

CURRICULUM VITAE

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PRESENT NATURE OF THE WORK

Presently, I have done my Ph.D. on the topic, “**Some Investigations on dualband microstrip patch antennas**” since 2013 in the Department of Electronics and Communication, J. K. Institute of Applied Physics and Technology, University of Allahabad, Allahabad, under the Supervision of Prof. J. A. Ansari.

Research Interest

The professional interest include the area of Microstrip patch Antenna, Microwave and Millimeter wave, electromagnetic field Theory, Biomedical applications.

- To investigate the effect of loading slots, notches in fed patch to obtain dualband/ Ultra wide band/ Multiband antenna.
- Investigation of rectangular, circular, semicircular, annular ring patch antenna using different type of feeding (coaxial feed/ L- strip proximity feed/ strip line feed/ Inset feed) techniques will be made for dualband/Ultra Wideband/Multi-band antenna.
- To investigate the stacking of the patch of different shapes with various types of feeding such as coaxial feed and L-strip to achieve the enhancement of the bandwidth of the antenna
- To investigation the gap coupled circular disk patch antenna for dual band operation.
- To design the microstrip patch antenna for microwave medical imaging

RESEARCH ACTIVITY

(a) Current Research Activity

Presently I am working on Dualband/Wideband/Multi band/Omni directional Microstrip Patch Antenna which is the major requirements for the various communication systems as well as in medical application such as breast cancer and tumor detection.

All these required properties of microstrip antenna can be obtained by the different shapes of the radiating patches such as rectangular, circular, semi circular or annular ring with another parasitic patch. Also by introducing various shapes of slots such as W- slot, half U-slot and L- shaped slot in the radiating patch, we can achieve either dualband operation. In my papers, I have used the cavity model to analyze many types of radiating structures in single as well as two layers configurations. In the beginning compact shorted patch and half U-slot loaded semicircular disk patch is analyze to obtain dualband operation.

W-slot loaded single and two dielectric layer patch is also analyzed in which an attempt was made to eliminate the inherent drawback of patch antenna i.e. narrow bandwidth and low gain. In this paper four inclined slots etched in a rectangular patch. This configuration provides appreciable bandwidth and high gain which is very useful for many industrial and scientific purposes.

(b) Future Plan of Research

In future the research work would be done on different shapes of patch radiators with various coupling techniques such as L-strip proximity fed, inset fed, aperture coupling, strip line coupling etc. to widen the bandwidth and reasonable gain. Further integration of the patch antenna with various active devices such as Gunn diode, Tunnel diode, IMPATT diode etc. will also be studied to get the desired resonant frequency. This technique is one of the alternate tools to avoid from the cut and try process in the patch.

Modern wireless communication system requires wide bandwidth to provide high speed data transmission for optimum system performance. In this regards microstrip patch antenna are very reliable and exhibits high radiation efficiency, small volume, simple and low-loss impedance matching to receive and transmit the data.

In the field of medical, patch antenna are very much useful. Microwave imaging is an attractive or supplementary method of detecting breast cancer. The fundamental basis of microwave imaging, like

any diagnostic imaging system, is the measurable contrast that exists between different materials (e.g. bone, healthy tissue or malignant tumor).

EDUCATIONAL QUALIFICATIONS

- **Doctor of Philosophy (Ph.D.)** from the Department of Electronics and Communication, **J. K. Institute of Applied Physics and Technology, University of Allahabad, Allahabad, India 2008-2013**
Thesis Title- “Some Investigations on dualband microstrip patch antennas”
- Project work on the topic of “**EPR and Optical Study of Mn²⁺ and Gd³⁺ doped single Crystal**” in the Department of Physics, University of Allahabad, Allahabad, under the supervision of **Prof. Ram Kripal, 2007-2008**
- **M. Sc. (Master of Science) -2006**
(Physics with specialization in Electronics)
- **B. Sc. (Bachelor of Science) -2004**
(Physics, Mathematics and Chemistry)
University of Allahabad, Allahabad

Reviewer of International Journals:

1. Progress in Electromagnetic Research, USA
2. International journal of Electronics (Taylor and Francis)
3. International journal of microwave and optical technology letter, USA
4. Wireless Engineering Technology, (Scientific Research Publication)
5. International Journal of Wireless personal Communication(Springer)
6. International journal of electronics(Science Direct)

