

## Curriculum Vitae

### **Dr. Alka Verma**

M. Tech., Ph.D.

**Present Address:** D-16, MNNIT Campus  
Motilal Nehru National Institute of Technology Allahabad  
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**Objective:** I would like to associate with an organization where personal achievements are recognized & where highly professional working environment persists.

### **Area of Specialization:**

- Theoretical and numerical analysis of optical Sensors
- Optical Communication

**Teaching Experience:** 1.5 Years

**Subjects:** Digital Logic design (REC301), Optical Communication, Electronics Engineering (REC101), Digital logic design lab (REC351)

### **Educational Qualifications:**

| <b>Examination Passed</b> | <b>Year of Passing</b> | <b>Institute</b>                      | <b>Board/ University</b>          | <b>Subject/ Discipline/ Specialization</b>                       | <b>Class/% of marks/ grades</b> |
|---------------------------|------------------------|---------------------------------------|-----------------------------------|--|---------------------------------|
| High School               | 2001                   | T J P Arya Kanya Inter College Etawah | U.P.Board, Allahabad              | Hindi, English. Math ,Music Instrumtl, Social science, Science-2 | Second 56.33                    |
| Intermediate              | 2003                   | Govt. Girls Inter College, Etawah     | U.P.Board, Allahabad              | Hindi, English Chemistry, Physics, Math                          | First 61.8                      |
| B.Sc (Math)               | 2006                   | K.K.P.G. college, Etawah              | C.S.J.M. university, Kanpur       | Mathematics, Chemistry, Physics                                  | First 65.33                     |
| M.Sc. (Electronics)       | 2008                   | Institute of Applied Science          | BundelKhand University, Jhansi    | Electronics  | First 73.95                     |
| M. Tech.                  | 2011                   | B.I.E.T., Jhansi                      | G.B.Technical University, Lucknow | Digital Communication  | First 78.50                     |
| Ph. D                     | 2017                   | MNNIT, Allahabad                      | MNNIT, Allahabad                  | Electronics and Communication Engineering                        | First 92.5                      |

## Research Publication:

|                   |                  |    |
|-------------------|------------------|----|
| Research Article: | SCI Journals     | 06 |
|                   | Non-SCI Journals | 01 |
|                   | Conference       | 06 |

## International SCI Journal

1. Sarika Pal, Alka Verma, Y.K. Prajapati, J.P. Saini, “Influence of Black Phosphorous on Performance of Surface Plasmon Resonance biosensor” *Optical and Quantum Electronics*, Vol.49, pp. 403, Dec. 2017. (**Impact factor: 0.987**)
2. Alka Verma, Arun Prakash, Rajeev Tripathi, “Comparative study of Surface Plasmon Resonance Biosensor based on Metamaterial and Graphene” *Journal of Silicon*, 9(3), pp.309-320, 2017, Springer publication. (**Impact factor: 0.860**), 1876-990X (Print) 1876-9918 (Online)
3. Alka Verma, Arun Prakash, Rajeev Tripathi, “Sensitivity improvement of graphene based surface plasmon resonance biosensors with chalcogenide prism” *Optik - International Journal for Light and Electron Optics*, Vol. 127, Issue 4, pp. 1787–1791, 2016, Elsevier Publication. (**Impact factor: 0.83**) 0030-4026
4. Alka Verma, Arun Prakash, Rajeev Tripathi, “Sensitivity enhancement of surface plasmon resonance biosensors using graphene and air gap,” *Journal of Optics Communications*, Vol.357, pp.106-112, 2015, Elsevier Publication. (**Impact factor: 1.54**) 0030-4018
5. Alka Verma, Arun Prakash, Rajeev Tripathi, “Performance analysis of graphene based surface plasmon resonance biosensors for detection of pseudomonas-like bacteria,” *International Journal of Optical and Quantum Electronics*, Vol.47, pp. 1197–1205, 2015, Springer publication. (**Impact factor: 1.05**), 0306-8919
6. D. Sharma, Alka Verma, Y. Prajapati, V. Singh and J.P.Saini, “Forward and Backward wave propagation in multilayer planar waveguide using Metamaterials layer” *International Journal of Optical and Quantum Electronics*, Vol.45, pp. 105–114, 2013, Springer publication. (**Impact factor: 1.05**) 0306-8919
7. Y.Prajapati, Archana.Yadav, A. Verma, V. Singh and J.P.Saini, “Effect of Metamaterial layer on optical surface plasmon resonance Sensor” *International Journal for Light and Electron Optics*, Vol. 124, issue-18, pp.3607-3610, 2013, Elsevier Publication Germany. (**Impact factor: 0.839**) 0030-4026

