Curriculum Vitae

1.Personal Details		
i.	Name	Dr. H. K. Verma
ii.	Father's Name	Late Shri S. K. Verma
iii.	Date of Birth	01-07-1963
iv.	Address for communication	EED, SGSITS, Indore 452003
v.	Permanent Address	SGSITS, Indore 452003
vi.	Contact Details	9827730610

2. Educational Qualification					
No.	**Degree**	**Year**	**University/ Institute**	**Division**	**Branch/Specialization on**
1	Ph. D.	1997	DAVV, Indore		Electrical
2	M.E.	1992	DAVV, Indore	First	Electrical
3	B.E.	1986	APSU, Rewa	First	Electrical
Ph.D. Dissertation Title: **Assessment of Power System Security from Voltage Stability View Point**					
M. E. Dissertation Title: **Optimal operation of Power System**					

3.	**Present Position Held: HOD EED**
4.	**Career History and Profile of Work Experience:**
(a)	**Academic / Teaching Experience :** i. Working as a Professor since June 2007 to till Date at SGSITS Indore. ii. Worked as a Reader since June 1999 to May 2007 at SGSITS Indore. iii. Worked as a Lecturer since Feb 1988 to June 1999 at SGSITS Indore.
(b)	**Subjects taught:** i. Network Theory ii. Power System iii. Power Electronics iv. Electrical Machines v. Control Systems vi. Modeling and simulation of advance Electric Drives vii. Advanced Electric Drives

5.	**Research Experience**
	Area of research interest: Power System

(a)	**Ph. D. Scholar Guidance:**
(I)	**Ph.D. Completed and Awarded:** 1.Research work on "Design of Three- Phase Squirrel – Cage AC Traction Motor with Aluminum alloy Rotor Bars on Inverter Supply" by Dr. R. N. Paul (Ph.D. Awarded in 2012) from R.G.P.V. Bhopal. 2.Research work on " Optimal Automatic Generation Control" , by Ms. Chestha Jain (Ph.D Awarded in 2019) from R.G.P.V. Bhopal as Co-supervisor.
(II)	**Ph.D. Submitted and Under Evaluation:NIL**
(III)	**Ph.D. Underprocess:** **i.** Supervising Mr. Animesh Masih (Ph.D. Pursuing) from R.G.P.V. Bhopal. **ii.** Supervising Mr.Ashutosh Kashiv (Ph.D. Pursuing) from R.G.P.V. Bhopal. **iii.** Supervising Ms. Prachi Mafidar (Ph.D. Pursuing) from R.G.P.V. Bhopal. **iv.** Supervising Ms. Rinki Keswani (Ph.D. Pursuing)) from R.G.P.V. Bhopal. **v.** Supervising Mr. Rakesh Jha (Ph.D. Pursuing)) from R.G.P.V. Bhopal. **vi.** Supervising Mr. Vineet Mishra (Ph.D. Pursuing)) from R.G.P.V. Bhopal. **vii.** Supervising Mr. Firoz Khan (Ph.D. Pursuing)) from R.G.P.V. Bhopal.
(b)	**Technical Papers Publications:**
(I)	**International and National Journals :** Some of the Research Papers are listed below: 1. Dr. H. K. Verma "Teaching-Learning-Based Optimization Algorithm for Parameter Identification", JIE (India), accepted for publication November 2013. 2. Dr. H. K. Verma, Ms. P. Mafidar "TLBO based Voltage Stable Environment Friendly Economic Dispatch Considering Real and Reactive Power Constraints.", JIE (India), September 2013 volume 94, issue 3, pp 193-206. 3. Dr. H. K. Verma "Population Set Based Optimization Method", JIE (India), September 2013 volume 94, issue 3, pp 173-177.

