



## School of Basic and Applied Sciences

**Name:** Dr. Deep Singh

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### Academic Profile:

- Ph.D. from Indian Institute of Technology, Roorkee  
Area of research: Cryptography (Algebra).  
Title of the Ph.D. thesis: “A Study of Some Cryptographically Significant Boolean Functions and Their Generalizations”.
- M.Sc. (Mathematics) Hindu College Moradabad, MJP Rohilkhand University, Bareilly.
- Qualified CSIR-NET+JRF with All India Rank– 32 in June-2009 in Mathematical Sciences.
- Qualified NBHM-DAE-JRF (Department of Atomic Energy, Trombay, Bombay) for NBHM Ph.D. fellowship in Mathematics for the year 2009.
- Qualified GATE- Graduate Aptitude Test in Engineering with Mathematics in the year 2009.

### Research Interests:

- Cryptography (Cryptographic Boolean functions and their generalizations).
- Abstract Algebra.
- Discrete Mathematics.

### Selected Publications:

1. Singh D., Bhaintwal M. and Singh B.K.: entitled “Constructions of q-ary functions with good global avalanche characteristics”, International Journal of Computer Mathematics, (**Publisher: Taylor & Francis**), Vol. 92 (2), pp. 266–276, 2015.
2. Singh D., Bhaintwal M. and Singh B.K.: entitled “Some results on q-ary bent functions”, International Journal of Computer Mathematics (**Publisher: Taylor & Francis**) Vol. 90 (9), pp. 1761—1773, 2013.

3. Singh D. and Bhaintwal M.: entitled “On the sum-of-squares modulus indicator of q-ary functions”, In Proc. of the International conference Advances in Computing, Communications and Informatics, ICACCI-2013, DOI:10.1109/ICACCI.2013.6637240 (**Publisher:IEEE Xplore**), pp. 599—603, 2013.
4. Singh D. and Bhaintwal M.: entitled “On second order nonlinearities of two classes of cubic Boolean functions”, In Proc. of the International conference Quality Reliability, Security and Robustness, QSHINE-2013, [Lecture Notes of the Institute for Computer Sciences](#), **Publisher: Springer-Verlag**, Berlin-Heidelberg, Vol. 115, pp. 560–567, 2013.
5. Singh D.: entitled “Construction of highly nonlinear plateaued resilient functions with disjoint spectra, In Proc. of the International conference on Mathematical Modelling and Scientific Computation-ICMMSC-2012, [Communications in Computer and Information Science](#), **Publisher: Springer-Verlag**, Berlin-Heidelberg, Vol. 283, pp. 522–529, 2012.