

CURRICULUM VITAE

Name : Dr. Sanjay Marwaha

Father's Name : Sh. D.V. Marwaha

Date and Place of Birth : 19/04/1966, Nahan (HP)

Category : General

Marital Status : Married

Address for Correspondence : Dr. Sanjay Marwaha
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Deptt of Electrical and Instrumentation Engg.
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Academic Qualifications

S. No.	Examination	Board/University	Year	% of Marks/Div.
1.	Matric	H.P. Board of School Education, Shimla	1981	63.22/First
2.	Pre-University (B.Sc-I)	H.P. University, Shimla	1984	76.00/First
3.	B.E. (Electrical)	Gorakhpur Univ., Gorakhpur	1988	73.01/First
4.	M.E. (Power Sys.)	Punjab University, Chandigarh	1990	63.13/First
5.	PhD # (Elect. Tech)	G.N.D.U., Amritsar	2000	

PhD Title (#): “Static and Quasi-static field analysis of Electromagnetic devices using FEM”

Employment Details

Institution	Post Held	From	To	Duration	Nature of Duties
REC Kurukshetra	Lecturer	03.08.1989	08.06.1995	5 years, 10 months, 5 days	Teaching
GZSCET Bathinda	Asstt. Professor	09.06.1995	18.09.1996	1 years, 3 months, 9 days	Teaching & Administrative
BCET Gurdaspur	Asstt. Professor	19.09. 1996	10.12.2002	6 years, 2 months, 21 days	Teaching & Administrative
SLIET Longowal	Professor	11.12.2002	Till date	—————	Teaching & Administrative

Membership of Professional Bodies : Fellow, Institution of Engineers (F-111916-4)
Life Member of ISTE (LM-13060), New Delhi

Publications (National/International) : Seventy five

Areas of Interest

- Design and Analysis of Electromagnetic Devices.
- Electrical Machines.
- Power systems and HV Engineering.
- Electrical and Electronic Measurements & Instrumentations.
- Industrial Electronics.

List of Conferences/Symposium/Workshop/Seminar Organised

- **Co-Chairman**, National Symposium on ‘**Emerging Technologies for Efficiency Improvement in Energy Sector (ETEIES-03)**’, Nov. 8-9th, 2003. SLIET Longowal.
- **Coordinator**, National Workshop on ‘**Emerging Scenario in Hydro-Thermal Power (ESHTP)**’, Sept. 15th, 2004. SLIET Longowal.
- **Chairman**, National Conference on ‘**Trends of Computational Techniques in Engineering (TCTE)**’, Oct. 15-16th, 2004. SLIET Longowal.
- **Regional Coordinator**, National Conference on ‘**Emerging Technologies & Applications (ETA-2005)**’, Oct. 1-2nd, 2005. Saurashtra University, Rajkot (Gujrat).
- **Convener and HOD**, One day seminar on ‘**Analytical Instrumentation in Science and Technology: Past, Present and Future**’, Nov. 16th, 2005. SLIET Longowal.
- **Co-Chaiman**, National Conference on ‘**Computational Intelligence in Electrical Engineering (CIEE-05)**’, Nov. 18-19th, 2005. SLIET Longowal.
- **Chairman**, National Workshop on ‘**Energy Management**’, Feb. 10th, 2006. SLIET Longowal.
- **Chairman**, National Workshop on ‘**FEMLAB**’, Feb. 21st, 2006. SLIET Longowal.

List of Attended Short Term Courses

- ISTE Winter School on “**Artificial Intelligence Applications to Power and Control Systems**”, Jan. 11-24th, 1993, REC Hamirpur.
- Short Term Course on “**Automatic and Adaptive Mesh Generation for FD and FE Applications**”, July 4-9th, 1994, IIT Madras.
- Attended Short Term Course on “**ANN Applications to Power System**”, June 14-19th, 1993. IIT Kanpur.
- CEP Course on “**Numerical Methods in Electromagnetics : Theory and Applications**”, Dec. 13-16th, 2004. IIT Bombay.
- Course on “**Current Trends in Hydro Projects and Their Rehabilitation**”, Jan. 16-17th, 2004. Institution of Engineers (India), Chandigarh.
- Short Term Training Programme on “**Improving Industry Institute Interaction**”, July 1-5th, 2002. TTTI Chandigarh.
- ISTE Training Programme on “**Performance Appraisal and Development System**”, March 3-5th, 1995. REC Kurukshetra.