	4. R. N. Paul, L. D. Arya, H. K. Verma, "Starting phenomena and temperature-rise under VVVF supply of three phase squirrel cage ac traction motor of electrical locomotives", JIE (India), September 2012 volume 93, issue 3, pp-203-208. 5. Dr. H. K. Verma, "Estimation of Iron Loss in a Three Phase Squirrel Cage ac Traction Motor under PWM Inverter Supply", Published in JIE (India), Vol. 91, Sep. 2010. 6. Dr. H. K. Verma, "Use of Aluminum Alloy Rotor Bars in a Three Phase Squirrel Cage ac Traction Motor Designed on the Basis of Parameter Optimization use Back Propagation Algorithm based Neural Network", Published in JIE (India), Vol. 89, March 2009. 7. Dr. H. K. Verma "Continuation Power Flow with Voltage Dependent Loads", JIE (India), Vol. 79, August 1998. 8. Dr. H. K. Verma "Contingency Evaluation Using Newly Developed Line Outage Distribution Factors", JIE (India), Vol. 79, Dec.1998. 9. Dr. H. K. Verma "A Predictor Corrector Method for Construction of PV-Curve", JIE (India), Vol. 77, May 96. 10. Dr. H. K. Verma "A Method for Tracing PV-Curve for Voltage Stability Analysis", JIE (India), Feb. 95, Vol. 75. 11. Dr. H. K. Verma "Voltage Stability Enhancement using Reactive Power Loss Minimization", JIE (India), Vol. 76, May 1995. 12. Dr. H. K. Verma "A Method for Tracing PV-Curve for Voltage Stability Analysis with Voltage Dependent Loads", Int. Journal of Electric Machines and Power System (USA), Sep. 96, Vol.24, No. 6. 13. Dr. H. K. Verma "Discussion on Improved Voltage and Reactive Power Distribution Factors for Outage Studies", IEEE Transaction on Power System , Vol.12, No.3, August 97. 14. Cheshta Jain, H.K. Verma, L.D. Arya "Big Bang-Big Crunch Based Optimized Controller for Automatic Generation control and Automatic Voltage Regulator System", IJEST, Vol. 3 issue 10, 2011, pp 12-19. 15. Cheshta Jain, H.K. Verma, L.D. Arya, "Hybrid particle swarm optimization based gains for deregulated automatic generation control.", IJECCE , Vol. 2 issue2, Nov. 2011. 16. L.D. Arya, Cheshta Jain, H.K. Verma "Differential Evaluation for Optimization of PID Gains in Automatic Generation Control.", Published in IJCSE, Vol. 3, No. 5, May 2011. 17. Dr. H. K. Verma, Ms. Prachi Mafidar "Environment Friendly BB-BC Optimized Economic Dispatch with Real and Reactive Power Constraints", IJCA, Volume 43– No.4, April 2012 18. H.K. Verma, C. Jain, A. Rathore, P. Gupta "A Comparative Study of GA, PSO and Big Bang-Big Crunch Optimization Techniques for Optimal Placement of SVC's", IJECCE, Volume 3– No.3, May 2012. 19. Cheshta Jain, H.K. Verma, L.D. Arya, "Determination of Controller Gains for Frequency Control Based on Modified Big Bang- Big Crunch Technique Accounting the Effect of AVR" International journal of electrical engineering and technology (IJEET), (Impact factor: 3.2031)

Vol. 3, issue 3, Oct-Dec 2012, pp52-62.

