

- [33]. Z. W. Geem, J. H. Kim and G. V. Loganathan, “A new heuristic optimization algorithm – Harmony Search,” *Simulation*, Vol. 76, no. 2, pp. 60 – 68, 2001.
- [34]. M. Mahdavi, M. Fesanghary, and E. Damangir, “An improved harmony search algorithm for solving optimization problems,” *Appl Math Comput*, Vol. 188, no. 2, pp. 1567–1579, 2007.
- [35]. Chiang, R. Jean-Jumeau, “Optimal network reconfigurations in distribution systems. Part I. A new formulation and a solution methodology,” *IEEE Transactions on Power Delivery*, Vol. 5, pp. 1902 – 1909, 1990.
- [36]. T. T. Nguyen, A. V. Truong, “Distribution network reconfiguration for power loss minimization and voltage profile improvement using Cuckoo Search Algorithm,” *International Journal of Electrical Power Energy Systems*, Vol. 68, pp. 233 – 42, 2015.



Pavan Khetrapal obtained B. E. degree and M. Tech degree from Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal and Guru Nanak Dev Government Engineering College, Ludhiana in year 2001 and 2009 respectively. He received PhD degree from NIT, Bhopal (an Institute of National Importance) in year 2017 in the field of Benchmarking of Electricity Distribution Utilities. He has about two years of industrial experience and eighteen years of the academic experience of teaching at undergraduate and postgraduate levels. Presently, he is working as an

Associate Professor in the department of Electrical Engineering at Institute of Technology, Nirma University, Ahmedabad. His research interest includes performance benchmarking of electricity utilities and electricity market regulation schemes.