List of Supervised PhD and M Tech. Thesis

MTech Thesis

- “**Finite Element Analysis of Balanced Patch Antenna**”, PTU Jalandhar, 2008 (Univ. Roll No.: M-6230641309).
- “**Analysis of Single Sided Linear Induction Motor Using Finite Element Method**”, PTU Jalandhar, 2008 (Univ. Roll No.: M-6230641307).
- “**Microwave Coagulation Therapy Using Finite Element Method**”, PTU Jalandhar, 2008 (Univ. Roll No.: M-6230641306).
- “**Skin effect and Eddy Current Analysis using FE Adaptive Grids**”, PTU Jalandhar, 2006.
- “**FD and FE Analysis of Horn Antennas**”, PTU Jalandhar, 2006.
- “**Finite Element Based Numerical Computation of Eddy Currents in Magnetic Structures**”, PTU, Jalandhar, 2005.
- “**Field Analysis of Electromagnetic Devices using HFEM**”, PTU, Jalandhar, 2005.
- “**Design and Implementation of DSP Based Single Phase UPS Employing IGBTs**”, PTU Jalandhar, 2004.
- “**Finite Element Formulation and Design of Transformer**”, PTU Jalandhar, 2004.
- “**Analysis of Three Phase Induction Motor on Single Phase Supply**”, Kurukshetra Univ. Kurukshetra, 1995.
- “**Transient Stability Analysis of Nine Bus System**”, Kurukshetra Univ. Kurukshetra, 1995.
- “**Study of Magnetic Field in DC Machines by Finite Element Method**”, Kurukshetra Univ. Kurukshetra, 1994.
- “**Analysis of Switching Transients Using a Multiwinding Transformer Model**”, Kurukshetra Univ. Kurukshetra, 1993.
- “**Some Aspects of Self Excitation and Excitation Control of Alternators**”, Kurukshetra Univ. Kurukshetra, 1993.
- “**Use of Personal Computer in the Analysis of Load Flow Problems**”, Kurukshetra Univ. Kurukshetra, 1992.

PhD Thesis

- **“Energy Estimation & Optimization for Low Power DSP”** (in Progress, Registration No. : 15.06.04, Date : 06.04.04), PTU Jalandhar.
- **“Finite Element based Steady & Quasi-Steady Field Analysis of Electromagnetic Devices Using h-Adaptive Refinement Technique”** (in Progress, Registration No. : 09.11.06, Date : 23.08.06), PTU Jalandhar.
- **“Electromagnetic Field Analysis of Linear of Linear Induction Motor by Self Adaptive Finite Element Method”** (in Progress, Registration No. : SLIET/Phd/25/2007 Date : 09.01.08), SLIET Longowal.

Books

- **‘Basic Electrical Engineering’**, H.M. Rai, **Sanjay Marwaha**, Satya Prakashan, 2004.
- **‘Basic Electrical Engineering’**, H.M. Rai, B.R. Sharma, **Sanjay Marwaha**, Satya Prakashan, 2006

Sponsored Projects

- Principal Investigator, MODROB Project titled **‘Modernization of Communication Engg. Lab’** Amount Sanctioned = Rs. 6 lakh (financial Year 2001-02).

Foreign Visits

- Nepal, 1987, 1988. Visit to the professional institutes under a collaboration.
- Thailand, 2007. Chaired a technical session and presented a research paper in an IASTED Conference in Phuket, April 2-4th, 2007.

Administrative, Academic Planning and Development Experience

- **HOD, Deptt. of Electrical and Instrumentation Engineering**, Oct. 18th, 2005-Oct. 22nd, 2008, SLIET Longowal.
- **Chief Coordinator (Centre for Collaboration and International Programmes)**, April 15th, 2003 -Dec.15th, 2005, SLIET Longowal.
- **MR (ISO-9001:2000)**, March 29th, 2005- Dec.15th, 2005 & Dec. 14th, 2006 – Dec. 18th, 2008, SLIET Longowal.
- **Dean (SW)/Prof. I/C (SW)**, March 31st, 2005-till date, SLIET, Longowal.
- **Chairman (Cultural Committee)**, - Dec. 18th, 2008, SLIET, Longowal.
- **HOD, Deptt. of Computer Sc. and Electronics Engg.**, Aug. 1st 1997 – Aug. 21st 2000, BCET, Gurdaspur.
- **Incharge, Computer Centre**, Aug. 4th 2000 – Aug. 31st 2001, BCET, Gurdaspur.
- **President, Cultural Societies**, Sept. 2nd 1997 – Aug. 31st 2001, BCET, Gurdaspur.
- **Chairman, Library Committee**, Sept. 14th 1999 – Aug. 31st 2001, BCET, Gurdaspur.
- **Chief Warden**, BCET, Gurdaspur.
- **Chairman, House Allotment Committee**, Oct. 20th 1999 – April 30th 2001, BCET, Gurdaspur.
- **Training Incharge, Deptt. of Computer Sc. and Electronics Engg.**, Oct. 29th 1998 – Sept. 7th 2000, BCET, Gurdaspur.
- **Member (BOS)**, PTU Jalandhar.
- **Suptt. & Dy. Suptt. (Exams)**, GZSCET, Bathinda and BCET, Gurdaspur.

