procedura selettiva di chiamata per n. 1 posto di **Ricercatore a tempo determinato - Tipologia A** presso il Dipartimento di Ingegneria dell'Informazione, Elettronica e Telecomunicazioni, Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Settore Scientifico-disciplinare ING-INF/03, Settore concorsuale 09/F2 di cui al bando emanato con D.D. n. 117 del 20/01/2023 con avviso pubblicato sulla G.U. – IV serie speciale n. 5 in data 20/01/2023, codice concorso 2023RTDAPNRR108

RANJEETH MAMIDI
Curriculum Vitae

Place: Warangal, Telangana, India
Date: 01-02-2023

Part I – General Information

Full Name	RANJEETH MAMIDI
Date of Birth	
Place of Birth	
Citizenship	
Spoken Languages	English, Hindi, Telugu.

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	2010	JNTU-Hyderabad, India	Electronics and Communications Engineering
Post-graduate studies	2013	National Institute of Technology- Durgapur	Telecommunication Engineering
PhD	2018	National Institute of Technology- Warangal	Wireless Communication
Specialty			
Pre-doctorate training			
Licensure 01			
Licensure 02			

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
11-07-2013	11-12-2013	JNTUHCEJ-Karimnagar	Teaching Assistant
18-06-2018	Till Date	Vaagdevi College of Engineering – Warangal	Assistant Professor

IIIB – Other Appointments

Start	End	Institution	Position
01-11-2022	Till Date	Vaagdevi College of Engineering – Warangal	R & D Coordinator at College level
17-09-2020	Till Date	Vaagdevi College of Engineering – Warangal	U.G Project Coordinator
18-06-2018	Till Date	Vaagdevi College of Engineering – Warangal	P.G Project Coordinator

Part IV – Teaching experience

Year	Institution	Lecture/Course
2013	JNTUH-Karimnagar	Analog and Digital Communications
2018	Vaagdevi College of Engineering – Warangal	Electronic Circuit Analysis
2018	Vaagdevi College of Engineering – Warangal	Cellular Mobile Communications
2019	Vaagdevi College of Engineering – Warangal	Wireless Communications
2019	Vaagdevi College of Engineering – Warangal	Analog and Digital Communications
2020	Vaagdevi College of Engineering – Warangal	Electronic Devices and Circuits
2020	Vaagdevi College of Engineering – Warangal	Wireless Mobile Communications
2021	Vaagdevi College of Engineering – Warangal	Computer Networks
2021	Vaagdevi College of Engineering – Warangal	Principles of Communication System
2022	Vaagdevi College of Engineering – Warangal	Signals and Systems

Part V - Society memberships, Awards and Honors

Year	Title
2019	DST-Travel grant to attend the conference at south korea.
2011-2013	Scholarship from MHRD-INDIA for M.Tech Thesis.
2013-2018	Scholarship from MHRD-INDIA for Ph.D Thesis.
2019	Best research paper award for presenting paper at IEEE-ICACT-2019 conference.
2021	Best research paper award for presenting paper at IEEE-ISSSC-2020 conference.

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value

Part VII – Research Activities

Keywords	Brief Description
Cognitive Radio	See description below
5G	
NOMA	
Fading Channels	

Ph.D Thesis Title: **Performance Analysis of Cooperative Spectrum Sensing Network Over Various Fading Channels**

In my Ph.D thesis, I have used Cognitive Radio Technology to improve the radio spectrum efficiency. Initially, in order to improve the detection probability of vacant band in the radio spectrum we have used various diversity and censoring schemes and the analysis observed under various fading environments. Further, I have worked on optimization of networks parameters of Cooperative Spectrum Sensing Network. An optimal value performance is observed under different fading environments. Finally, I have evaluated the sensing throughput performance and optimization of sensing performance using various fusion rules under multiple fading channels [5-11, 17-26].

Currently, I am continuing my Ph.D work, along with that working latest technologies such as NOMA, millimetre wave and 6G communications. The BER analysis is observed using NOMA scheme under traditional and generalized fading environments and, I am working how 6G scheme is useful compared to 5G technology [1-4, 12-16].

