# MANDEEP MALIK

Current Address : Military College of Telecommunication Engineering, Indore
Email: manlik.687a@gov.in, mandeepmalik100@gmail.com

## WORK EXPERIENCE

**Signal Intelligence Proffesional** 2023 - Present
*SIGINT* *Delhi*

- Planning procurement of software defined radios and there deployment
- Attended multiple workshops on GNU Radio, SIGINT, EW and cyber security

**Instructor Class - A/ Project Manager** 2019 - 2023
*Military College of Telecommunication Engineering (MCTE), Indore* *Indore, M.P*

- Spearheaded 5Gi and 5G projects with IIT-Madras and Nokia Ltd for over 50 Cr to establish 5G Test Bed at MCTE.
- Conceptualized integration of IoT, IoMT, LPWAN with 5G Core
- Completed Nokia Bell Labs BL-100 5G assocciate certification.
- Faculty for M.Tech and B.Tech students for courses in Wireless Networks, MPLS and IoT.

**Instructor Class - B** 2016 - 2017
*Military College of Telecommunication Engineering, Indore* *Indore, M.P*

- Teaching Faculty for B.Tech students of ECE.
- Courses taken on Analog Communication, Optical Fiber Networks and Satellite Communication.

**Officer Commanding Communications** 2014 - 2016
*Static and Field Communication* *New Delhi*

- Responsible for planning voice communication/ computer network to 800 local subscribers at Shankar Vihar, Delhi through EPABX (Alcatel) and (NEC) and Microsoft domain controller.

**Officer Commanding Operations** 2010- 2013
*Rashtriya Riffles* *Rajuri, JK*

- Deputation with Rashtriya Riffles Batallion in Counter Terrorist role, planned multiple operations spanning over days against adversery.

**Communications Officer** 2007 - 2010
*Static Communication* *Jammu, JK*

- Responsible for voice communication to 1000 local subscribers at Jammu through EPABX (Alcatel).
- Trunk communication to all Army static/ Field installations using E1/ PRI on Nortel Passport.

**Network Analyst** 2005 - 2006
*HCL Technologies* *Noida, UP*

- Router programming on diffrent protocols like ISIS, OSPF, BGP and IGP.

## EDUCATION

**Indian Institute of Information Technology (IIIT-N)** 2021 - 2024
*PhD in Wireless Communication* *Nagpur, MH*

- Thesis : Optimization of LoRa Communication Parameters For PER Reduction .

· Course Work : Machine Learning and Digital Signal Processing.
· CGPA : 7.9 (Course Work)

**Indian Institute of Technology (IIT-R)** 2017 - 2019
*MTech in Communication Systems* *Roorkee, UK*

· Dissertation Stage I : Sensitive and Nonlinear Far Field RF Energy Harvesting.
· Dissertation Stage II : Nonlinear and Efficient RF Energy Harvesting for Backscatter Sensor Network with Extended Communication Range.
· Course Work : Coding Theory, Digital Communication, Crytography, Information Theory and Filter Design.
· CGPA : 7.43

**Military College of Telecommunication Engineering (MCTE)** 2013 - 2014
*IT and Communication Course* *Indore, M.P*

· One year course in handling Computer/Data Networks, Optical Networks, Routers, L2/L3, MPLS, STM1, STM3, Cryptography, PKI and Project Management.
· Grade : 'AI'

**Military College of Telecommunication Engineering (MCTE)** 2008
*Young Officers Course (Signals)* *Indore, M.P*

· Six months course for young Officers in planning networks using equipment such as UHF Radio, PCM Mux, TDM EPABX.
· Grade : 'B'

**Indian Military Academy (IMA)** 2006 - 2007
*Post Graduate Diploma in Military Science and Warfare* *Dehradun, UK*

· One year course for Gentlemen Cadets in Military Tactics, Combat Operations and Military History.
· Grade : 'A'

**RustamJi Institute of Technology, B.S.F. Academy** 2001 - 2005
*B.E in Electronics and Communication* *Gwalior, MP*

· Percentage : 75.9 (Hons)

## PUBLICATIONS

Citations : 43 as of 2024, h Index : 3

**Scalability Analysis of LoRa and Sigfox in Congested Environment and Calculation of Optimum Number of Nodes** 2023, MDPI
*The Sensors Journal, SCI and Scopus*

Author: Mandeep Malik, Ashwin Kothari, Rashmi Pandhare

**Integration of LPWAN based IoT Devices on 5G Network: Security Challenges, Roaming and Research Road-map** 2023, IIIT, Gwalior
*2024 IEEE International Conference on Intelligent Signal Processing and Effective Communication Technologies (INSPECT)*

Author: Mandeep Malik, Ashwin Kothari, Rashmi Pandhare

**Stand Alone or Non Stand Alone 5G Tactical Edge Network Architecture for Military and Use Case Scenarios** 2023, IIIT, Gwalior

*2024 IEEE International Conference on Intelligent Signal Processing and Effective Communication Technologies (INSPECT)*

Author: Mandeep Malik, Ashwin Kothari, Rashmi Pandhare

**Network Slicing In 5G: Possible Military Exclusive Slice** 2023, Nagpur
*International Conference on the Paradigm Shifts in Communication, Embedded Systems, Machine Learning and Signal Processing (PCEMS), pp. 48-52*

Author: Mandeep Malik; Ashwin Kothari; Rashmi A. Pandhare

**Simplified SEP Approximation Of HQAM In Combined Time Shared Nakagami-Lognormal And Rician Fading Channel** 2022, London
*4th International Conference on "Intelligent Engineering and Management (IEM), pp. 123-127"*

Author: Shivam Kumar Garg; Mandeep Malik

**Towards 6G: Network Evolution beyond 5G & Indian Scenario** 2022, Noida
*2nd International Conference on Innovative Practices in Technology and Management (ICIPTM)*

Author: Mandeep Malik; Shivam Kumar Garg

**5G For Military Communication: Automation of Kill Cycle** 2021, Tashkient
*International Conference on Technological Advancements and Innovations (ICTAI), pp. 285-290*

Author: Mandeep Malik

## SKILLS

**The Arduino Platform and C Programming** Online
*University of California*

Certification Id : JUEK8HXBG6WT

**Industrial IoT on Google Cloud Platform** Online
*Google Cloud*

Certification Id : 9NJZXYRMFFUB

## TECHNICAL STRENGTHS

| | |
|---|---|
| **Optical Networks** | OFC, MER/MAR, OTDR, ROW Calculations |
| **Computer Networks** | IIS, L2/L3 Switches, MPLS routers |
| **Telecom Networks** | Alcatel/ Siemens EPABX, PCM MUX, E1, PRI, Microwave radios |
| **Latest Tech** | ML, Google IoT Cloud, LPWAN, Energy Harvesting, Scatter Networks |

## COMPUTER SKILLS

| | |
|---|---|
| **Computer Language** | C/C++, MATLAB, PHP, Octave |
| **Databases** | MySQL |
| **Tools** | LaTeX, Simulink |

## PERSONAL DETAILS

| | |
|---|---|
| **Language Known** | English and Hindi |
| **Hobbies** | Reading, Swimming and Tennis |
| **Passport** | Valid Indan Passport issued 2015 |

All details mentioned above are correct to the best of my knowledge.