## Paper Publications in International and National Conferences

1. “Modal Dispersion Characteristics of Different cross sectional Optical Waveguide” by Y.K.Prajapati, Vivek Singh, J.P. Saini and AlkaVerma, International Conference PIER 2010, ISSN: 1559-9450, Cambridge (U.S.A), July 5-8,2010.
2. “Modeling of microstructure optical fiber” ShrishBajpai, Jitu Sharma, AlkaVerma, Y. K. Prajapati, J.P.Saini, International Conference on “Recent Trends in Engineering,

Technology and Management (ICRTETM)”, BIET, Jhansi, 26-27, Feb.2011, (ISBN: 978-93-80697-69-7).

3. “Modal analysis and Characteristics equation of plasma filled Multilayer optical waveguide” Y. K Prajapati, U. K. Yadav, **AlkaVerma**, , Vivek Singh, J.P.Saini, International Conference on innovative science and Engineering Technology (ICSET-2011) organized by V.V.P. Engineering College, Rajkot, India, 08-09, April2011. (ISBN: 978-81-906377-5-6).
4. Y.K. Prajapati, M. Raviteja, Sajal Agarwal, **AlkaVerma**, “Design of Broadband and Polarization-independent Metamaterial Absorber Using N Helix,” 9 th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics – Metamaterials 2015 Oxford, pp. 141-143, ISBN 978-88-941141-0-2 United Kingdom, 7-12 September 2015.
5. Babita Singh, **Alka Verma**, Y. Prajapati, J.P. Saini, and Vivek Singh “Birefringence effect of Elliptical 1-D photonic waveguide,” National Conference on Electronic Materials and Applications(NCEMA-11),10 - 11 June, 2011, Gwalior.
6. **Alka verma**, Y. Prajapati, Vivek Singh and J. P. Saini, “Modal dispersion of 1-D photonic waveguide,” National conference on Electronics, Computers and Communication (NCECC-2010), Gwalior, 06-07 march 2010.

### Professional Activity

- Reviewer of IEEE Sensor Letters
- Reviewer of International journal of Silicon, Springer publication

### Short-term courses/National Workshop/Conference Attended

| S. No. | Title of the Paper Presented                          | Title of Conference / Seminar                      | Organized by  | Type     |
|--------|---|--|---|----------|
| 1      | Film Imprinting Technology                            | National level Paper Presentation -21 October 2008 | Vindhya Institute of Technology & Science, Satna, MP. | National |
| 2      | Advances in Wireless and Optical Networks (AWON-2014) | National Workshop                                  | MNNIT, Allahabad                                      | National |
| 3      | Author Workshop                                       | Workshop   | MNNIT, Allahabad                                      |          |

**Names and complete postal addresses of 3 referees**

|                                 | <b>Referee-1</b>  | <b>Referee-2</b>   | <b>Referee-3</b>   |
|---------------------------------|---|--|--|
| Names & complete postal address | Prof. Rajeev Tripathi<br>Director<br>Motilal Nehru National<br>Institute of Technology,<br>Allahabad-211004 | Dr. Arun Prakash,<br>Assistant Professor,<br>Department of Electronics<br>and Communication<br>Engineering, Motilal Nehru<br>National Institute of<br>Technology, Allahabad-<br>211004 | Prof. J. P. Saini,<br>Director,<br>Netaji Subhas Institute<br>of Technology (NSIT),<br>Delhi |
| Email:                          | rt@mnnit.ac.in  | arun@mnnit.ac.in   | jpsaini.biet@gmail.com   |
| Mobile Ph:                      | +91-9415014473  | +91-9794008282   | +91-9415011199   |

Date: March 27, 2018

Place: Allahabad

(Alka Verma)