List of Publications

International Journals:

1. Srikar D, Anveshkumar.N, **M. Ranjeeth**, Ashok Babu, Sudipta Das, Sunil Lavadiya, Abeer D. Algarni, Walid El-Shafai, **"A Novel Integrated UWB Sensing and 8-element MIMO Communication Cognitive Radio Antennas System"**, Electronics, **(MDPI)**, ISSN 2079-9292. **(SCI)** I.F: 2.690 (https://doi.org/10.3390/electronics12020330)
2. N. Srinivas, **M. Ranjeeth**, A. Bhowmick, **"Analysis of Energy-Efficient Cooperative Spectrum Sensing with Improved Energy Detectors and Multiple Antennas over Nakagami-q/n Fading Channels"**, International Journal of Communication Systems, vol.34, Issue.5, pp.1-21, Jan-2021, **(Wiley)**, ISSN 1099-1131. **(SCI)** I.F: 2.047 (https://doi.org/10.1002/dac.4731)
3. **M. Ranjeeth**, S.Anuradha, , N Srinivas **"Optimized Cooperative Spectrum Sensing Network Analysis in Non-Fading and Fading Environments"**, International Journal of Communication Systems, vol.33, Issue.5, pp.1-28, Jan-2020, **(Wiley)**, ISSN 1099-1131. **(SCI)** I.F: 2.047 (https://doi.org/10.1002/dac.4262)

4. **M. Ranjeeth**, S.Anuradha, **"The Effect of Weibull Fading Channel on Cooperative Spectrum Sensing Network Using an Improved Energy Detector"**, Telecommunications Systems, Vol. 68, Issue.3, pp.493-512, July-2018, **(Springer)**, ISSN 1572-9451. **(SCI)** I.F: 2.314 (https://doi.org/10.1007/s11235-017-0405-1)
5. **M. Ranjeeth**, S.Anuradha, **"Throughput Analysis in Proposed Cooperative Spectrum Sensing Network with an Improved Energy Detector scheme over Rayleigh Fading Channel"**, International Journal of Electronics and Communications, AEU Journal, vol.83, pp.416-426, Jan-2018, **(Elsevier)**, ISSN 1434-8411. **(SCI)** I.F: 3.183 (https://doi.org/10.1016/j.aeue.2017.09.008)
6. **M. Ranjeeth**, S.Anuradha, N Srinivas, **"Performance Analysis of Cooperative spectrum Sensing Network Using Optimization Technique in Different fading channels"**, Wireless Personal Communications, Vol. 97, issue 2, pp.2887-2909, November-2017, **(Springer)**, ISSN 0929-6212. **(SCI)** I.F: 1.2 (https://doi.org/10.1007/s11277-017-4640-2)
7. **M. Ranjeeth, S.Anuradha**, **"Threshold Based Censoring of Cognitive Radios in Rician Fading Channel"**, Wireless Personal Communications, Vol.93 issue 2, pp. 409-430, June-2016, **(Springer)**, ISSN 0929-6212. **(SCI)** I.F: 1.2 (https://doi.org/10.1007/s11277-016-3440-4)
8. **M. Ranjeeth**, S.Anuradha, N. Srinivas, **"Optimization Analysis of Improved energy detection based cooperative spectrum sensing in Nakagamim and weibull fading channels"**, Journal of Engineering Science and Technology review, Vol.10, no.2, pp.114-121, June-2017, ISSN: 1791-2377. **(Scopus)** I.F: 1.2 (https://doi.org/10.25103/jestr.102.14)
9. **M. Ranjeeth**, S.Anuradha, **"Maximization of Network Utility function in Cooperative Spectrum Sensing using Energy Detection Scheme"**, Indian Journal of Science and Technology, Vol.9 (SI), pp.1-4, Dec-2016, ISSN 0974-5645. **(Web of Science)** (https://doi.org/10.17485/ijst/2016/v9iS1/107908)
10. **M. Ranjeeth**, S.Anuradha, **"Performance of Nakagami-m Fading Channel over Energy Detection Based Spectrum Sensing"**, International Journal of Electrical, computers, Electronics and Communications Engineering, Vol. 8, no.10, pp.1605-1609, Nov-2014. **(Scopus)** (https://doi.org/10.5281/zenodo.1337517)
11. **M. Ranjeeth**, A. Chandra, **"Performance of RS-Coding on Fading Channels"**, International Journal of Systems Algorithms and Applications, Vol.3, pp.72-78, May-2013.

