammad Azfar Yaqub, D. Kim, and H. Song*, "**DIFS: Distributed Interest Forwarder Selection Scheme for Vehicular Named Data Networks**," IEEE Transactions on Intelligent Transportation System, Sept. 2018. [IF: 5.744] DOI: https://doi.org/10.1109/TITS.2017.2768329
15. [Q3] *A.N. Alvi, Muhammad Azfar Yaqub, N. Javaid, S.H. Ahmed, S.H. Bouk and D. Kim*, "**An Improved IEEE 802.15.4 Superframe Structure with Minimum Delay and Maximum CFP Link Utilization**," Ad Hoc & Sensor Wireless Networks (AHSWN), 2017. [IF: 0.948] URL: https://www.oldcitypublishing.com/journals/ahswn-home/ahswn-issue-contents/ahswn-volume-35-number-1-2-2017/ahswn-35-1-2-p-151-171/
16. *[Q1] *S.H. Ahmed, S.H. Bouk, Muhammad Azfar Yaqub, D. Kim, H. Song, and J. Lloret*, "**CODIE: Controlled Data and Interest Evaluation in Vehicular Named Data Networks**", IEEE Transactions on Vehicular Technology, June 2016. [IF: 5.339] DOI: https://doi.org/10.1109/TVT.2016.2558650
17. [Q3] *S.H. Ahmed, Muhammad Azfar Yaqub, S.H. Bouk, and D. Kim,* "**SmartCop: Enabling Smart Traffic Violations Ticketing in Vehicular Named Data Networks**," Mobile Information Systems, 2016. [IF: 1.635] DOI: https://doi.org/10.1155/2016/1353290
18. *[Q1] *S.H. Bouk, S.H. Ahmed, Muhammad Azfar Yaqub, D. Kim and M. Gerla,* "**DPEL: Dynamic PIT Entry Lifetime in Vehicular Named Data Networks**," IEEE Communications Letters, Feb. 2016. [IF: 3.457] DOI: https://doi.org/10.1109/LCOMM.2015.2508798
19. *[Q1] *A.N. Alvi, S.H. Bouk, S.H. Ahmed, Muhammad Azfar Yaqub, M. Sarkar, and H. Song*, "**BEST-MAC: Bitmap-assisted Efficient and Scalable TDMA based WSN MAC Protocol for Smart Cities**," IEEE Access Journal, 2016. [IF: 4.098] DOI: https://doi.org/10.1109/ACCESS.2016.2515096
20. *[Q1] *A.N. Alvi, S.H. Bouk, S.H. Ahmed, Muhammad Azfar Yaqub, N. Javaid, and D. Kim*, "**Enhanced TDMA based MAC Protocol for Adaptive Data Control in Wireless Sensor Networks,**" Journal of Communications and Networks (JCN), June 2015. [IF: 1.632] DOI: https://doi.org/10.1109/JCN.2015.000046

CONFERENCE PAPERS

1. *Muhammad Azfar Yaqub, A. Buriro, M. M. Saad, A. Aieb, A. Liotta and M.R. Usman,* "**Trajectory Prediction and Intelligent RSU Handover for Connected Vehicles Using Deep Sequential and Ensemble Learning,**" ACM SAC, Thessaloniki Greece March 2026. [Accepted]
2. *K. Moniri, Muhammad Azfar Yaqub, M.A- Usman and M.R. Usman,* "**RIS-Mounted UAV-Assisted Backscatter NOMA System for Emergency Communications in**

Wireless Network," ACM SAC, Thessaloniki Greece March 2026. [Accepted]