LIST OF PUBLICATIONS

In Peer Reviewed International Journals

1. **Anurag Mishra**, J.A. Ansari, Kamakshi, A.Singh and B. R. Vishvakarma “Compact Dualband rectangular microstrip patch antenna for 2.4/5.12 Ghz wireless applications,” **Wireless Network, Vol.21, pp. 347-355, 2015.**
2. A. Singh, J. A. Ansari, Kamkashi, **Anurag Mishra**, “Compact notch loaded half disk patch antenna for dual band operation ,” **Annals Telecommunication, Vol.69, pp.475-483, 2014.**
3. A. Singh, J. A. Ansari, Kamkashi, **Anurag Mishra**, “Analysis of F-shape microstrip line fed dual band antenna for WLAN application,” **Wireless Network, Vol.20, pp.133-140, 2014.**

4. **Anurag Mishra**, J. A. Ansari, N. P. Yadav, P. Singh, B. R. Vishvakarma “L-strip Feed Circular Disk Dual Resonator Patches Antenna for Wireless Communication.” **International Journal of Wireless Personal Communications, Volume 72, pp.795-807, 2013.**
5. J. A. Ansari, **Anurag Mishra** and B. R. Vishvakarma Analysis of L-shaped slot loaded circular disk patch antenna for satellite and radio telecommunication,” **International Journal of Wireless Personal Communications, Vol. 70, 927-943, 2013.**
6. J. A. Ansari, Kamakshi, Ashish Singh and **Anurag Mishra**, “Ultra wideband Co-planer microstrip patch antenna for wireless applications,” **International journal of wireless personal communications, Vol. 69, pp. 1365-1378, 2013.**
7. J. A. Ansari, **Anurag Mishra**, and B. R. Vishvakarma, Analysis of W-slot loaded patch antenna for dualband operation, **International Journal of Electronic, Science direct, 66, 32-38, 2012.**
8. N. P. Yadav, **Anurag Mishra** and J. A. Ansari, Analysis of multilayer rectangular patch antenna for broadband operation, **International Journal of Wireless Personal Communications, 62,315-327, 2012.**
9. A. Singh, J. A. Ansari, Kamkashi, **Anurag Mishra**, “Analysis of planer monopole antenna for 4.2/6.8 Ghz dual band operation,” **Review of Business and Technology Research, Vol.5, no.1, pp.196-201, 2012.**
10. J. A. Ansari, **Anurag Mishra** and B. R. Vishvakarma, Half U-slot semicircular disk patch antenna for GSM mobile phones and optical communications, **Progress in Electromagnetic Research C, 18, 31-45, 2011.**
11. J. A. Ansari, **Anurag Mishra** and B. R. Vishvakarma, Compact triple U shaped slot loaded patch antenna for dualband operation, **International Journal of Microwave and Optical Technology, 6, 91-99, 2011.**
12. J. A. Ansari, **Anurag Mishra**, P. Singh, Dualband slot loaded circular disk patch antenna for WLAN application, **International Journal of Microwave and Optical Technology, 5, 124-129, 2010.**
13. J. A. Ansari, **Anurag Mishra**, P. Singh, Dualband slot loaded circular disk patch antenna for WLAN application, **International Journal of Microwave and Optical Technology, 5, 124-129, 2010.**
14. **Anurag Mishra**, P. Singh and J. A. Ansari, Compact shorted microstrip patch antenna for dualband operation, **Progress in Electromagnetic Research C, 9, 171-182, 2009.**
15. J. A. Ansari, N. P. Yadav and **Anurag Mishra**, Compact half U-slot loaded shorted rectangular patch antenna for broadband operation, **Progress in Electromagnetic Research M, 9, 215-226, 2009.**
16. J. A. Ansari, S. K. Dubey, **Anurag Mishra** and B. R. Vishvakarma, Analysis of half E-shaped patch for wide band application, **Microwave and Optical Technology Letter, 50, 1576-1580, 2009.**
17. J. A. Ansari, **Anurag Mishra** and Kamakshi, Analysis of U-shaped slot loaded circular disk patch antenna for dualband operation, **International Journal of Electrical Engineering and Embedded Systems, 3, 73-77, 2011.**

18. J. A. Ansari, **Anurag Mishra** A. Singh, Analysis of L-strip fed circular disk patch antenna for dual band operation, **International Academy of Physical Sciences**, **15,399-406, 2011.**
19. J. A. Ansari, N. P. Yadav and **Anurag Mishra**, Analysis of broadband operation of disk patch antenna with parasitic elements in single and two layer structures, **International Journal of Microwave and Optical Technology**, **51, 40-147, 2010.**
20. J. A. Ansari, Kamakshi, **Anurag Mishra** and N. P. Yadav, Analysis of L-strip fed U-slot loaded rectangular patch antenna for wideband application, **International Journal of Computing and Application**, **6, 27-31, 2011.**
21. J. A. Ansari, N. P. Yadav and **Anurag Mishra**, Broadband Rectangular Microstrip Antenna Loaded with Double U-Shaped Slot, **International Journal of Microwave and Optical Technology**, **6, 185-190, 2011.**
22. J. A. Ansari, Kamakshi, **Anurag Mishra** and R. B. Ram, "Shorting pin loaded S-shaped patch antenna for multi-band operation," International academy of physical sciences, Vol.15, pp.289-296, 2011.
23. J. A. Ansari, Kamakshi and **Anurag Mishra**, Analysis of dual inverted c-slot patch antenna for limited space application, **International journal of proceeding of National Academy of Science, India Section, Physical Science**, Vol.83,pp175-180,2013.
24. Ram Kripal and **Anurag Mishra**, Estimation of ground state wave function and nature of bonding of paramagnetic ion in vanadyl doped single crystals, **Chemical Physics Letters**, Vol. **478, pp. 307-309, 2009.**