International Conferences

12. N. Srinivas, O. Laxmi Pratyusha, **M.Ranjeeth**, **"Performance of Generalized α - μ Fading for Energy Detection Based Spectrum Sensing in Presence of Channel Errors"**, **Eighth International Conference** on Advanced Computing and Communication Systems **(ICACCS-2022)**, Coimbatore, India, March 25-26, 2022, , doi:10.1109/ICACCS54159.2022.9784984. **(IEEEXplore)**
13. M Shashidhar, **M Ranjeeth**, B Santosh, V Manohar **"Comparative Analysis in Between HSPA+ and LTE"**, **Eighth International Conference** on Advanced Computing and Communication Systems **(ICACCS-2022)**, Coimbatore, India, March 25-26, 2022, doi: 10.1109/ICACCS54159.2022.9785262. **(IEEEXplore)**
14. **M.Ranjeeth**, V. Manohar, A.Supriya, M. Vinay, **"BER Analysis of NOMA System over Various Fading Channels"**, **Secondnd IEEE International Conference** on Communication, Computing & Industry 4.0,**(C2I4-2021)**, Bangalore, India, Dec 16-17, 2021, pp. 1-5, doi:10.1109/C2I454156.2021.9689385. **(IEEEXplore)**
15. B.Santosh, B. Naveen, **M.Ranjeeth**, N. Srinivas, **"Energy Efficiency and Throughput Analysis Using the Proposed CSS Network in Weibull Fading Environment"**, **Seventh International Conference** on Advanced Computing and Communication Systems **(ICACCS-2021)**, Coimbatore, India, March 19-20, 2021, pp.1380-1385, doi: 10.1109/ICACCS51430.2021.9441848. **(IEEEXplore)**
16. N. Srinivas, G. Kiran, **M.Ranjeeth**, **"Energy-Efficiency Analysis of Cognitive Radio Network with Improved Energy Detectors and SC Diversity over Nakagami-q Fading Environment"**, **(Best Paper Award)**, IEEE International Symposium on Sustainable Energy, Signal Processing and Cyber Security **(IEEE-iSSSC 2020)**, Odisha, India, Dec-17-18, 2020, pp.1-6, doi: 10.1109/iSSSC50941.2020.9358880. **(IEEEXplore)**
17. **M.Ranjeeth** and S.Anuradha, **"Throughput Analysis in Cooperative Spectrum Sensing Network using an Improved Energy Detector"**, **(Best Paper Award)**, **Twenty-first International conference on ICACT-2019**, Phoenix park, South korea, Feb.17-20, 2019, pp.483-487, doi:10.23919/ICACT.2019.8701974. **(IEEEXplore)**

