



Name: Dr. Tuhin Utsab Paul

Designation: Associate Professor

Qualifications: M.Sc, M.Tech, Ph.D (Tech)

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Biographical Sketch

Dr. Tuhin Utsab Paul is an associate professor in the Department of Computer Science under the Faculty of Science at St. Xavier's University, Kolkata. He is associated with the University since 2018. He focuses on the improvement of students' experiences and learning with Information and Computer Tools in the application of technology in various areas such as IoT, Data analytics etc.

He completed his M.Sc in Computer and Information System in 2010 and M.Tech in Computer science and Engineering in 2012 from the University of Calcutta. He was awarded Ph.D degree for his Doctoral studies in Computer Science and Engineering from the University of Calcutta in 2020. He is UGC-NET qualified as Lecturer in Computer Science and Application in June, 2012. He is having an experience of working as assistant professor for more than eight years since 2012. His area of research includes Image processing, Algorithms, Data base systems and IOT.

Areas of Specialisation and Research

His areas of specialisation are Algorithms, Data base systems, IOT, E-commerce, Image Processing. And the research interest lies on the field of Image Processing, Database Systems, IOT.

Teaching Experience

- Associate Professor – Department of Computer Science, St. Xavier's University. From August 2022.
- Assistant Professor, Department of IT/Computer Application, St. Xavier's University. From July 2018 – July 2022.
- Assistant Professor, Department of Computer Science and Engineering, Amity University. From September 2016 – June 2018.

- Assistant Professor, Department of Electronics and Communication Engineering, Institute of Engineering and Management. From September 2012 – August 2016.

Administrative Responsibility

- Assistant Registrar – November 2020 – August 2022
- Faculty representative for placement in Department of Commerce and Management – Since August 2019 – September 2020
- IQAC – NAAC Working Committee member – Since August 2019
- Website Monitoring Committee Coordinator – Since March 2020
- IT Team member – Since May 2020

Publications

Chapter/Article published in Books

- Tuhin Utsab Paul and Samir Kumar Bandhyopadhyay. 2017. **An Analysis of Brain MR Image Segmentation**. In: Siddharth Bhattacharya et.al. eds. **Hybrid Intelligent Techniques for Pattern Analysis and Understanding**. London, CRC Press, Taylor & Francis, Chapter no. – 11, Pg(s) - 247 – 276
- Tuhin Utsab Paul and Aninda Ghosh. 2020. **Vision–X IOT Based Smart Navigation System For Visually Challenged People**. In: Anirban Mitra et.al. eds. **Medical Internet of Things: Techniques, Practices, and Applications**. London, CRC Press, Taylor & Francis, Chapter no. – 12, Pg(s) – 175-198
- Tuhin Utsab Paul and Aninda Ghosh. 2021. **Smart Support System for Navigation of Visually Challenged Person Using IOT**. In: Priyadarshi Nanda et. al. eds. **Data Engineering for Smart Systems**. Springer, Singapore, Chapter no. – 3, Pg(s) – 27 – 36

Article published in Peer-reviewed journals

- **A New Discrete Wavelet Transform Algorithm Based on Frame Theory and Its Application to Brain MRI Segmentation** - Tuhin Utsab Paul, Sayantan Chakraborty, Dr. Samir K. Bandhyopadhyay, Journal of Medical Imaging and Health Informatics Vol -9 No.- 2,Pages - 223-234 [**Science Citation Index by Thomson-Reuters**]
- **Brain Tumor Texture Analysis – Using Wavelets and Fractals** - Tuhin Utsab Paul, Aninda Ghosh, Samir Kumar Bandhyopadhyay - International Journal of Medical Imaging. Vol. 4 (4), 2016, Pp. 23-31
- **Technologies in Texture Analysis – A Review** – Tuhin Utsab Paul, Pranavesh Banerjee, Annanya Mukherjee, Samir Kumar Bandhyopadhyay – British Journal of Applied Science and Technology Volume 13 Issue 6 Pages 1- 21
- **A new insight into Wavelet Transforms using the concepts of Frame Theory** - Tuhin Utsab Paul,

Sayantana Chakraborty, Saikat Mukhopadhyay, Dr. Samir K. Bandyopadhyay – *IJCT* Volume 12 Number 9 Page(s): 3860 – 3874

