

## MANOJ KUMAR FALASWAL

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### EMPLOYMENT HISTORY

January, 2018 - Present : Govt. Engineering College, Ajmer  
Assistant professor  
August, 2017 - December, 2017 : Indian Institute of Information and Technology, Kota  
(Mentored by MNIT, Jaipur)  
Assistant professor

### EDUCATIONAL QUALIFICATIONS

Course	Specialization	Board / University	Year of Passing	GPA/Marks Obtained
M.Tech.	Optoelectronics and Optical Communication	Indian Institute of Technology, Delhi	2016	8.3/10
B.Tech.	Electronics and Communication Engineering	Rajasthan Technical University, Kota	2013	73%
12 <sup>th</sup>	Physics, Chemistry, Mathematics	Board of Secondary Education, Rajasthan	2008	86.62%
10 <sup>th</sup>	Math, Science, English, Social Science, Hindi, Sanskrit	Board of Secondary Education, Rajasthan	2006	88.83%

### SCHOLASTIC ACHIEVEMENTS

- **GATE-2014** : Secured **99.41** percentile in **GATE(EC)-2014** amongst **2,16,367** candidates

### IIT DELHI THESIS

**Title - LSPR Based Fiber Optic Sensors**

**Supervisor -** Dr. Anuj Dhawan, Department of Electrical Engineering, IIT Delhi

**Description -**

- **Numerical Modelling of Optical Fiber Structure** having **Plasmonic Nanostructures** on tips or surface
- Employing **Finite Difference Time Domain (FDTD)** and **Rigorous Coupled Wave Analysis (RCWA)** Methods for modelling fiber optic sensors

- Effect of **Refractive Index** on light transmitted or reflected from these **nanostructure** is studied

## INDUSTRIAL TRAINING

**Objective:** Working of Networks Function, Idea Cellular Ltd., Indore (June, 2012 - July, 2012)  
**Description:** Studied **GSM System architecture** and Configuration of **BTS**  
 Worked on **Ericsson RBS 6201 BTS** with 2/3/2 and 2/3/3 configuration  
**Achievement:** Optimization of Network configuration to reduce power consumption and increase capacity

## TECHNICAL PROJECTS UNDERTAKEN

**Title: Multi-Band Double U-Slots Patch Antenna for Wi-MAX Mobile Applications** (April,2012-April,2013)

**Description:**

- **Designed and simulated** a multi-band compact micro-strip patch antenna using **CST Microwave Studio Software**
- **Return loss and Directivity** at center frequency 2.7 GHz, 3.2 GHz, 3.7 GHz, 4.8GHz and 5.3 GHz was achieved in order of -25dB and 7.10dB respectively, to be used in **Wi-MAX** technology

**Title: Simulation and Hardware implementation of QPSK modulator** (January, 2015 - April, 2015)

**Description:** Simulated in OrCAD PSpice and Implemented using IC LF-398 and 741 Op-Amp

**Title: Simulation of 50kW Smart Grid Solar Network in MATLAB** (January, 2015 - April, 2015)

**Description:** Simulated in **Simulink** and integrated with **Battery Charge Controller** and **Two-way Meter**

## PRINCIPAL SUBJECTS / COURSE WORK

B.Tech: Electronic Devices & Circuits, Circuit Analysis & Synthesis, Electronic Measurements & Instrumentation, Analog Electronics, Digital Electronics, Electromagnetic Field Theory, Random Variables & Stochastic Processes, Signals & Systems, Telecommunication Engg., Analog Communication, Digital Communication, Control Systems, Microprocessor and Microcontroller, Antenna & Wave Propagation, Digital Signal Processing, Wireless Communication, IC Technology, VLSI Design, Object Oriented Programming, Data Structure and Algorithms.

M.Tech: Optical Communication Systems, Digital Communication And Information Systems, Broadband Communication & information Systems, Instrument Design And Simulations, Fiber Optics And Optical Communications Lab, Fiber Optics, Optical Electronics, Semiconductor Optoelectronics, Optics And Lasers, Guided Wave Optical Components & Devices, Computer Programming And Its Application, Photonic Switching and Networking, Micro and Nano photonics.

## TEACHING ASSISTANT (TA) JOB (JULY-2015 APRIL-2016)

- Prepared and evaluated tutorials, assignments and problem sheets *and Weekly tutorial class*

## AREAS OF INTEREST

- ❖ Research and Development in Optoelectronics
- ❖ Fabrication and Characterization of Optoelectronic Devices
- ❖ Designing LSPR based fiber optic sensor, SERS based biosensors

- ❖ Teaching Optical communication, Fiber optics, Electronic Devices & Circuits, Circuit Analysis & Synthesis, Analog and Digital Communication, Analog and Digital Electronics, Electromagnetic Field Theory, Control system

## COMPUTER SKILLS

- ❖ Programming Language : C, C++, Data Structure
- ❖ Operating Systems : Windows 7, 8, XP, Ubuntu
- ❖ Software : Matlab, OrCAD, PSpice, Lumerical, RSoft CAD, MS Office, Optism

## POSITIONS OF RESPONSIBILITY

- **Coordinator of Information Committee in ANUKRITI'12** (Apr, 2012 - Apr, 2012) : (College Annual Techfest)
- **Coordinator of Sizzlers Committee in ANUKRITI'13** (Apr, 2013 - Apr, 2013) : (College Annual Techfest)

## LANGUAGE PROFICIENCY

- English - Reading, Writing, Speaking
- Hindi - Reading, Writing, Speaking

## EXTRA CURRICULAR ACTIVITIES

### Participation:

- Participated in One day **Workshop on Manual Robotics** with **WORKSHOP INDIA** (March 2010)
- Participated in Two days **Workshop on Embedded System & Matlab** in LUMENIRE'11

## OTHER INTERESTS

- Playing: Cricket and Badminton, Watching movies, Listening to music, Yoga and Travelling

## REFERENCES

1. **Dr. Anuj Dhawan**  
Assistant professor, Department of Electrical Engineering, IIT Delhi  
[adhawan@ee.iitd.ac.in](mailto:adhawan@ee.iitd.ac.in)
2. **Dr. (Mrs.) Devi Chadha**  
Professor Emeritus, Department of Electrical Engineering, IIT Delhi  
[chadha@ee.iitd.ac.in](mailto:chadha@ee.iitd.ac.in)