20. Dr. H. K. Verma "Big Bang Big crunch optimization for determination of worst case loading margin", IJERA , Volume 2- issue 4 July- August 2012.
21. Dr. H. K. Verma "Combined Economic and emission dispatch by using hybrid PSO-GA with real and reactive power constraint", IJEIR, Volume 3– Issue.3, May 2012.
22. Dr. H. K. Verma "Fuzzy based median filtering for removal of salt & pepper noise", IJSCE , Volume 2, Issue 3, July 05, 2012 ,ISSN 2231-2307.
23. Dr. H. K. Verma "Big Bang-Big Crunch Optimization Algorithm for linear phase FIR digital filter design", IJECCE, Volume 3, Issue 1 Jan 2012 , ISSN 224-071X
24. Dr. H. K. Verma "Multi-Objective Big Bang-Big Crunch Optimization Algorithm for Recursive Digital filter design", IJEIR, Volume 1, Issue 2,April 2012,ISSN 194-200.
25. Cheshta Jain, H.K. Verma," Big-Bang Big-Crunch based Optimization of PID Controller for DC Motor", IJAREEIE, (Impact factor:1.682), Vol. 2, issue 7, July 2013.
26. Rameshwari Bisen, H. K. Verma, and Arun Parakh," Hardware Implementation of Serial High Speed point to point Communication protocol", Proceedings of the 2014 International Conference on Information and Communication Technology for Competitive Strategies (ICTCS '14). ACM, New York, NY, USA, Article 19 ,5 pages. DOI=10.1145/2677855.2677874 http: // doi .acm. org /10.1145/2677855.2677874.
27. Cheshta Jain, H.K Verma, L.D. Arya," Statistical and Dynamic Analysis of Optimized wind-solar Hybrid system by Teaching Learning Based Optimization", Mod. Power system clean Energy", Springer, January 2015.
28. Bhatt, Sunil, H. K. Verma, and Prachi Mafidar, "Participation factor in model voltage stability analysis",International Journal of Engineering Sciences & Management."(IJESM) Impact Factor: 3.145 (2015): 79-86.
29. Cheshta Jain, H.K Verma, L.D. Arya "A novel statistically tracked particle swarm optimization method for automatic generation control", International journal of modern power and clean energy, Springer, Volume 2, Issue 4, 2014, Pages 396-410
30. Harish Kumar Verma, Cheshta Jain ,"A Novel Hybrid Statistical Particle Swarm Optimization for Multimodal Functions and Frequency Control of Hybrid Wind- Solar System" Journal of The Institute of Engineers (India), 2016.
31. Verma H.K., Pal, S. Modified Sigmoid Function Based Gray Scale Image Contrast Enhancement Using Particle Swarm Optimization. J. Inst. Eng. India Ser. B **97,** 243–251(2016).
32. "Teaching Learning Based optimization of controllers for Wind-Solar Hybrid System", Journal of The Institute of Engineers (India), (under

	revision). 33. Jain, Cheshta, and H. K. Verma. "A New Hybrid Statistically Tracked PSO for PID Controller of Wind-Solar System Incorporating Effect of AVR." Journal of Electrical and Power System Engineering , Volume 4 issue 2 ,2018. 34. Verma, H.K. & Singh, P., Optimal Reconfiguration of Distribution Network Using Modified Culture Algorithm , Journal of Institution of Engineers, India Series. B, Volume 99 ,issue 6,pp 613-622 , December 2018. 35. Pandse Ankita, Verma H.K, Parakh Arun, Design of Asset Tracking System Using Speech Recognition, Journal of Information and Communication Technology for Intelligent Systems, pp 371-379,2018 36. Sanjay Chaturvedi, Arun Parakh, H.K. Verma, Wireless sensor network based real time monitoring system for electrical power distribution network, international journal of latest trends in engineering and technology,Volume 10,issue 1 , pp244-249 ,2018 37. Mafidar, Prachi & Verma, H.K.Verma, An improved TLBO based economic dispatch of power generation through distributed energy resources considering environmental constraints. Journal of Sustainable Energy, Grids and Networks , Volume 18. June 2019. 38. A Kashiv, HK Verma , "Dolphin echolocation algorithm for small-signal stability analysis of DFIG-based wind power system", International Journal of Engineering Systems Modelling and Simulation, vol. 12, no.4 , pp. 301-328, 2021. 39. Animesh Masih, HK Verma, "Optimum sizing and simulation of hybrid renewable energy system for remote area", Journal of Energy & Environment, Sept. 2021. 40. Prachi Mafidar Joshi, H.K. Verma,Synchrophasor measurement applications and optimal PMU placement: A review,Electric Power Systems Research,Volume 199,2021,107428,ISSN 0378-7796,https://doi.org/10.1016/j.epsr.2021.107428. 41. Rachana Pandey, Dr. H.K. Verma, Dr. Arun Parakh and Cheshta Jain Khare, "Optimization of Phasor Measurement Unit (PMU) Placement: A Review", International Journal of Emerging Science and Engineering (IJESE), November, 2021. 42. Ritu Saxena, H. K. Verma, Arun Parakh and Rinki Rajpal, " Selective Harmonic Elimination of Voltage Source Inverter for Renewable Energy Sources Using Hybrid Salp Swarm-Sine Cosine Algorithm,vol. 10, no.12,pp. 7667-7676, Dec. 2021.
(II)	**<u>Technical Papers –International /National Conferences:</u>** Some of the Papers are listed below: 1. Deepesh Kumar Jain, Arun Parakh, Dr. H. K. Verma, "Microcontroller- based System for Water Quality Monitoring using Electronic Sensors", International Conference on Power Control and Instrumentation Engineering (ICPCIE) 2014.

