PERSONAL INFORMATION

Zaib Ullah

Sex | Date of birth | Nationality

PERSONAL STATEMENT

To apply my knowledge and skills efficiently in order to add productivity to my organization and professionalism to myself.

EDUCATION AND TRAINING

05-2013 To 11-2016(EXPECTED)	Doctorate (PhD candidate) In Computer Science Dvision with focus on developing Clusters based Energy Efficient algorithms for WSN and IOT, Universita degli Studi di Camerino, Italy.
08.04.15-01.08.16	Visiting reseracher at Senso Lab Middlesex University, London, UK
01.02.09- 01.06.12	MPhil in Electronics , Dept of Electronics, Quaid I Azam University, Islamabad.
2006-2009	Bachelor in Electronics, Dept of Electronics, Quaid I Azam University, Islamabad.

Honours and awards

23.05.2013-23.05.2016	Phd Grant under Eurika Project
Jun 2014-Jun2016	Unicam Phd students represntative
01.04.2015-01.09.2015	Mobility Grant for Middlesex University, London, UK. At Senso Lab, I worked on mathematical modeling of clustering protocol for WSN under the supervision of Prof. Orhan Gimikonakli and Designing optimal duty cycle for energy efficient M2M communication in 5G networks.
13.12.2010-13.12.2011	Teacher Assistant Lab and Coordinator in dept of electronics Quaid-I-Azam University Islamabad under National Internship Programme (NIP).

Communication skills and Capabilities:

◆ Ability to communicate with clarity and intelligibility in written and spoken English acquired during education and research career;

◆ Ability to work in any environment;

◆ Working to deadline;

Research Fields

- Designing Clustering Protocols for Wireless Sensor Network to enhance network lifetime and optimize Hot Spot Problem.
  (1) Hybrid energy efficient, distributed (HEED) protocol based WSN Protocols.
  (2) Data Rate based Clustering Protocols for WSN using realistic energy model and optimum duty cycle.
  (3) Optimization of duty cycle to improve energy efficiency and machine to machine (M2M) communication in 5G networks.
- Tourism and Transportation
  Buspooling for Tourism and Information technology based destination management.
- Signals Processing
  (1) Adaptive Optimization Algorithms (SDA, CDA, CGA, RLS, LMS, FLMS, Mini-Batch CGA, Stabilized CGA, SPCGA and SCGA)
  (2) Principal Component Analysis (PCA) and Non linear Principal Component Analysis (NLPCA)

Major Courses

- Statistical Signal &Processing
- Stochastic Processes
- Error Correcting Codes
- Information Theory
- Quantum Chaos and Laser
- Wave propagation and Applied Math
- Communication Theory & System
- Quantum Information Theory
- Circuit Theory
- Analogue & Digital Electronics
- Control System
- Electromagnetic Theory
- Engineering Mathematics

Programing Languages and skills:

- Matlab
- Contiki-OS (Introductory Level)
- Opnet++ (Introdcutory Level)
- C++
- Assembly Language
- Fortran
- Xilinx (Introductory Level)

Publications:

(1) "A comparison of HEED based clustering algorithms - introducing ER-HEED" published in 30-th IEEE AINA-2016.
(2) "RUHEED- Rotated Unequal Clustering Algorithm For Wireless Sensor Networks" published in the 2015 IEEE 29th International Conference on Advanced Information Networking and Applications Workshops
(3) Buspooling for Tourism, published in ATE2014, at Lusiada University, Lisbon, Portugal.
(4) Fractionally Spaced Channel Equalization Using Non- Linear PCA

(5) Fractional order stochastic pair wise conjugate gradient algorithm (FSPCGA). Presented as a poster at Unicam Scientific day May 23rd, 2014.

- ***Publication in progress:***

(1) "On the efficiency of equal and unequal size clustering protocols for IOT" to be submitted in IEEE Communication letter.
(2) "A survey on HEED based clustering protocols for WSN."
(3) "Data rate based energy efficient clustering protocols for WSN/IOT."
(4) "A Near Optimal Scheduling Algorithm for Efficient Radio Resource Management in Multiuser MIMO Systems."

Conferences:

(1) 2012 International Conference on Emerging Technologies 8-9 oct. Islamabad (As a speaker).

(2) 2012 International Conference and Workshop on NANO Science and Technology 1-5 oct. Quaid-i-Azam University (As a visitor).

(3) 2012 International Work shop on "Nano-Scale Electronics Devices and Systems" 21st May- 1st Jun at Quaid-i-Azam University Islamabad (As an organizer team member)

(4) ATE 2014 Conference, Lisbon (As a speaker).

(5) Inter Doc 2014, Padova University, Italy (As a visitor).

Posters Presentations:

(1) "Buspooling for Tourism", presented at Unicam scientific day 13th Jun 2014.
(2) " Fractional order derivative based Conjuagte gradient algorithms" presnted at Unicam scientific day 13th Jun 2014.
(3) "Clustering based energy efficient algorithms for WSN and IOT" presnted at Unicam scientific day 13th Jun 2016.

Seminars:

(1) Title: Scalability of High-Dimensional Indexing
Speaker: Björn Þór Jónsson (Reykjavík University) at Unicam (Italy) on 21st Oct. 2015.
(2) "Job Hunt " by Michael Zebrak
Oct. 12 to Oct 15 2015 at Unicam.
(3) "Multiparty Session Types And Their Applications (with a live demo)". By Nobuko Yoshida and Rumyana Neykova
on April 29th 2016 at Unicam (Italy).
(4) "From automata theory to process theory" by Flavio Corradini on Fab. 3rd at Unicam (Italy).
(5) "SmartHubs: a framework for validating intermodal mobility solutions" by Francesco De Angelis on 18th July 2016 at Battibocca palace, Computer Science Division, Unicam, Italy.

References:

- Dr. Roberto Gagliardi
  Associate Professor, Computer Science Division, Unicam, Italy.
  Email: roberto.gagliardi@unicam.it
- Dr. Leonardo Mostarda
  Associate Professor, Computer Science Division, Unicam, Italy.
  Email: leonardo.mostarda@unicam.it

- Dr. Almas Khan
  Lecturer, Department of Physics, Virginia Tech, USA.
  Email: almas@vt.edu