

## CV

**Name in Full:** Sanjay Kumar Soni  
**Date of Birth:** 11/02/1975  
**Place of Birth:** Padrauna, Dst- Kushinagar (UP)  
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**Married:** Yes  
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**Educational Qualification:**

Degree/Examination	University/Institution	Year	Discipline
Ph.D	IIT Kharagpur	2011	Wireless Communication
M.Tech	IIT Kanpur	2004	Electronics and Communication
B.E	M.M.M.Engg. College, Gorakhpur,	1997	Electronics

### Experience:

University/Organization	Designation	From	To	Total Period	Nature of Work
G.B.Pant Engg. College, Pauri	Associate Professor	2010	Contd		Teaching
IIT Kharagpur	Research Scholar	2007	Contd.	-	Research & Teaching Assistant
G.B.Pant Engg. College, Pauri	Senior Lecturer	2004	2007	3 Years	Teaching and Administrative work
G.B.Pant Engg. College, Pauri	Lecturer	1998	2004	6 Years	Teaching
IIT Kharagpur	Teaching Assistant	2007	Contd.		Tutorial Class and Laboratory

**Teaching Experience:** (Subject Taught)  
**At Undergraduate Level:**

1. Digital Communication, Wireless Communication, Semiconductor Devices and Circuit, Mobile Communication.
2. Electronic Switching, Principle of communication

#### **Ph.D Work: (Brief)**

- (1) *A new reciprocal heuristic diffraction coefficient for lossy dielectric wedge is presented which is applicable for arbitrary positions of transmitter and receiver in a complex channel environment. The prediction obtained using proposed coefficient is compared with those obtained using rigorous Maliuzhinets's solution. The comparison shows significant improvement over available heuristic coefficients. The coefficient is valid for both parallel and perpendicular polarizations. Further, the measurements of the electric field in the vicinity of edge of the building is carried out and the measurement results thus obtained is compared with predictions using proposed coefficient. Ray tracing tool is developed and the proposed coefficient is then applied to characterize the scattering through typical urban scenario in order to demonstrate its applicability.*
- (2) *To study propagation through a building.*

**Area of Interest:** Channel modeling and characterization for Wireless Communication

#### **Publications:**

##### **Journal**

- **S.Soni, A. Bhattacharya, "A new heuristic Diffraction coefficient for modeling of wireless channel," *Progress in Electromagnetic Research (PIER )C*, vol. 12, pp. 125-137, 2010.**
- **Sanjay Soni and Amitabha Bhattacharya, "Novel three dimensional dyadic diffraction coefficient for wireless channel," *Microwave and Optical Technology Letter*, vol. 52, issue 9, pp. 2132-2136, September 2010.**

#### **International Conference**

1. Sanjay Soni, Amitabha Bhattacharya, " Novel Heuristic Diffraction Coefficient for Modeling of Radio Channel," **12th International Symposium on Wireless Personal Multimedia Communication, WPMC-2009, Japan**

2. Sanjay Soni, Amitabha Bhattacharya, "Improved Three Dimensional Dyadic Diffraction Coefficient for Wireless Channel," **12th International Symposium on Wireless Personal Multimedia Communication, WPMC-2009, Japan**
3. Sanjay Soni, Santanu Goswami, Amitabha Bhattacharya, "Rigorous Maliuzhinets Diffraction Coefficient Applied to Hilly Terrain Scanario," **IEEE 2009 International Symposium on Microwave, Antenna, Propagation and EMC Technologies for Wireless Communications, Beijing, China (MAPE 09)**
4. Sanjay Soni, Amitabha Bhattacharya, "Roof-top Modeling of Building for Microcellular Systems Using Double Diffraction Coefficient," **4th IEEE International Conference on Computers & Devices for Communication, Kolkata**
5. **Sanjay Soni, Amitabha Bhattacharya**, "A Deterministic Model for Improved Propagation Prediction in Microcellular Environment," **Accepted in International Conference on Computer and Communication devices (ICCCD 2010), IIT Kharagpur.**
6. **Sanjay Soni, Puspriya Singh Chauhan, Amitabha Bhattacharya**, "A Novel Symmetrical Heuristic Diffraction Coefficient for Urban Microcellular Environments.

**Any Other Information:**

1. Invited talk on "**Propagation Channel Modeling for Wireless Communication**" in short term course on **Recent Advances in RF and Wireless Communication**" from July 1, 2008 to July 13, 2008, IIT Kharagpur.
2. Invited talk on , "**Propagation channel Modelling for Wireless Communication** ," December, 2009.
3. Provided training on **Wireless Insite (Propagation Channel Modeling tool)**
4. **Administrative Responsibility:** Head of Department (EEED, GBPEC): August 2004- April 2005
5. Chief Warden: 2004 to 2007.
6. **Lab Established:** Microwave and Communication Lab