3. *M. Hompola, R H Jhaveri, S Bvuma, Muhammad Azfar Yaqub, G Johnson, M R. Usman,* "**AI-based Intrusion Detection Systems for Medical IoT Networks: A Performance Analysis,**" IEEE ICC, May 2026 Glasgow, Scotland, UK [Accepted]
4. *I. Kichah, A. Aieb, A. Liotta and Muhammad Azfar Yaqub,* "**Machine Learning-Based Malware Classification in Real-Time IoT Scenarios,**" Springer ICTIS 2026 Thailand 2026. [Accepted]
5. *A Rafi, A Buriro, Muhammad Azfar Yaqub, A Liotta*, "**Machine Learning-Based Malware Classification in Real-Time IoT Scenarios,**" IEEE FIT, Islamabad Pakistan, December 2025. DOI https://doi.org/10.1109/FIT67061.2025.11333598
6. *A Aieb, X Liu, A Jacob, Muhammad Azfar Yaqub, A Liotta,* "**Time Series Gaps Filling based on Heterogeneous Sensor Data Fusion**", ACM ICAITC, July 2025. DOI: https://doi.org/10.1145/3762329.3762362
7. *A Aieb, A Jacob, A Liotta, Muhammad Azfar Yaqub*, "**Multitask Learning Strategy for Surrogate Hydrological Modeling,**" Springer ICTIS, New York, USA, May 2025. DOI: https://doi.org/10.1007/978-981-95-1357-4_30
8. *A Buriro, F Luccio, Muhammad Azfar Yaqub,* "**Balancing the Scales: Using GANs and Class Balance for Superior Malware Detection**," ACM SAC, Sicily Italy, April 2025. DOI: https://dl.acm.org/doi/abs/10.1145/3672608.3707800
9. *A Buriro, A Rafi, Muhammad Azfar Yaqub, F Luccio,* "**Malware detection using anomaly detection algorithms,**" IEEE ICUFN, Budapest Hungry, July 2024. DOI: https://doi.org/10.1109/ICUFN61752.2024.10624871
10. *Amir Aieb, Antonio Liotta, Alexander Jacob, Muhammad Azfar Yaqub*, "**Short-term forecasting of non-stationary time series**," Engineering Proceedings, 2024. DOI: https://doi.org/10.3390/engproc2024068034
11. *R Fanti Coelho Lima, M Segata, Muhammad Azfar Yaqub, A Liotta,* "**Experimental Evaluation of Lane Detection Models in Miniature Autonomous Vehicles**," ACM EWSN, Rende Italy, September 2023. DOI: https://dl.acm.org/doi/abs/10.5555/3639940.3639993
12. *A. Rasheed, A. Anwar, KSK Liyanage, P. Chong, W. Liu, Muhammad Azfar Yaqub, and MR Jafri*, "**Application-Aware Hierarchical Offloading for MEC-Enabled Autonomous Vehicle Architecture**," IEEE GLOBECOM, Taipei, Taiwan, 2020. https://doi.org/10.1109/GCWkshps50303.2020.9367480
13. *Abdul Rehman, Anand Paul, Muhammad Azfar Yaqub, and MMU Rathore,* "**Trustworthy intelligent industrial monitoring architecture for early event detection by exploiting social IoT**," ACM Symposium on Applied Computing (SAC), Brno Czech Republic, April 2020. https://doi.org/10.1145/3341105.3373996
14. *Muhammad Azfar Yaqub, S.H. Ahmed, and D. Kim*, "**A Detailed Simulation Study of the Push-based Protocol for Critical Data Dissemination in Vehicular Named Data Networks**," 2019 International Conference on Networking and Network Applications, Daegu Korea, 2019. https://doi.org/10.1109/NaNA.2019.00042
15. *N. Leshov, Muhammad Azfar Yaqub, M.T.R. Khan, S. Lee, D. Kim,* "**Content Name Privacy in Tactical Named Data Networking,**" IEEE ICUFN, Zagreb Croatia, 2019. https://doi.org/10.1109/ICUFN.2019.8805919
16. *M.R. Usman, M.A. Usman, Muhammad Azfar Yaqub, S.Y. Shin*, "**UAV Reconnaissance using Bio-Inspired Algorithms: Joint PSO and Penguin Search Optimization Algorithm (PeSOA) Attributes,**" IEEE CCNC, Las Vegas USA, 2019. DOI: https://doi.org/10.1109/CCNC.2019.8651831
17. *Muhammad Azfar Yaqub, S.H. Ahmed, S.H. Bouk and D. Kim,* "**Enabling Critical Content Dissemination in Vehicular Named Data Networks**," ACM RACS, Honolulu USA, 2018. DOI: https://doi.org/10.1145/3264746.3264779
18. *L. Amwine, M.T.R Khan, Muhammad Azfar Yaqub, and D. Kim*, "**RIED-MAC: Receiver-Initiated MAC based on Energy-efficient Duty Cycling for UWSNs**," IEEE OCEANS, Kobe Japan, 2018, pp. 1-5, DOI: https://doi.org/10.1109/OCEANSKOBE.2018.8559282
19. *Muhammad Azfar Yaqub, S.H. Ahmed, and D. Kim*, "**BIRD: Bio-InspiRed Distributed Interest Forwarding in Vehicular Named-Data Networks**," ACM SAC, Pau France, 2018, 2078-2083. DOI: https://doi.org/10.1145/3167132.3167355
20. *Muhammad Azfar Yaqub, M.T.R Khan, S.H. Ahmed, D. Kim*, "**Receiver-Initiated Dynamic Duty Cycle Scheduling Schemes for Underwater Wireless Sensor Networks**," IEEE CCNC, USA, 2018, pp. 1-6. doi: https://doi.org/10.1109/CCNC.2018.8319205
21. *E. Moon, S. Lee, Muhammad Azfar Yaqub, and D. Kim,* "**p-BORE: Prioritized Beacon Repetition and Contention Window Selection Based MAC Protocol in**