	2. H. K. Verma, Cheshta Jain, L.D. Arya, " A novel statistically tracked particle swarm optimization (STPSO) method for complex multimodel function", communicated to *International Journal of Applied Soft Computing.* 3. Cheshta Jain, H. K. Verma, "Chaotic particle swarm for reduced order model of automatic generation control", International conference on deregulated environment and energy market-DEEM 2011, July 22-23 2011, Chitkara University Punjab. 4. Cheshta Jain, H. K. Verma, "A performance dependent PSO based optimization of PID controller for D.C. motor", International conference on Electrical energy system, (ICEES 2011), Jan 2-3, Chennai. 5. "Particle swarm optimization based controller for reduced order model of automatic generation control", National conference on recent trends in electronics and commercial tech., April 8 2011. S.D. Bansal College of technology, Indore. 6. "Effect of area system parameter to optimize gains of PID controller", National conference on advanced in electrical and electronics engg. SVC Indore, Feb. 2011. 7. "On line trained Neural controller for a DC motor", NCPS 2007, UEC. Ujjain. 8. "Comparison of various BPA techniques for identification and control of DC motor in MATLAB", NCPS 2007, UEC. Ujjain. 9. "A Genetic algorithm solution to economic load dispatch in MATLAB", NCETIT, 2008, SGSITS, Indore. 10. "Comparison of Genetic algorithm with other optimization methods", ETEET 2008, MIT. Ujjain. 11. Chaturvedi, Shivam, Pallavi Pragya, and H. K. Verma. "Comparative analysis of particle swarm optimization, genetic algorithm and krill herd algorithm." Computer, Communication and Control (IC4), 2015 International Conference on. IEEE, 2015. 12. Sanjay Chaturvedi, Arun Parakh, HK Verma , "Development of a WSN Based Data Logger for Electrical Power System", International Conference on Information, Communication and Computing Technology, Springer, Singapore,2019, pp 72-83. 13. C. Bhattacharya, S. K. Sharma and H. K. Verma, "Improved Power Quality of Sensorless Speed Controlled PMBLDC Motor Drive," IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), Chennai, India, pp. 1-5,2018. 14. L. Gurjer, P. Chaudhary and H. K. Verma, "Detailed Modelling Procedure for Lithium-ion Battery Using Thevenin Equivalent," *2019 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT)*, Coimbatore, India, 2019, pp. 1-6, doi: 10.1109/ICECCT.2019.8869224. 15. C. Bhattacharya, S. K. Sharma and H. K. Verma, "A Voltage Controlled Sensorless Speed Control of PMBLDC Motor Drive for

an Electric Two Wheeler," 2018 2nd IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), Delhi, India, 2018, pp. 886-891, doi: 10.1109/ICPEICES.2018.8897497.

