



## School of Basic and Applied Sciences

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### Academic Profile

- **B.Tech. (Computer Science & Engineering)** with honors, Kurukshetra University, Kurukshetra, Haryana.
- **M.Tech. (Computer Science & Engineering)**, Kurukshetra University, Kurukshetra, Haryana (*Gold medalist*).
- **Ph.D. (Computer Science and Engineering)**, Faculty of Engineering & Technology, I.K. Gujral Punjab Technical University, Punjab. *Title of the Ph.D. thesis: "Enhancing Template Database Security and Performance in a Multimodal Biometric System"*
- **UGC-NET** Qualified for Lectureship, conducted by UGC in the years June 2012, Dec. 2012 and Dec. 2013.
- **Qualified GATE** exams in the years 2006, 2011, 2012, conducted by various IITs with a latest score of 92.9 % tile (2012).
- Teaching experience of more than 13 years of UG and PG classes.
- Reviewer of Journal of Optical Communication De-**Gruyter**, Germany.

### Research Interests

- Biometrics and Pattern Recognition
- Image processing
- Automata Theory
- Advanced Database Systems

### Selected Publications

1. Arvind Selwal, S. K. Gupta (2017): "Low Overhead Octet Indexed Template Security Scheme for Multi-modal Biometric System", Journal of Intelligent & Fuzzy Systems, ISSN 1875-8967 (online), Vol. 32, no. 5, pp. 3325-3337, **Impact factor: 1.26 (SCI Indexed,**

Scopus, ACM digital library etc.) .

2. Arvind Selwal, S.K. Gupta (2016): “Template Security Analysis of Multimodal Biometric frameworks based on Fingerprint and Hand Geometry”, *Perspectives in Science (Elsevier)*, ISSN: 2213-0209, Vol. 8, pp 705-708.
3. Arvind Selwal, Sunil Kumar Gupta (2016) “A Scheme for Template Security at Feature Fusion Level in Multimodal Biometric System”, *Advances in Science & Technology Research Journal*, Polish Academy ICV:100 (**Indexed in Thomson Reuter’s ESCI, IC etc.**), Volume 10, No. 31, pp 23-30.
4. Arvind Selwal, S.K. Gupta, Surender, “A Hybrid Template Security Scheme for Multimodal Biometric System based on Fingerprint and Hand Geometry”, *International Journal of Control Theory and Applications*, (**Scopus indexed**), Vol.10 Number 15, pp147-152.
5. Arvind Selwal, S. K. Gupta (2016): “Fuzzy Analytic Hierarchy Process based Template Data Analysis of Multimodal Biometric Conceptual Designs”, *Computer Procedia (Elsevier Science Direct)*, ISSN: 1877-0509. (**Indexed in Scopus etc., SNIP: 0.7**), Vol. 85 (2016) pp. 899 – 905.
6. Arvind Selwal, S.K. Gupta, Surender (2015) “Performance Analysis of Template Data Security and Protection in Biometric Systems”, *IEEE International Conference RAECS, UIET Punjab University, Chandigarh*, published in *IEEE Xplore digital library* ISBN: 978-1-4673-8253-3, Scopus Indexed, pp 1-7.
7. Arvind Selwal, S. K. Gupta, Surender (2016): “Region Coded Hashing based Template Security Scheme for Multi-biometric System”, in the proceedings of *Int. Arab Conference of Information Technology*, held at Morocco, Dec. 6-8, 2016.
8. Arvind Selwal, Sunil Kumar Gupta (2016), “Biometric System Attacks and Template Security: An overview”, published in the proceedings of “*National Conference on Role of Information Technology in Management & Engineering: Issues & Prospects*” held at MIMIET, Malout, Punjab, pp 51-57.