Communicated for Publication In Peer Reviewed International Journals

1. J. A. Ansari, **Anurag Mishra**, Ashish Singh and Kamakshi, Analysis of L-strip fed symmetrical notch loaded semicircular disk patch antenna for dualband operations, Communicated for Publication.
2. **Anurag Mishra**, J. A. Ansari, Ashish Singh and Kamakshi, Compact shorting pin loaded L shaped semicircular disk patch antenna for dualband operation, Communicated for Publication.
3. Ram Kripal and **Anurag Mishra**, Estimation of ground state wave function and nature of bonding of paramagnetic ion in vanadyl doped single crystals, Communicated for Publication.

List of Papers Published in Pier Reviewed International Conferences

1. Inset fed rectangular microstrip patch antenna with parasitic Element, Ashish Singh, J. A. Ansari, **Anurag Mishra**, Mohd. Anesh **IEEE, International Conference on Communications, Devices and Intelligent Systems (CODIS), Jadavpur University, pp.549-551, 28-29 dec.2012.**

2. Analysis of planar monopole antenna for 4.2/6.8 GHz dual band, Ashish Singh, J. A. Ansari,, Kamakshi, and Anurag Mishra, Mohd. Anessh, **Review of Business and Technology Research Vol.5, no.1, , pp.196-201.GBU, NOIDA, 2012**
3. Analysis of L-strip feed slot loaded dualband microstrip patch antenna, J. A. Ansari, Ashish Singh, Kamakshi, Anurag Mishra, ICCCT,MNNIT Allahabad, pp.511-517 Oct. 2011.(published in IEEE explore).
4. Analysis of Ultra-Wideband Patch Antenna for S, C & X Band Applications, J. A. Ansari, Kamakshi, Ashish Singh, Anurag Mishra, ICCCT, MNNIT Allahabad, pp. 619, 15-17 Oct .2011.(published in IEEE explore).
5. Analysis of L-strip fed gap coupled compact semi-circular disk patch antenna, J. A. Ansari, Ashish Singh, Kamakshi, and Anurag Mishra, IEEE conference IMPACT-11, University of Aligarh, 22-24 Dec. 2011.
6. Analysis of ring patch antenna for wireless applications, J. A. Ansari, Kamakshi, Ashish Singh, Anurag Mishra, INNOVATIONS and advancement in information and Communication technology, GBTU, 30-31 March, 2012.
7. W-slot loaded patch antenna for dualband operation, Anurag Mishra, S. K. Dubey, J. A. Ansari and B. R. Vishvakarma, ELECTRO-2009, Department of Electronics Engineering, BHU, Varanasi, IEEE Digital Library Explore, 320-323, Dec. 22-24, 2009
8. A broadband U-slot loaded circular disk patch antenna, N. P. Yadav, Anurag Mishra, P. Singh, J. A. Ansari and B.R. Vishvakarma, Department of Electronics Engineering, BHU, Varanasi during Dec. 22-24, 2009, IEEE Digital Library Explore, 317-319, ELECTRO-2009,
9. Analysis of compact C-shape shorted patch antenna for dualband operation, J. A. Ansari, Anurag Mishra, N. P. Yadav, P. Singh and B. R. Vishvakarma, Antenna Testing and measurement Society (ATMS), 150-154, Feb.11-13, 2010.
10. Half U- slot loaded patch antenna for broadband operation, N.P Yadav, J. A. Ansari, P. Singh and Anurag Mishra, Antenna Testing and Measurement Society (ATMS), 36-40, Feb. 11-13, 2010.
11. Analysis of slot loaded disk patch antenna for dualband operation, J. A. Ansari, Anurag Mishra, N. P. Yadav and P. Singh, International Conference on Engineering Innovations, paper No.ICEI2k10-2013, Punjab, Feb.18-20, 2010.
12. Compact half U-slot loaded patch antenna for dualband operation, J. A. Ansari, Anurag Mishra, N. P. Yadav, Kamakshi and A. Singh, International Conference on Communications Computers and Devices, IIT Kharagpur, Dec.10-12, 2010.
13. Analysis of pair of L-shape slot loaded patch antenna for WLAN application, J.A. Ansari, Anurag Mishra, N. P. Yadav, Kamakshi and Ashish Singh, International Conference on Power Control and Embedded Systems, MNNIT Allahabad, 58, 2010.
14. A broadband rectangular microstrip antenna loaded with pair of U-shaped slot, J.A Ansari, N. P. Yadav, Anurag Mishra, Kamakshi and A. Singh, International Conference on Power, Control and Embedded Systems, MNNIT Allahabad, 60, 2010.