16. Sanam Agnihotri , Apporw Atre and H.K.Verma. "Equilibrium Optimizer for solving Economic Dispatch problem,"IEEE Power India International Conference(PIICON-2020), Haryana , India.
17. A. Kashiv and D. H. K. Verma, "Techniques used for the LVRT ability enhancement for DFIG connected system," 2020 First International Conference on Power, Control and Computing Technologies (ICPC2T), Raipur, India, 2020, pp. 68-72, doi: 10.1109/ICPC2T48082.2020.9071505.
18. Rinki Keswani , Dr. H.K.Verma , Dr. Shailendra Kumar Sharma , "Dynamic Economic Load Dispatch incorporating Renewable Energy Sources using Multiswarm Statistical Particle Swarm Optimization" , IEEE International Conference on Computing, Power and Communication Technologies , GUCON on 2-4 October 2020.
19. Apoorwa Atre ,Sanam Agnihotri, Dr. H.K.Verma, " Hybrid EO-SCA based Economic Load Dispatch" accepted in IEEE International Conference on Smart Technologies for Power , Energy and Control organized by VNIT, Nagpur on 25-26 September 2020.
20. A. K. Masih and H. K. Verma, "Management of Battery using ANN Controller for Renewable Hybrid system," *2021 2nd International Conference for Emerging Technology (INCET)*, 2021, pp. 1-6, doi: 10.1109/INCET51464.2021.9456360.
21. Chaturvedi, S., Parakh, A., Verma, H.K. (2021). Development of a Wireless Sensor Node for Electrical Power Distribution Monitoring System. In: Satapathy, S.C., Bhateja, V., Favorskaya, M.N., Adilakshmi, T. (eds) Smart Computing Techniques and Applications. Smart Innovation, Systems and Technologies, vol 225. Springer, Singapore. https://doi.org/10.1007/978-981-16-0878-0_73
22. H. Rai and H. K. Verma, "Economic Load Dispatch Using Jellyfish Search Optimizer," *2021 10th IEEE International Conference on Communication Systems and Network Technologies (CSNT)*, 2021, pp. 301-304, doi: 10.1109/CSNT51715.2021.9509624.
23. Joshi, P.M., Verma, H.K. (2022). Equilibrium Optimizer-Based Optimal Allocation of SVCs for Voltage Regulation and Loss Minimization. In: Dubey, H.M., Pandit, M., Srivastava, L., Panigrahi, B.K. (eds) Artificial Intelligence and Sustainable Computing. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-1220-6_26.
24. Ritu Saxena, H. K. Verma, Arun Parakh and Rinki Rajpal, "Harmonic reduction of multilelvel inverters by using soft computing techniques: a review", SCRS Conference Proceedings On Intelligent Systems, SCRS, India, 2021, pp. 415-430. https://doi.org/10.52458/978-93-91842-08-6-40.

6.	**Awards/ Honours / Special Achievements**
	Awarded Power Medal of Union ministry of Energy: Power Medal Department for the year 95-96. Awarded Power Medal of Union ministry of Energy: Power Medal Department for the year 2016.
7.	**Professional Memberships**
	1. ISTE 2.IE (India)

8.	**List of Webinars/ Online FDP Organised**		
S. No	**Details of Course**	**Duration**	**Organized by**
1	Assessment of Electrical Vehicle By Big Data	9 June 2020	EED , SGSITS , Indore
2	Research Opportunities in Power Electronics	10 June 2020	EED , SGSITS , Indore
3	Accreditation: A Continuous Process: "Let's make it more effective"	11 June 2020	EED , SGSITS , Indore
4	A Perspective on Performance , Power and Energy Efficiency of GPUs	12 June 2020	EED , SGSITS , Indore
5	Electrical Vehicle Technology : Developments and Opportunities	13 June 2020	EED , SGSITS , Indore
6	Enhancement of Consultancy and Testing in Institute	14 June 2020	EED , SGSITS , Indore
7	Real Time Hardware-in-the-Loop (HIL) Simulation for Power Electronics & Power Systems (FDP)	28-30 June 2020	EED , SGSITS , Indore
8	Recent Trends in Electrical Engineering	1-2 July 2020	EED , SGSITS , Indore