

Faculty Performa

	Dr.	First	Manish	Last	Kumar	Photograph
Title		Name		Name		
Designation		Assistant Professor				
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Educational Qualifications

Educational Quantications						
Degree	Institution	Subjects/Topics				
Ph. D. (2019)	University of Delhi	Design and development of encryption models based on dynamic key driven shuffling methods				
M. Tech (2013)	USICT, GGSIPU	Information Technology				
B. Tech (2011)	USICT, GGSIPU	Information Technology				
NET	UGC	Computer Science and Applications				

Career Profile

- Asst. Professor, Cluster Innovation Centre (CIC), University of Delhi, Delhi 110007 (from Jan' 2023 continuing)
- Asst. Professor, School of Computer and Information Sciences (SOCIS), Indira Gandhi National Open University, Maidan Garhi, New Delhi (Nov' 2021 to Jan' 2023).
- Asst. Professor, Department of Computer Science, SoET, Central University of Haryana, Mahendergarh, Haryana (Feb' 2020 to Nov, 2021).
- Project Researcher, Samarth eGov, University of Delhi (May' 19 to Feb' 2020).

• Administrative Assignments

Areas of Interest / Specialization

- Machine Learning
- Cyber Physical Systems
- Information Security
- Internet of Things

Subjects Taught

(Teaching the following courses at B.Tech. level since 2020).

- Data Structures
- Information Security
- Design and Analysis of Algorithms
- Embedded Systems
- Internet and Web Technology
- Java

Research Guidance

Publications Profile

1. Rajat Budhiraja, Manish Kumar, Mrinal .K. Das, Anil Singh Bafila, and Sanjeev Singh A reservoir computing approach

for forecasting and regenerating both dynamical and time delay controlled financial system behaviour PLoS ONE 16 1-24 2021 e0246737

- 2. **Manish Kumar**, Sunil Kumar, Rajat Budhiraja M.K. Das and Sanjeev Singh, Securing images with a diffusion mechanism based on Fractional Brownian Motion, Journal of Information Security and Applications 40 134-144 2018 2214-2126
- 3. Sunil Kumar, **Manish Kumar**, Rajat Budhiraja, M. K. Das and Sanjeev Singh A secured cryptographic model using intertwining logistic map Procedia Computer Science 143 804-811 2018 1877-0509
- 4. Sunil Kumar, Manish Kumar, Rajat Budhiraja, M. K. Das and Sanjeev Singh A cryptographic model for better information security Journal of Information Security and Applications 43 123-138 2018 2214-2126
- 5. **Manish Kumar**, Sunil Kumar, Rajat Budhiraja, M.K. Das and Sanjeev Singh A cryptographic model based on logistic map and a 3-D matrix Journal of Information Security and Applications 32 47-58 2016 2214-2126
- 6. U. Shukla, G. J. Saxena, **M. Kumar**, A. S. Bafila, A. Pundir and S. Singh An Improved Decision Support System for Identification of Abnormal EEG Signals Using a 1D Convolutional Neural Network and Savitzky-Golay Filtering IEEE ACCESS 9 163492- 163503 2021 2169-3536
- 7. A. Pundir, S. Singh, **M. Kumar**, A. Bafila and G. J. Saxena Cyber-Physical Systems Enabled Transport Networks in Smart Cities: Challenges and Enabling Technologies of the New Mobility Era IEEE ACCESS 10 16350- 16364 2022 2169-3536
- 8. Mukesh Rawat, A. Bafila, S. Kumar, **M. Kumar**, S. Singh, A. Pundir; A new encryption model for multimedia content using two dimensional Brownian motion and coupled map lattice, Multimedia Tools and Applications 1573-7721, 2023

Book Chapters:

Nitisha Aggarwal, Unmesh Shukla, Geetika Jain Saxena, **Manish Kumar**, Anil Singh Bafila, Sanjeev Singh & Amit Pundir, An Improved Technique for Risk Prediction of Polycystic Ovary Syndrome (PCOS) Using Feature Selection and Machine Learning. In: Shukla, A., Murthy, B.K., Hasteer, N., Van Belle, JP. (eds) Computational Intelligence. Lecture Notes in Electrical Engineering, vol 968. Springer, Singapore. https://doi.org/10.1007/978-981-19-7346-8_51

