Zaib Ullah

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Web: Researchgate
       GoogleScholar
News Bulletin 2022: Designated Among Highly cited 24 Scientists from UNICAM in 2021

EDUCATION AND TRAINING

University of Giustino Fortunato, Benevento, Italy	Researcher	01/02/2023 – Present
Institute of High Performance Computing and Networking, National Research Council of Italy	Post Doc	23/06/2022 - 31/01/2023
University of Camerino, Italy Computer Science Division,	Post Doc	21/04/2021 - 08/12/2021
University of Camerino, Italy Computer Science Division	Post Doc	01/05/2019 - 01/04/2021
University of Camerino, Italy Computer Science Division	Post Doc	01/04/2017 - 28/02/2018
University of Camerino, Italy Computer Science Division	PhD	23/05/2013 -16/01/2017
Middlesex University, London, UK Visiting researcher at Senso Lab		08/04/15– 01/08/16
Quaid I Azam University, Islamabad Dept of Electronics.	MS	01/02/09- 01/06/12
Quaid I Azam University, Islamabad Dept of Electronics.	BS	2006-2009

GRANTS AND AWARD

- *ICU4COVID* Project fellowship at *ICAR-CNR, Italy*   22/06/2022-22/06/2023
- 3 Post Doc fellowships at Computer Science Division, Unicam, Italy.   2017-19/12/2021
- PhD Grant under Eureka (European Union) Project, Italy.   2013-2017
- Mobility Grant for Middlesex University, London, UK.   2015-2016
- National Internship Program (NIP) at dept of electronics

    Quaid-I-Azam University Islamabad.   2010-2011

RESEARCH FIELDS

- Blockchain Applications in Smart Cities and Next-Generation Communications
- Artificial Intelligence and Machine Learning Applications to Optimize Complex Problems of Drones Communications.
- Designing Clustering Protocols for Wireless Sensor Network to enhance network lifetime and optimize Hot Spot Problem.
- Tourism and Transportation: Buspooling for Tourism and Information technology based destination management.
- Signals Processing: Adaptive Optimization Algorithms (SDA, CDA, CGA, RLS, LMS, FLMS, Mini-Batch CGA, Stabilized CGA, SPCGA and SCGA)

INDUSTRY EXPERIENCE

Contram spa Italy

Researcher and App Developer   Jun 2013-Jun2014

– Develop ICT based Tourist Destination Development

UNICAM Italy

Researcher and App Developer   April 2017-April 2018

– WSN and IoT based App development using My PhD Thesis

Digimark Srl and Namirial spa Italy   Jun 2018-Aug 2018

Researcher and App Developer

– Worked as C# Developer on a Vodafon Project

Coinmarketlinks

--Founder and developer of Coinmarketlinks, a cryptocurrencies platform.

PROGRAMMING LANGUAGES AND TECHNICAL SKILLS

- **Programming Languages:** Python(Expert), Matlab (Expert), NS-3, C#, Java, C++, MVC Controller
- **Data/Machine Learning:** PyTorch, SKLearn, Numpy, SQL.

- **Web Technologies:** HTML, Wordpress, MySQL,

EDITORIAL SERVICES

- Board Member of the Journal of Computational and Cognitive Engineering(JCCE)(ISSN: 2810-9503)
- Worked as Official Reviewer for "12th International Conference on Electronics, Communications and Networks" held in Xiamen, China during November 4-7, 2022.
- Will work in 2023 as Guest Editor for Special Issue on **"Advances and Challenges in Intelligent UAVs applications and Techniques"** – with the Mdpi Journal of "Applied Sciences".

REVIEW SERVICES

- IEEE Internet of Things Journal
- IEEE Network Magazine
- IEEE Sensors Journal
- IEEE Access
- Journal of Sustainable Cities and Society
- Journal of Vehicular Communication
- Journal of Computer Communications
- Journal of Computer Networks
- Journal of Energy Reports
- Journal of Reliable Intelligent Environments
- Journal of Neural Computing and Applications
- Journal of Computers and Electrical Engineering

ACCEPTED ARTICLES

 [1] **Ullah, Zaib**, Muddasar Naeem, Antonio Coronato, Patrizia Ribino "**Applications of Blockchain Technology In Sustainable Smart Cities."**

Accepted in the Journal of ***Sustainable Cities and Society*, Impact factor : 10.696, Cite Scor :14.4**

ARTICLES IN PROGRESS

 [1] **Ullah, Zaib**, Fadi Al-Turjman, Leonardo Mostarda,"Optimal Cluster Head Rotation for Energy Efficient WSNs"

 [2] "Blockchain Applications in Next-Generation Communication" to be submitted in IEEE Survey in Communications

 [3] Federated Learning Approach in effective decision making in ICU4Covid (In Progress) to be submitted in IEEE journal of biomedical and health informatics

 [4] Federated Learning Applications in Smart Healthcare Systems (In Progress) to be Submitted in the Journal of Nature Medicine.

PUBLICATIONS

Peer-Reviewed Publications

[1] **Ullah, Zaib**, Fadi Al-Turjman, Leonardo Mostarda, and Roberto Gagliardi. "Applications of artificial intelligence and machine learning in smart cities."*Computer Communications*154 (2020): 313-323.

[2] **Ullah, Zaib**, Fadi Al-Turjman, and Leonardo Mostarda. "Cognition in UAV-aided 5G and beyond communications: A survey."*IEEE Transactions on Cognitive Communications and Networking* 6.3 (2020): 872-891.

