CURRICULUM VITAE

DR. UMAR FAROOQ
Department of Electronics and Communication Engineering
Islamic University of Science and Technology (IUST)
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DOB: 15 August 1991

Academic Qualifications

Ph.D	**National Institute of Technology (NIT) Srinagar, Kashmir, India** Thesis: Millimeter Wave Propagation & Antennas for Next Generation Mobile Networks			**2020**
M.Tech	Electronics and Communication Engineering (Thesis: Wavelet Transform Based Data Transmission in WSNs)	Punjab Technical University (*GZSCCET, Formerly Government. Engineering College Bathinda*)	**71.82%**	**2014**
B.Tech	Electronics and Communication Engineering	IUST, Jammu & Kashmir, India	**CGPA 8.28**	**2012**
12th	Non Medical	J&K BOSE	**78.6%**	**2007**
10th	Science	J&K BOSE	**86.8%**	**2005**

Teaching Experience

February 2021 to Till date – Lecturer in Department of Electronics and Communication, Islamic University of Science and Technology Awantipora, Kashmir, India

August 2014 to August 2015 - Assistant Professor in Department of Information Technology, National Institute of Technology Srinagar, Kashmir, India

Research Experience

August 2015 to August 2020- Research Fellow (JRF, SRF) in Department of Electronics and Communication Engineering, National Institute of Technology Srinagar, Kashmir, India

Research Interests

Millimeter Wave /TeraHertz band Communication, Antenna Design, 5G/B5G Networks, Internet of Things, Wireless Sensor Networks.

Computer Skills

Simulation (Level: Proficient):

CST MICROWAVE STUDIO, MATLAB, MULTISIM, FLOW CODE, ORIGIN.

Documenting (Level: Proficient):

MS Word, Latex, MS Excel, MS PowerPoint

Awards and Fellowships

1) Recipient of Senior Research Fellowship (SRF) from Ministry of Human Resource Development (MHRD), Govt. of India from **August 2017 to August 2020**.
2) Received Junior Research Fellowship (JRF) from MHRD, Govt. of India from **August 2015 to August 2017**.
3) Received **Best Paper award** in Springer International Conference on Advanced Computing and Intelligent Engineering, Ajmer, India, 2017.

Membership

1. Institution of Electrical and Electronics Engineers (IEEE)
2. Microwave Theory and Techniques Society (MTTS)
3. Institution of Engineers India (IEI)
4. International Information and Engineering Technology Association (IIETA)

Research Publications

Journals:

1. **Umar Farooq** and Ghulam Mohammad Rather, "Design and Analysis of Rectangular Microstrip antenna for Millimeter Wave Applications" *Traitement du Signal, Vol. 36, No. 5, October, 2019, pp. 433-438.* https://doi.org/10.18280/ts.360508 (**SCIE&SCOPUS**)
2. **Umar Farooq** and Ghulam Mohammad Rather, "Design and Analysis of miniaturised multiband MMW antenna for Body Centric Network Applications", *Alexandria Engineering Journal, Elsevier,* January, 2022, https://doi.org/10.1016/j.aej.2022.01.044 (**SCI&SCOPUS**)
3. **Umar Farooq** and Ghulam Mohammad Rather, "Design and Analysis of Dual band Slotted Microstrip Antenna for Millimeter Wave Applications", *International Journal of Computing and Digital Systems, Vol.9, No. 4, pp.607-614.* http://dx.doi.org/10.12785/ijcds/090408 (**SCOPUS**)
4. **Umar Farooq** and Ghulam Mohammad Rather, " Millimeter Wave Communications for Next Generation Mobile Networks: Evolution, Challenges and Potential Applications", *International Journal of Service Science, Management, Engineering & Technology, IGI Global, Vol. 12, Article 8*(**SCOPUS**)
5. **Umar Farooq** and Ghulam Mohammad Rather, "Design & Analysis of C/Ka/V multiband miniaturized antenna for Next Generation Network Applications", International Journal of Computer-Aided Engineering & Technology, Inderscience (*Accepted*) doi:10.1504/ijcaet.2022.10038721(**SCOPUS**)
6. **Umar Farooq** and Ghulam Mohammad Rather, "Performance Analysis of Millimeter wave link for Next Generation Mobile Networks." *International Journal of Computing and Network Technology, Vol. 7, No. 2, May 2019, pp. 41-46.* http://dx-doi.org/10.12785/ijcnt/070201

Conference Proceedings:

1. **Umar Farooq**, Jyoti Saxena and Shabir Sofi, "Wavelet Transform based Effective Energy Utilisation Approaches of Data Transfer in Wireless Sensor Networks: A Survey," *Proceedings of International Conference on Advances in Engineering and Technology, Roorke, India, May 2014, pp. 599-604.*
2. **Umar Farooq**, Shabir Ahmad Sofi and Roohie Naaz Mir, "Experimental Study of different wavelets for real time transmission in Wireless Visual Sensor Networks," *Proceedings of International Conference on Advances in Computers, Communication and Electronic Engineering, 16-18 March, 2015, Kashmir, India.* ISBN: 978-93-82288-63-3.
3. **Umar Farooq** and Ghulam Mohammad Rather, "Design and Analysis of Graphene based TeraHertz band Antenna for Nano Network Applications", *Proceeding of 5th International Conference on Nanotechnology for Better Living 2019,* ISBN: 978-81-939516-0-6
4. Hushmat Amin, **Umar Farooq** and G M Rather, "Internet of nano-things: An energy efficient routing protocol for healthcare applications," *Proceeding of 5th International Conference on Nanotechnology for Better Living 2019,* ISBN: 978-81-939516-0-6
5. Yusra Banday, **Umar Farooq** and G M Rather, "Diffusion based molecular communication in next generation nano-networks," *Proceeding of 5th International Conference on Nanotechnology for Better Living 2019,* ISBN: 978-81-939516-0-6