- **Segmentation of Brain Tumour from MRI image – Analysis of K-means and DBSCAN Clustering** - Tuhin Utsab Paul, Samir Kumar Bandyopadhyay - *IJRES Volume 1 Issue 1* May 2013 Page(s): 48 – 57
- **Automatic Segmentation of Brain Tumour from Multiple Images of Brain MRI** - Tuhin Utsab Paul, Samir Kumar Bandyopadhyay - *IJAEM Volume 2 Issue 1* January 2013 Page(s): 240 – 248
- **A Comparative Study of Retinal Image Processing Technique for Blood Vessel Segmentation** – Shreyashi Hazra, Atashi Patra, Tuhin Utsab Paul – *International Journal of Science and Research (IJSR)* Volume 5 Issue 4 April 2013 Page(s) : 652 – 664
- **Exudates Detection of Retinal Images using Otsu’s Thresholding and Kirsch’s Templates** - Shreyashi Hazra, Atashi Patra, Tuhin Utsab Paul – *International Journal of Computer Science and Network (IJCSN)* Volume 5 Issue 4 Page(s) : 615 - 621
- **Segmentation of Brain Tumor from Brain MRI Images Reintroducing K–Means with advanced Dual Localization Method** - Tuhin Utsab Paul, Samir Kumar Bandyopadhyay - *IJERA Volume 2 Issue 3* May 2012 Page(s): 226 – 231
- **Segmentation of Brain MRI Image–A Review** – Samir Kumar Bandyopadhyay, Tuhin Utsab Paul – *IJARCSSE Volume 2 Issue 3* March 2012 Page(s): 409 – 413
- **Image Compression using Approximate Matching and Run Length** - Samir Kumar Bandyopadhyay, Tuhin Utsab Paul, Avishek Raychoudhury - *International Journal of Advanced Computer Science and Applications Volume 2 Issue 6* June 2011 Page(s): 117 – 121 [Science Citation Index by Thomson-Reuters][Scopus Indexed]
- **A Robust Audio Steganographic Technique based on Phase Shifting and Psycho – acoustic Persistence of Human Hearing Ability** - Prof. Samir Kumar Bandyopadhyay, Tuhin Utsab Paul, Avishek Raychoudhury - *International Journal of Computing and Corporate Research vol-1-issue-1-july-2011*
- **Genetic Algorithm Based Substitution Technique of Image Steganography.** - Samir Kumar Bandyopadhyay, Tuhin Utsab Paul and Avishek Raychoudhury, *Journal of Global Research in Computer Science Research Paper. Volume 1, No. 5, December 2010.* Page(s): 62 – 69
- **A Novel Steganographic Technique based on 3D-DCT Approach** - Tuhin Utsab Paul, Avishek Raychoudhury, Prof. S. K. Bandyopadhyay - *Computer and Information Science by Canadian Center of Science and Education Vol. 3 No. 4* November 2010 Page(s): 229 – 235
- **Invisible Digital Watermarking Through Encryption** - Avishek Raychoudhury, Tuhin Utsab Paul and Samir Kumar Bandyopadhyay. *International Journal of Computer Applications Vol. 4(No. 8)* Page(s):18–20, August 2010. Published By Foundation of Computer Science.
- **An Encryption Based Technique for Invisible Digital Watermarking** - Samir Kumar Bandyopadhyay Tuhin Utsab Paul Avishek Raychoudhury. *IJCA,Special Issue on CASCT (No. 1)* Page(s):24–28, 2010. Published By Foundation of Computer Science.

Article published in International Conference

- **A Palette Based Approach for Invisible Digital Watermarking using the Concept of Run-length** - Tuhin Utsab Paul, Avishek Raychoudhury, Prof. S. K. Bandyopadhyay – *IEEE International Conference on Computational Intelligence and Communication Networks (CICN-2010)* at Bhopal, India, 26-28 Nov. 2010 Page(s): 83 - 87

- **A Reference Image Approach for Invisible Digital Steganography using the Concept of Run-length and Encryption Technique** – Tuhin Utsab Paul, Avishek Raychoudhury, Indra Kanta Maitra - *98th Indian Science Congress*, Chennai, Section VIII Information and Communication Science and Technology, Page(s): 121 – 122 (Abstract only)
- **Automatic Segmentation of Brain Tumour using Multiple Brain MRI Images** - Tuhin Utsab Paul, *100th Indian Science Congress*, Kolkata, Section VIII Information and Communication Science and Technology
- **Smart support system for navigation of visually challenged person using IOT** - Tuhin Utsab Paul, Aninda Ghosh – *Smart Systems: Innovations in Computing (By Springer)* at Jaipur, India, 22-23 Jan. 2021