Units/ Chapters in IGNOU MCA course (eGyankosh)

- 1. Artificial Intelligence and machine Learning, Print, eSLM, 2021-2022
- 2. Cloud Computing and IoT, Print/ eSLM, 2021-2022
- 3. Data Communication and Computer Networks, Print/ eSLM, 2021-2022
- 4. Computer Networks and Data Minig (Lab), Print/eSLM, 2021-2022

Conference Organization/ Presentations (in the last three years)

Conference Papers (Co-Authored)

1 R. Budhiraja, M. Kumar, M. K. Das, A. S. Bafila and S. Singh, "LIED: A Lightweight and Ensemble learning approach for fake face Detection," 2023 IEEE 3rd International Conference on Technology, Engineering, Management for Societal

impact using Marketing, Entrepreneurship and Talent (TEMSMET), Mysuru, India, 2023, pp. 1-6, doi: 10.1109/TEMSMET56707.2023.10149972.

- 2. **Manish Kumar**, Sunil Kumar, Rajat Budhiraja, M. K. Das and Sanjeev Singh Ligthweight Data Security Model for IoT Applications: A Dynamic Key Approach IEEE, USTC International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData) Chengdu, China DEC-2016
- 3. **Manish Kumar**, Sunil Kumar, Rajat Budhiraja, M. K. Das and Sanjeev Singh Chaotic Dynamical System Based Image Encryption Model IEEE IEEE International Conference on Information and Communication Technology Convergence (ICTC) Jeju Island, Korea OCT, 2017
- 4. Sunil Kumar, **Manish Kumar**, Rajat Budhiraja, M. K. Das and Sanjeev Singh Improved Cryptographic Model For Better Information Security IEEE The 8th IEEE International Conference on ICT Convergence Jeju Island, Korea OCT, 2017
- 5. Sunil Kumar, **Manish Kumar**, Rajat Budhiraja, M. K. Das and Sanjeev Singh Investigation of Coupled Map Lattice as a Diffusion Model for Enhanced Image Security IEEE TENCON 2018 2018 IEEE Region 10 Conference Jeju Island, Korea OCT, 2018
- 6. **Manish Kumar**, Sunil Kumar, Rajat Budhiraja, M. K. Das and Sanjeev Singh Performance Evaluation of a New Shuffling Cipher Model with Most Used Chaotic Dynamical Systems IEEE TENCON 2018 2018 IEEE Region 10 Conference Jeju Island, Korea OCT, 2018
- 7. R. Budhiraja, M. Kumar, M. K. Das, A. S. Bafila and S. Singh MeDiFakeD: Medical Deepfake Detection using Convolutional Reservoir Networks IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT) New Delhi, India SEPT. 2022

Conference and workshops:

Research Projects (Major Grants/Research Collaboration)

Awards and Distinctions

Recognition awards and Honors:

Association With Professional Bodies

Other Activities

Resource Person in Conference/ Seminar/ Workshop/ Radio Sessions

- 1. Talk on IT in Higher Education, FDP, SGND Khalsa College, Delhi University, Jul. 2023
- 2. Talk on role of deep learning models in Speech Processing, ATAL- FDP, CU Haryana Jan. 2023
- 3. Gyan Vani interactive radio session Jul, 2022

4. Gyan Vani interactive radio session5. Gyan Vani interactive radio sessionJun, 2022Jan, 2022

Training Programs Attended

- 1. Short Term Program on NEP-2020: Design and Development of Audio/ Video Programmes STRIDE- EMPC- IGNOU.
- 2. Orientation Programme, Induction cum orientation program for newly recruited faculty of IGNOUSTRIDE IGNOU.
- 3. Orientation Programme , Induction/Orientation Programme PMMMNMTTTLC Ramanujan College, University of Delhi.
- 4. Faculty Development Programmes, Development and Delivery of MOOCs and E-Content MHRD Under PMMMNMTT scheme CU Haryana and Deshbandhu College, University of Delhi.
- 5. Faculty Development Programmes, Entrepreneurship, Incubation and Innovation MHRD Under PMMMNMTT scheme Ramanujan College, University of Delhi.
- 6. Faculty Development Programme, Developing new perspective in the era of AI/ ML Meerut Institute of Technology, Meerut.

Manish Kumar Signature of Faculty Member

(Updated in August 2023)