Book Chapters (SCOPUS):

1. **Umar Farooq** and Ghulam Mohammad Rather, "Millimeter Wave (MMW) Communications for Fifth Generation (5G) Networks." *Progress in Advanced Computing and Intelligent Engineering. Springer, 2019. 97-106.* https://doi.org/10.1007/978-981-13-0224-4_9
2. **Umar Farooq** and Ghulam Mohammad Rather. "A Study on the Coverage of Millimeter Wave (MMW) Communication Link for Fifth Generation (5G) Mobile Networks." *Innovations in Electronics and Communication Engineering. Springer, 2019. 361-370.* https://doi.org/10.1007/978-981-10-8204-7_37
3. **Umar Farooq,** H A Kar and S A Banday, **"**A Miniaturised Multilayer Tri band Off-body Antenna for Heterogeneous Applications in Internet of Medical Things." *Extended Reality for Healthcare Systems, Elsevier* (**In Press)** 2021.
4. **Umar Farooq,** Aqib Amin and Nasir Sharief, **"**Integrating IoT Technology for Effective Agriculture Monitoring: An Approach to Smart Farming System." *Intelligent Green Communication Network for Internet of Things, Springer* (Accepted with minor **Revision)** 2022.

Invited Talks/Resource Person

Invited resource person at "One Week Short Term Course (STC) on Communication System Design" sponsored by TEQIP-III at NIT Srinagar, India on April 24-25, 2018.

Participation in Conferences, Workshops, FDPs and Training Courses

1. One Week Workshop on *Mathematica and Related Software* at JK Institute of mathematical Sciences Amar Singh College, Kashmir, India.
2. Three Day Workshop on *"5G: An Evolution to Revolution"* at Islamic University of Science and Technology Awantipora, Kashmir, India.
3. Two Week Training on *"Flow Code and Associated Hardware"* at Technics Infosolutions Delhi, India.
4. One Week STC on *"Communication System Design"* at NIT Srinagar, India.
5. Ten Day Training on "*Big Data Analytics"* at NIT Srinagar, India.
6. One Week Training on *"CST Microwave Studio"* at Dassault Systems Bangalore, India.
7. One Week STC on "*Open Source Technologies*" at NIT Srinagar, India.
8. Attended *IEEE International Conference IMARC 2016* at IIT Delhi, India.
9. Attended *IEEE International Conference IMARC 2017* at ISRO Ahmedabad, India.
10. One Week AICTE FDP on "*Biomedical Instrumentation and IOT*"
11. One Week AICTE FDP on "*Wearable Devices*"
12. One Week FDP on *"Recent Trends in Information Technology"* at IUST, Kashmir, India
13. One Week AICTE FDP on "Artificial Intelligence and Machine Learning" NITTR Chandigarh.
14. One Week AICTE FDP on "Flexible & Wearable Antennas" NITTR Chandigarh.
15. One Week Short Term Training on "Word Processing with LaTeX" NITTR Kolkata.

Courses Taught at Graduate and Post Graduate Level

1. Wireless and Mobile Communication
2. Wireless Sensor Networks
3. Antenna and Wave Propagation
4. Data Communication
5. Signals and Systems
6. Communication System
7. Electronics-I
8. Advanced Design Techniques

Projects Guided

1. Data Compression in WSNs (NIT Srinagar)
2. Performance Analysis of WiMax System (NIT Srinagar)
3. Internet of Things based Smart Agriculture Monitoring System (Islamic University)
4. Internet of Things(IoMT) based remote health care system (Islamic University)
5. IoT based environmental monitoring system (Islamic University)
6. Real time driving license authentication system using IoT (Islamic University)

Personal Details

Date of Birth	:	August 15, 1991
Father's Name	:	Farooq Ahmad Dar
Mother's Name	:	Rafiqa
Passport No.	:	M4631648
Languages Known	:	English, Hindi, Urdu, Kashmiri, Arabic and Punjabi
Residential Address	:	House No. 12, Arigam Tral Jammu & Kashmir, India-192123

REFERENCES

Dr. G M Rather Professor and Head, Dept. of Electronics & Comm. National Institute of Technology Srinagar, India - 190006 e-mail: gmrather@nitsri.ac.in Ph No: +91-9419076741	**Dr. Rajinder Amberdar** Professor, Dept. of Material Science Engineering National Institute of Technology Srinagar, India - 190006 e-mail: rajinderambardar@nitsri.ac.in Ph No: +91-9419191635	**Dr. M A Shah** Associate Professor, Dept. of Physics National Institute of Technology Srinagar, India - 190006 e-mail: shah@nitsri.ac.in Ph No: +91-7889426961

Declaration

I hereby declare that the information given above is true to the best of my knowledge.

Date: 12th April, 2022
Place: Kashmir, India

Sincerely Yours
(Umar Farooq)