Underwater Wireless Sensor Networks," IEEE ICUFN, Milan Italy, 2017, pp. 269-271. doi: https://doi.org/10.1109/ICUFN.2017.7993790

22. *Muhammad Azfar Yaqub, S.H. Ahmed, S.H. Bouk, and D. Kim*, "**FBR: Fleet Based video Retrieval in 3G and 4G enabled Vehicular Ad Hoc Networks,**" IEEE ICC, Malaysia, 2016, pp. 1-6. doi: https://doi.org/10.1109/ICC.2016.7510894
23. *A.N. Alvi, S.H. Bouk, S.H. Ahmed, Muhammad Azfar Yaqub,* "**Influence of Backoff Period in Slotted CSMA/CA of IEEE 802.15.4**," Wired/Wireless Internet Communications (WWIC), Thessaloniki Greece, 2016. DOI: https://doi.org/10.1007/978-3-319-33936-8_4
24. *Muhammad Azfar Yaqub, S.H. Ahmed, S.H. Bouk, and D. Kim*, "**Interest Forwarding in Vehicular Information Centric Networks: A Survey,**" ACM SAC, Pisa Italy, 2016. 724-729. DOI: https://doi.org/10.1145/2851613.2851857
25. *S.H. Ahmed, S.H. Bouk, Muhammad Azfar Yaqub, and D. Kim*, "**CONET: COntrolled Data Packets Propagation in Vehicular Named Data NETworks,**" IEEE CCNC, USA, 2016, pp. 620-625. doi: https://doi.org/10.1109/CCNC.2016.7444850
26. *S.H. Bouk, Muhammad Azfar Yaqub, S.H. Ahmed, and D. Kim*, "**Evaluating Interest/Data Propagation in Vehicular Named Data Networks**," ACM RACS, Czech Republic, 2015, 256-259. DOI: http://dx.doi.org/10.1145/2811411.2811539
27. *S.H. Ahmed, Muhammad Azfar Yaqub, S.H. Bouk, and D. Kim,* "**Towards Content-Centric Traffic Ticketing in VANETs: An Application Perspective**," The 3rd International Workshop on Intelligent Vehicles, IEEE ICUFN, Sapporo Japan, 2015, pp. 237-239. doi: https://doi.org/10.1109/ICUFN.2015.7182541

Further data (past 3 years)

- 2025, Invited Talk, 22nd International Conference on Frontiers of Information Technology, 15-16 December 2025, Islamabad Pakistan.
- 2025, Invited Talk, The 40th ACM Symposium on Applied Computing (SAC), from March 31 – April 4, 2025, in Sicily Italy.
- 2024, Invited Talk, The 15th International Conference on Ubiquitous and Future Networks (ICUFN), July 2-5, 2024, in Budapest, Hungry.
- 2023, Invited Talk, The 20th International Conference on Embedded Wireless Systems and Networks (EWSN), September 25-27, 2023, in Rende, Italy.
- 2023, Invited Seminar on the topic "Experimental evaluation of lane detection models in miniature autonomous vehicles" at Superior University, 26th October 2023 in Lahore Pakistan.

Entrepreneurship

Patents:

1. Inventors: Muhammad Azfar Yaqub, M.T.R. Khan, S.H. Ahmed, Y. Bae, D. Kim, Title: Next Wake-Up Time of Sender Node Based Dynamic Duty Cycle Scheduling Scheme for Underwater Wireless Sensor Networks, Publish Date: 30.10.2020, Application Number: 10-2018-0058514, DOI: https://doi.org/10.8080/1020180058514
2. Inventors: Muhammad Azfar Yaqub, M.T.R. Khan, S.H. Ahmed, H. Park, D. Kim, Title: Residual Energy-Based Receiver-Initiated Dynamic Duty Cycle Scheduling Scheme for Underwater Wireless Sensor Networks, Publish Date: 24.09.2019, Application Number: 10-2017-0158808, DOI: https://doi.org/10.8080/1020170158808

Language competence

Urdu (Native), English (C1), Italian (A1), Korean (A1)

Date: _02-03-2026_