18. **M.Ranjeeth** and S.Anuradha, **"Network Utility Function Performance Analysis Using Cooperative Spectrum Sensing Network over Fading Channels"**, **Fourteenth International INDICON conference**, IIT-Roorkee, India, Dec.15-17, 2017, pp.1-6, doi: 10.1109/INDICON.2017.8487546. **(IEEEXplore)**
19. IR Dev, S.Anuradha, **M.Ranjeeth "Maximizing Network Utility Function in Cooperative Spectrum Sensing over Fading Channels"**, **Seventh IEEE conference on ICCSP**, Chennai, India, April 3-5, 2018, pp.845-849, doi:10.1109/ICCSP.2018.8524290.**(IEEEXplore)**
20. **M.Ranjeeth**, S.Anuradha, Sipra Behera, **"Optimization of Cooperative Spectrum Sensing Network With Multiple Antennas in Weibull Fading Channel With Improved Energy Detector"**, **Fifth IEEE conference on ICCSP**, Chennai, India, April 6-8, 2016, pp.1363-1367, doi:10.1109/ICCSP.2016.7754375.**(IEEEXplore)**
21. **M.Ranjeeth**, Sipra Behera, S.Anuradha, **"Optimization of Cooperative Spectrum Sensing Network With Multiple Antennas in Nakagami-*m* Fading Channel With Improved Energy Detector"**, **Fifth IEEE conference on ICCSP**, Chennai, India, April 6-8, 2016, pp.1410-1414, doi:10.1109/ICCSP.2016.7754387. **(IEEEXplore)**
22. S.Anuradha, Sipra Behera, **M.Ranjeeth "Performance Analysis and Threshold Selection in Cooperative Spectrum Sensing Using Soft Decision Techniques"**, **IEEE-ICEEOT-2016**, Chennai, India, March 3-5, 2016, pp.2412-2417, doi:10.1109/ICEEOT.2016.7755126. **(IEEEXplore)**
23. **M.Ranjeeth**, Sipra Behera, N.Srinivas, S.Anuradha, **"Optimization of Cooperative Spectrum Sensing Based on Improved Energy Detector With Selection Diversity in AWGN and Rayleigh Fading"**, **IEEE-ICEEOT-2016**, Chennai, India, March 3-5, 2016, pp.2402-2406, doi: 10.1109/ICEEOT.2016.7755124. **(IEEEXplore)**
24. **M.Ranjeeth** and S.Anuradha, **"Rank based Censoring of Cognitive Radios with Cooperative Spectrum Sensing under Hoyt Fading Channel"**, **International Conference on iCATccT-2015**, BIET, Bengaluru, India, Oct 29-31, 2015, pp.625-630, doi: 10.1109/ICATCCT.2015.7456960. **(IEEEXplore)**
25. **M.Ranjeeth**, S.Anuradha, **"Cooperative Spectrum Sensing with Square Law Combining Diversity Reception"**, **Third International Conference on ICSCN**, Anna University, Chennai, India, Mar 26-28, 2015, pp.1-6, doi:10.1109/ICSCN.2015.7219876. **(IEEEXplore)**
26. **M.Ranjeeth** and S.Anuradha, **"Performance of Fading Channels on Energy Detection Based Spectrum Sensing"**, **Second International Conference on CNT**, Hyderabad, India, Oct 17-18, 2014, pp.361-370, **(Elsevier Proceeding)**

Book chapter:

1. **M.Ranjeeth** and S.Anuradha, **"Threshold Based Censoring of CRs in Fading Channel With Perfect Channel Estimation"**, **Cognitive Radio Oriented Wireless Networks**, LNICST 172 series, pp.220-231, 2016, **ISSN 1867-8211**. **(Springer and Scopus proceedings)**

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	**27**	https://scholar.google.co.in/citations?hl=en&user=nU9IGVwAAAAJ&view_op=list_works&sortby=pubdate	2016	2023
Papers [national]				
Books [scientific]				
Books [teaching]				

Total Impact factor	15.993
Total Citations	108
Average Citations per Product	04
Hirsch (H) index	06
Normalized H index*	01

*****H index divided by the academic seniority.

Part IX– Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

1. Srikar D, Anveshkumar.N, M. Ranjeeth, Ashok Babu, Sudipta Das, Sunil Lavadiya, Abeer D.Algarni, Walid El-Shfai, **"A Novel Integrated UWB Sensing and 8-element MIMO Communication Cognitive Radio Antennas System"**, **(Accepted)**, ELectronics, **(MDPI)**, ISSN 2079-9292. **(SCI)** I.F: 2.690 (https://doi.org/10.3390/electronics12020330)

2. N. Srinivas, M. Ranjeeth, A. Bhowmick, **"Analysis of Energy-Efficient Cooperative Spectrum Sensing With Improved Energy Detectors and Multiple Antennas over Nakagami-q/n Fading Channels"**, International Journal of Communication Systems, vol.34, Issue.5, pp.1-21, Jan-2021, **(Wiley)**, ISSN 1099-1131. **(SCI)** I.F: 2.047, Citations: 06 (https://doi.org/10.1002/dac.4731)

3. M. Ranjeeth, S.Anuradha, S. Anuradha, **"Optimized Cooperative Spectrum Sensing Network Analysis in Non-Fading and Fading Environments"**, International Journal of Communication Systems, vol.33, Issue.5, pp.1-28, Jan-2020, **(Wiley)**, ISSN 1099-1131. **(SCI)** I.F: 2.047 (https://doi.org/10.1002/dac.4262) Citations: 04

4. M. Ranjeeth, S.Anuradha, **"The Effect of Weibull Fading Channel on Cooperative Spectrum Sensing Network Using an Improved Energy Detector"**, Telecommunications Systems, Vol. 68, Issue.3, pp.493-512, July-2018, **(Springer)**, ISSN 1572-9451. **(SCI)** I.F: 2.314 (https://doi.org/10.1007/s11235-017-0405-1) Citations: 03