15. L- strip proximity fed broadband circular disk patch antenna, J. A. Ansari, N. P. Yadav and **Anurag Mishra**, **International Conference in University of Allahabad, Allahabad, INDIAS, Sept. 20-23, 2010.**
16. Analysis of circular disk stacked square patch antenna for broadband operation, J. A. Ansari, Kamakshi, P. Dubey, N. P. Yadav and **Anurag Mishra**, **International Conference, Maharastra, CSCIT-2010,**
17. Broadband slot loaded microstrip patch antenna, J. A. Ansari, Kamakshi, R. B. Ram, A. Singh, **Anurag Mishra** and N. P. Yadav, **COM0303-1-6, SPRTOS-2011-H.B.T.I.Kanpur.**
18. Analysis of L-strip fed circular disk patch antenna for dualband operation, J.A. Ansari, **Anurag Mishra**, Kamakshi, A. Singh, **13th International Conference of the International Academy of Physical Sciences, June 14-16, 2011.**
19. Analysis of notch loaded half disk patch antenna, J.A Ansari, Ashish Singh, Kamakshi and **Anurag Mishra**, **13th International Conference of the International Academy of Physical Sciences, June 14-16, 2011.**
20. Analysis of dualband rectangular microstrip patch antenna with parasitic element , A. K. Pandey, Ashish Singh, **Anurag Mishra** and Kamakshi, **13th International Conference of the International Academy of Physical Sciences, June 14-16, 2011.**
21. Compact slot loaded half disk patch antenna for dualband operation, J.A. Ansari, **Anurag Mishra**, Kamakshi, A. Singh, **Accepted in Conference and published in IEEE.**
22. Ultrawide band shorted patch antenna for wireless communication, J. A. Ansari, Kamakshi, Ashish Singh, **Anurag Mishra** and Mohammad Aneesh, **International Conference on Power Control and Embedded System, MNNIT Allahabad, 58, 2010.**

List of Papers Published in Pier Reviewed National Conferences/Symposium

23. Analysis of half E-shaped patch for wideband application, J. A. Ansari, S. K. Dubey, **Anurag Mishra**, B. R. Vishvakarma, **Proceedings of APSYM, CUSAT, Cochin, INDIA, 23-26, Dec.29-31, 2008.**
24. Compact microstrip patch antenna for dualband application, J. A. Ansari, **Anurag Mishra** and N. P. Yadav, National conference on Communication and Networking, Punjab, March 6-7, 2009.
25. Circular disk patch antenna in single and two layer structures, J. A. Ansari, P. Singh, N. P. Yadav and **Anurag Mishra**, **National Conference on Communication and Networking, Punjab, March 6-7, 2009.**
26. Analysis of slot loaded circular disk patch antenna for dualband operation, J. A. Ansari, **Anurag Mishra**, N. P. Yadav, Kamakshi and A. Singh, **NSALSN, March 5-7, 2011**
27. Analysis of L-strip fed S-shape rectangular patch antenna, J. A. Ansari, Kamakshi, A. Singh, **Anurag Mishra** and N. P. Yadav, **NSALSN, March 5-7, 2011.**

Work shop/ Short term course/Sdp Organized

1. One week Faculty development program on recent advancement in Software Engineering & Networking Technologies, 11-15 June, 2012, **Gautam Buddha University, Greater Noida.**
2. One year certificate program in computing, 2012-13, **Ishwar Saran Degree College, University of Allahabad, Allahabad.**
3. U.G. C. Sponsored, 3 days workshop on ROBOTICS, 16-18 May 2013, **Ishwar Saran Degree College, University of Allahabad, Allahabad.**
4. Short term course on “**The Role of Basic Sciences in Engineering Education**” Motilal Nehru National Institute of Technology, **Allahabad, 12-16 June 2013**, India
5. One Week Short Term Course on “**3G Wireless Networks, MIMO Systems and Antenna Design**” **July 08-13, 2013**, Department of Electronics & Communication Engineering, Motilal Nehru National Institute of Technology, Allahabad, India

DECLARATION

I hereby declare that the information's given above are true to the best of my knowledge and belief.

Place: Allahabad

Anurag Mishra