

# NAVDEEP KANWAL

Off: Room No. 309, Department of Computer Engineering, Punjabi University, Patiala

Permanent Address: House No. 200, Ward No. 11, Ajit Nagar, Malout

Email: navdeepkanwal@pbi.ac.in Off: +91-175-3046337 M: +91-9872839915

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Working as Assistant Professor in Department of Computer Engineering, Punjabi University, Patiala since November 2011.

## EXPERIENCE

- Software Developer in 'Computer Hawks', Chandigarh from June, 2004 to January, 2005.
- Lecturer in Department of Computer Science & Engineering at 'Bhai Gurdas Institute of Engineering & Technology', Sangrur from January, 2005 to June, 2005.
- Lecturer in Department of Computer Science & Engineering at 'Guru Teg Bahadur Khalsa Institute of Engineering & Technology', Chhapiawali from June, 2005 to May, 2011.
- Assistant Professor in Department of Computer Science & Engineering at 'Guru Teg Bahadur Khalsa Institute of Engineering & Technology', Chhapiawali from May, 2011 to Nov, 2011.

## PROFESSIONAL QUALIFICATIONS

- Pursuing **Ph. D.** (*Synopsis defended in 2016*) from IKG PTU, Jalandhar
- **M. Tech.**, CSE from Guru Nanak Dev Engineering College, Ludhiana
- **B. Tech.**, CSE from Guru Teg Bahadur Khalsa Institute of Engineering & Technology, Chhapiawali

## SOFTWARE SKILLS

Programming (C / C++, Visual Basic), Web (PHP, Joomla/Wordpress, Dreamweaver, WAMP), DTP/Designing (Corel Draw, Adobe Photoshop), Tools/Libraries (Matlab, Latex, OpenCV, Image Forensic Tools), Operating System (Windows, debian distributions of Linux)

## SUBJECTS TEACHING (PG / UG)

Computer Graphics, Data Structures, Object Oriented Programming, Digital Image Processing, Software Engineering, Operating System

## RESEARCH AREA

Digital Image Forensics, Multimedia Processing

## PUBLICATIONS / CONFERENCES

International Journal (8+), International Conference (10+), National Conference (4)

## RESEARCH CONTRIBUTION / INDICES

M. Tech. Thesis Supervised:	18
Scopus:	Citation Index (15) h-index (2)
Google Scholar:	Citation Index (45) h-index (3)
ResearchGate.net:	Reads (556) Citation Index (10)

## **MEMBERSHIP OF PROFESSIONAL BODIES / SOCIETIES**

Member of Computer Society of India (CSI)

Member of Internet Society Chapter

Member of the Society of Digital Information and Wireless Communications (SDIWC)

Member of International Association of Engineers

## **FACULTY/PROFESSIONAL DEVELOPMENT PROGRAMS**

- Three day induction cum training program at Punjabi University from 3 January to 5 January, 2012
- Faculty Enablement Program at Infosys Limited from 2 July to 6 July, 2012
- Workshop on Business Intelligence at Chitkara University, Punjab on 28 February 2013
- Participated in Orientation Program at UGC ASC, Pbi. Uni., Patiala from 10 July to 06 July, 2013
- Seminar on Fullbright-Nehru Fellowship Opportunities, at Punjabi University on 5 June, 2015
- Short term course on Vulnerabilities in Cyberspace & Adopting Security Policies at MIMIT, Malout from 20 July to 31 July, 2015
- Short term course on Cyber Threat Detection & Safety at Punjabi University, Patiala from 04 January to 15 January, 2016
- Refresher Course at Punjabi University, Patiala from 23 May to 11 June, 2016

## **EXPERT TALKS IN FDP'S**

- Expert talk on “Emerging Trends in Computer Science & IT” at MIMIT, Malout on 21 June, 2012
- Expert talk on “Computing Pattern Recognition” at MIMIT, Malout on 22 June, 2012
- Delivered an Expert Talk on “Image Processing and its Applications (Image Forensics)”, at LLRIET, Moga on 10 June 2015
- Delivered a Talk on “Digital Image Forensics and its Applications”, at Guru Nanak Dev Engineering College, Ludhiana on 1 Nov. 2017

## **MAJOR PUBLICATIONS**

- [1] N. Kanwal and Pooja Jain, “Image Steganography in RGB Color Components using Improved LSB Technique Image Pattern Compression using Weighted Principal Components Algorithm,” *Indian J. Sci. Technol.*, vol. 9, no. 45, 2016.
- [2] G. Kaur and N. Kanwal, “A comparative review of various approaches for feature extraction in face recognition,” in *IEEE 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom)*, 2016, pp. 2705–2710.
- [3] D. Singh and N. Kanwal, “Dynamic video steganography using LBP on CIELAB based K-means clustering,” in *IEEE 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom)*, 2016, pp. 2684–2689.
- [4] A. Kaur, A. Girdhar, and N. Kanwal, “Region of Interest Based Contrast Enhancement Techniques for CT Images,” in *IEEE 2016 Second International Conference on Computational Intelligence &*

*Communication Technology (CICT)*, 2016.