[3] **Ullah, Zaib**, Leonardo Mostarda, Roberto Gagliardi, Diletta Cacciagrano, and Flavio Corradini. "A comparison of heed based clustering algorithms--Introducing ER-HEED." In *2016 IEEE 30th international conference on advanced information networking and applications (AINA)*, pp. 339-345. IEEE, 2016.

[4] **Ullah, Zaib**, Fadi Al-Turjman, Uzair Moatasim, Leonardo Mostarda, and Roberto Gagliardi. "UAVs joint optimization problems and machine learning to improve the 5G and Beyond communication." *Computer Networks* 182 (2020): 107478.

[5] **Zaib Ullah ,**Aierken, Nueraili, Roberto Gagliardi, Leonardo Mostarda "RUHEED-rotated unequal clustering algorithm for wireless sensor networks." In *2015 IEEE 29th International Conference on Advanced Information Networking and Applications Workshops*, pp. 170-174. IEEE, 2015.

[6] **Ullah, Zaib**. "A survey on hybrid, energy efficient and distributed (HEED) based energy efficient clustering protocols for wireless sensor networks." *Wireless personal communications* 112, no. 4 (2020): 2685-2713.

[7] **Ullah, Zaib**, Roberto Gagliardi, Orhan Gemikonakli, and Fadi Al-Turjman. "Network Lifetime Efficiency Based on Equal and Unequal Size Clustering Strategies." In *Workshops of the International Conference on Advanced Information Networking and Applications*, pp. 905-916. Springer, Cham, 2020.

[8] **Ullah, Zaib**, Fadi Al-Turjman, and Leonardo Mostarda. "UAVs Healthcare Applications, Communication Protocols, Deployment Strategies, and Security Challenges." In *Unmanned Aerial Vehicles in Smart Cities*, pp. 27-37. Springer, Cham, 2020.

[9] **Ullah, Zaib**, Roberto Gagliardi. "Buspooling for Tourism", ATE 2014: transport systems for tourism.

[10] Anjum, Naveed, **Zaib Ullah**, and Aqeel Abbas Syed. "Fractionally spaced channel equalization using non-linear PCA." In *2012 International Conference on Emerging Technologies*, pp. 1-4. IEEE, 2012.

[11] Naeem, Muddasar, Sajid Bashir, **Zaib Ullah**, and Aqeel A. Syed. "A near optimal scheduling algorithm for efficient radio resource management in multi-user MIMO systems."*Wireless Personal Communications* 106, no. 3 (2019): 1411-1427.

[12] Ahmad, Sheraz, K. N. R. Prasad, **Zaib Ullah**, Leonardo Mostarda, and Fadi Al-Turjman. "Classification of IoT Device Communication Through Machine Learning Techniques." In *International Conference on Forthcoming Networks and Sustainability in the IoT Era*, pp. 129-143. Springer, Cham, 2020.

[13] Al-Turjman, Fadi, Diletta Cacciagrano, Leonardo Mostarda, Mattia Paccamiccio, and **Zaib Ullah**. "Light Communication for Controlling Industrial Robots." In *International Conference on Forthcoming Networks and Sustainability in the IoT Era*, pp. 111-128. Springer, Cham, 2020.

[14] Muddasar Naeem, Antonio Coronato, **Zaib Ullah,** Sajid Bashir, Giovanni paragliola "Optimal User Scheduling in Multi Antenna System using Multi Agent Reinforcement Learning." Journal of Sensors mdpi. 2022.

Non-Refereed Publications

[15] **Ullah, Zaib**., A. A. Syed, and R. Gagliardi. "Fractional Order Stochastic Pairwise Conjugate Gradient Algorithm For Adaptive Filtering."*4th Scientific Day of School of Science and Technology, UNICAM*(2014): 41.

TEACHING AND MENTORSHIP

Mentorship

- Nur Ali Aerkin (MS Thesis, University of Camerino)   2014-2015
- Matteo Micheletti (PhD Thesis, University of Camerino)   2017-2019
- Abdul Qayum Talipu (MS Thesis, University of Camerino)   2015-2016
- Nijati Abdul Qayum (MS Thesis, University of Camerino)   2015-2016
- Sheraz Ahmad (MS Thesis, University of Camerino)   2019-2020
- Uzair Moatasim (BS Thesis, Khushal Khan Khattak University Karak, Pakistan)   2020-2021

PROFESSIONAL ACTIVITIES

Poster Presentations and Flash Talks

- *2012* International Conference on Emerging Technologies 8-9 oct 2012. Islamabad (As a speaker).
- 2012 International Conference and Workshop on NANO Science and Technology 1-5 oct. Quaid-i-Azam University
- ATE 2014 Conference, Lisbon, Portugal.
- Inter Doc 2014, Padova University, Italy.
- Scalability of High-Dimensional Indexing at Unicam (Italy) on 21 st Oct. 2015.
- "From automata theory to process theory" by Flavio Corradini, Unicam, Italy, 2016
- "SmartHubs: a framework for validating intermodal mobility solutions" by Francesco De Angelis on 18th July 2016 at Computer Science Division, Unicam, Italy.

VOLUNTEER ACTIVITIES

- Reviewer Activities for more than 15 high impact factors Journal   2016–Present
- PhD Students representatives   March 2015 –March 2016
- Short course on Matlab for BS and MS students at UNICAM, Italy,   Jan 2016 -- Dec 2017

References:

Dr. Roberto Gagliardi
    Associate Professor, Computer Science Division, Unicam, Italy.
    Email: roberto.gagliardi@unicam.it
    Ph: 00393201519412

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    Research Fellow, ICAR-CNR, Naples, Italy.
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Dr. Almas Khan

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