5. M. Ranjeeth, S.Anuradha, **"Throughput Analysis in Proposed Cooperative Spectrum Sensing Network with an Improved Energy Detector scheme over Rayleigh Fading Channel"**, International Journal of Electronics and Communications, AEU Journal, vol.83, pp.416-426, Jan-2018, **(Elsevier)**, ISSN 1434-8411. **(SCI)** I.F: 3.183. (https://doi.org/10.1016/j.aeue.2017.09.008) Citations: 10

6. M. Ranjeeth, S.Anuradha, N Srinivas, **"Performance Analysis of Cooperative spectrum Sensing Network Using Optimization Technique in Different fading channels"**, Wireless Personal Communications, Vol. 97, issue 2, pp.2887-2909, November-2017, **(Springer)**, ISSN 0929-6212. **(SCI)** I.F: 1.2. Citations: 01 (https://doi.org/10.1007/s11277-017-4640-2)

7. **M. Ranjeeth**, S.Anuradha, **"Threshold Based Censoring of Cognitive Radios in Rician Fading Channel"**, Wireless Personal Communications, Vol.93 issue 2, pp. 409-430, June-2016, **(Springer)**, ISSN 0929-6212. **(SCI)** I.F: 1.2. Citations: **04** (https://doi.org/10.1007/s11277-016-3440-4)

8. M. Ranjeeth, S.Anuradha, N. Srinivas, **"Optimization Analysis of Improved energy detection based cooperative spectrum sensing in Nakagamim and weibull fading channels"**, Journal of Engineering Science and Technology review, Vol.10, no.2, pp.114-121, June-2017, ISSN: 1791-2377. **(Scopus)** I.F: 1.2 Citations: 14 (http://dx.doi.org/10.25103/jestr.102.14)

9. N. Srinivas, G. Kiran, **M.Ranjeeth**, **"Energy-Efficiency Analysis of Cognitive Radio Network with Improved Energy Detectors and SC Diversity over Nakagami-*q* Fading Environment"**, **(Best Paper Award)**, IEEE International Symposium on Sustainable Energy, Signal Processing and Cyber Security **(IEEE-iSSSC 2020)**, Odisha, India, Dec-17-18, 2020, pp.1-6. (https://doi: 10.1109/iSSSC50941.2020.9358880). **(IEEEXplore)**

10. M.Ranjeeth and S.Anuradha, **"Network Utility Function Performance Analysis Using Cooperative Spectrum Sensing Network over Fading Channels"**, **Fourteenth International INDICON conference**, IIT-Roorkee, India, Dec.15-17, 2017, pp.1-6. (https://doi: 10.1109/INDICON.2017.8487546). **(IEEEXplore)**

11. **M.Ranjeeth**, Sipra Behera, N.Srinivas, S.Anuradha, **"Optimization of Cooperative Spectrum Sensing Based on Improved Energy Detector with Selection Diversity in AWGN and Rayleigh Fading"**, **IEEE-ICEEOT-2016**, Chennai, India, March 3-5, 2016, pp.2402-2406, (https://doi: 10.1109/ICEEOT.2016.7755124). **(IEEEXplore)** Citations: 14

12. M.Ranjeeth and S.Anuradha, **"Throughput Analysis in Cooperative Spectrum Sensing Network using an Improved Energy Detector"**, **(Best Paper Award)**, **Twenty-first International conference on ICACT-2019**, Phoenix park, South korea, Feb.17-20, 2019, pp.483-487. (https://doi:10.23919/ICACT.2019.8701974). **(IEEEXplore)** Citations: 07

Part X– Achievements

1. Got **travel grant from DST-SERB** to attend an international conference at **south korea**.
2. Got **best Research paper award** for presenting the paper in **IEEE-ICACT-2019 conference at south korea**.
3. Conducted one session as session chair in IEEE-ICACT-2019 conference at south korea.
4. **Got best research paper award** for presenting the paper in **IEEE-ISSSC-2020 conference at odisha**.
5. Got the **scholarship from MHRD-INDIA** for **M.Tech and Ph.D thesis**.
6. All India **2378** rank in **GATE-2011** out of 1,37,853.
7. One zero three **(103) citations** for my research work.
8. h-index is six (6) and i 10-index is one (4).
9. Got **state 9558 rank in EAMCET-2006** (Engineering And Medical Common Entrance Test) out of 2,27,483.
10. Got **school first and M.Tech class third Position**.
11. **Permanent reviewer for International Journal of Communication Systems (SCI) journal**.
12. **Reviewer for IEEE conferences**.
13. Got the **certificate for NPTEL online course** for principles of communications.