- [5] D. S. Navdeep Kanwal, "An Approach to Steganography using Local Binary Pattern on CIELAB based K-Means Clustering," in *IJCA Proceedings on International Conference on Computer Technology*, 2015, vol. 5, pp. 35–40.
- [6] G. Nandan and N. Kanwal, "Image Resolution Enhancement Methods for Different Applications," *Int. J. Inf. Comput. Technol. ISSN*, pp. 974–2239, 2014.
- [7] S. Jain and N. Kanwal, "Overview on image registration" in *IEEE International Conference on Medical Imaging, m-Health and Emerging Communication Systems, MedCom 2014*, 2014, pp. 376–381.
- [8] K. Kaur, N. Kanwal, and J. S. Bhullar, "A Technique for Enhancement of Gray Image using Local Gamma Correction," *Int. J. Comput. Appl.*, vol. 105, no. 5, 2014.
- [9] A. Singh and N. Kanwal, "Spatial Image Enhancement of Color Images Using Texture Analysis," *Int. J. Appl. or Innov. Eng. Manag.*, vol. 2, no. 6, 2013.
- [10] S. Narang, M. Lal, and N. Kanwal, "A Comparative Survey Of Various Segmentation Techniques," *Int. J. Innov. Res. Dev. ISSN 2278--0211*, vol. 2, no. 5, 2013.
- [11] E. J. Singh and N. Kanwal, "Survey of facial marks detection techniques," in *International Journal of Engineering Research and Technology*, 2013, vol. 2, no. 5 (May-2013).
- [12] A. Singh and N. Kanwal, "Qualitative comparative study of various contrast enhancement techniques," *Int. J. Comput. Sci. Eng. Inf. Technol. Res.*, vol. 1, no. 3, pp. 19–24, 2013.
- [13] N. Kanwal, A. Girdhar, and S. Gupta, "Region based adaptive contrast enhancement of medical X-ray images," in *IEEE 5th International Conference on Bioinformatics and Biomedical Engineering, Wuhan, China, iCBBE 2011*, 2011.
- [14] N. Bhalla, N. Kanwal, A. Girdhar, and P. K. Mann, "An approach for contrast enhancement of color images with the help of adaptive region growing segmentation," *Int J Comput. Int Manag*, vol. 19, no. 3, pp. 28–33, 2011.

### **PROJECTS UNDERTAKEN**

1. Automation of Payroll and Inventory System in Central Govt. Undertaking Suraj Textile Mills, Malout, Punjab in year 2004  
Technologies: Visual Basic, MS Access

### **ADMINISTRATIVE EXPERIENCES**

1. Member, Board of Studies, Department of Computer Engineering, Punjabi University, Patiala.
2. Member, ACD, Department of Computer Engineering, Punjabi University, Patiala, 2017-2018.
3. Worked as Coordinator, M. Tech. (Part-Time) at Department of Computer Engineering, Punjabi University, Patiala, 2014-2016.
4. Incharge, Research and Development at Guru Teg Bahadur Khalsa Institute of Engineering and Technology, Chhapiawali, Malout, 2011.

5. Coordinator (Website), Guru Teg Bahadur Khalsa Institute of Engineering and Technology, Chhapiawali, Malout, 2009-2011.
6. Co-coordinator, Admissions, Guru Teg Bahadur Khalsa Institute of Engineering and Technology, Chhapiawali, Malout, 2009-2011.
7. Incharge (Press and Advertisements), Guru Teg Bahadur Khalsa Institute of Engineering and Technology, Chhapiawali, Malout, 2008-2011.
8. Incharge, Microsoft Licensing (Campus Agreement) for GTB Khalsa Group of Institutes, Chhapiawali, Malout, 2009-2011.
9. Co-coordinator, Training and Placement, Department of Computer Engineering, Punjabi University, Patiala, 2005-2008.

### **AREAS OF INTEREST, CURRENT RESEARCH**

Digital Image Forensics, Single/Multi Image Forgery Detection, Image Source Object Identification



(Navdeep Kanwal)