Part-XI- Patents

1. Censoring Methods for Energy-Efficient Collaborative Spectrum Sensing Network with Improved Energy Detectors over Generalized Fading Channel is communicated for Full-Patent Grant. **(Patent filed with application No.202241052070)**
2. Evaluation of BER Performance of NOMA System Under Various Fading Channels is **communicated for Full-Patent Grant.** Communicated & Under review

Part-XII-Responsibilities Handled

1. **Coordinator for R& D committee**.
2. Department B.Tech **project coordinator**.
3. **Coordinator for M.Tech projects** (Wireless Mobile Comm. branch).
4. Coordinator for department student activity committee.

Part-XIII-Skill Set

Communication skills	• Excellent written and verbal communication skills acquired via study and presentations. Confident, articulate, and professional speaking abilities. Speaking in public, to groups, or via electronic media. Excellent presentation and negotiation skills. Presented many international presentations (both oral and paper) in front of many experts. Troubleshooting, finding solutions, solving problems or tackling difficult tasks.

Organizational /Managerial skills

Self-management helps an individual in becoming a better person. It inculcates qualities. Such as punctuality, discipline and subservience. Leadership skills acquired via class representative from childhood. Developedthe ability to multitask, flexibility, responsible and ethical way of working, commitment to excellence via respected teachers and elders. Creative thinking, organizational skills, Technological skills, listening skills acquired from under graduation and post-graduation projects.

Skill Set

Communication Tools: **MATLAB,Simulink, Scilab**.
Operating system: **Windows-xp, 7,8,10**.
Computer Languages Known: **C-language, Python**.
Office Applications: **Microsoft Office**.
Technical Drawing: **Microsoft visio, Origin**

- **Writing scientific articles in LATEX format**

Part-XIV- Workshop/FDP Conducted

- Conducted a **one-day webinar** on **"Efficient Utilization of MS-Office for Preparation of Thesis and Presentations"** on July-05-2021.
- Conducted a **one-day webinar** on **"Introduction to 5G and It's Applications"** on May-25-2020.
- Conducted a **five days FDP** on **"Recent Trends in Communication Technologies (RTCT-2020)"** from 10-10-2020 to 14-10-2020.

Workshops Attended

- Attending a **five days National Workshop** on **"Applications of Machine Learning for Communication and Signal Processing"** organized by NIT-Meghalaya from 22-11-2021 to 26-11-2021.
- Attended a **Six days Traning program** on **"Optical Fiber Communication"** organized by STL-Academy from 15-11-2021 to 20-11-2021.
- Attended a **three days High Intensity Training (HIT) Program** on **"5G Multi-User and Massive MIMO Wireless Technology"** organized by IIT-Kanpur from 25-09-2020 to 27-09-2020.
- Attended a **three days High Intensity Training (HIT) Program** on **"5G Multi-User and Massive MIMO Wireless Technology"** organized by IIT-Kanpur from 25-09-2020 to 27-09-2020.
- Attended a **three days High Intensity Training (HIT) Program** on **"5G Millimeter Wave MIMO OFDM Wireless Technology"** organized by IIT-Kanpur from 02-10-2020 to 04-10-2020.
- Attended a **three days High Intensity Training (HIT) Program** on **"NOMA Wireless Technology"** organized by IIT-Kanpur from 09-10-2020 to 11-10-2020.Attended a **ten days winter school training program** on **"Massive MIMO,mmWave using Python"** organized by IIT-Kanpur from 21-12-2020 to 30-12-2020.
- Attended a **ten days winter school training program** on **"NOMA Wireless Technology using Python"** organized by IIT-Kanpur from 04-01-2021 to12-1-2021.

Luogo e data
Warangal, Telangana,
India, 01-02-2023

Firm