- **Member, Expert Committee (Punjab)** for selection of Professor's/Asstt. Prof.'s/Lecturer's/ in the Disciplines of Electrical Engg. Electronics & Communication Engg. and Electronics & Instrumentation Engg.
- **Member, AICTE team.**
- **Chairman, Discipline Committee, BCET Gurdaspur.**
- **Incharge, Maintenance Cell, BCET Gurdaspur.**
- **Paper Setter/External Examiner** of various Universities like P.U. Chandigarh, K.U. Kurukshetra, H.P. Univ. Shimla, M.D.U. Rohtak, G.N.D.U. Amritsar, and P.T.U. Jalandhar, UGC etc.

Awards and Achievements

- Sixth position in HPU Entrance Test for admission in Engineering and third position in Physics, Chemistry and Maths.
- Secured highest marks in Maths (i.e. 149/150), which is a record till date in HPU Entrance examination.
- Has been designated as Certified Lead Auditor, ISO-9001:2000.

Any other Information

- PAN No. - ABQPM1177M.
- Voter Id. Card No. – LBZ1934330, Dhanaula Constituency-085, 28.10.2006, Sangrur.
- Passport No. – F9637728, Date of issue – 07.09.2006, Date of expiry – 06.09.2016.
- Teaching Experience: Approx. 19 yrs.
- Present Basic Pay: Rs. 19100/-.
- Date of Next Increment: Dec. 2009.

References

- **Dr. I.S. Hudiara, Professor**
Department of Electronics Technology
G.N.D.U. Amritsar
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- **Dr. R.S. Kaler, Professor & Head**
Deptt. of Electronics and Communication Engineering
TIET, Patiala
Email: rskaler@tiet.ac.in
- **Dr. V.K. Jain, Professor**
Department of Electrical and Inst. Engg.
SLIET, Longowal
Email: vkjain27@yahoo.com

Date:

Signature

PUBLICATIONS

Papers in Journals

1. Anupma Marwaha, I.S. Hudhara and **Sanjay Marwaha**, "FE Analysis of ACSA", IETE Journal of Research, Vol. 50, No. 3, May-June, 2004, pp. 223-228.
2. Anupma Marwaha, I.S. Hudhara and **Sanjay Marwaha**, "FEM-Aperture Coupled Stacked Antennas", DEI Journal of Science and Engineering, Vol. 12, No. 1&2, 2003, pp. 97-103.
3. Anupma Marwaha, I.S. Hudhara and **Sanjay Marwaha**, "FE Analysis of Dielectric Loaded Pyramidal Horns", Journal of the Institution of Engineers, Vol. 83, Jan. 2003, pp. 41-44.
4. Anupma Marwaha, I.S. Hudhara and **Sanjay Marwaha**, "Analysis of Curved Boundaries by FDTD and FE Methods" IETE Journal of Research, Vol. 47, No. 6, November – December, 2001, pp. 301-310.
5. Anupma Marwaha, I.S. Hudhara and **Sanjay Marwaha**, "Non-linear Cryptography using Product Transformation", Journal of the Institution of Engineers, Vol. 81, Jan. 2001, pp. 41-45.
6. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Analysis of Effect of Approximating Output samples Using Random Sub-Sampling of input for Computation Reduction in Filtering Operation", Journal of Engineering Science and Technology (JESTEC), Taylor's University College, Malaysia, Vol. 1, No. 2, 2006, pp. 157-172.
<http://jestec.taylors.edu.my/V1Issue2.html>
7. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "FE Analysis for Minimization of Cogging Torque in Wind Generators", Journal Indian Inst. Sci., July-Aug. 2006, Vol. 86, No. 4, pp. 355-362.
<http://journal.library.iisc.ernet.in/vol200604/paper5/355.pdf>
8. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Management of Power Reduction Techniques in DSP Domain", Journal of Engineering & Technology Education, NITTTR, January-June 2007, Vol. 1, No. 1, pp. 38-42.
9. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "Finite Element 2-D Modeling of Electromagnetic Devices taking account of the Rotation" International Journal of Engineering Research and Industrial Applications, 2008, Vol. 1, No.111, pp. 95-103.
10. B.R. Singla, **Sanjay Marwaha**, Anupma Marwaha, "Design and Simulation of Fuzzy, Neuro Fuzzy Based Optimizer and Comparative Analysis of Unit Commitment Problem", Journal of Institution Of Engineers , Vol. 88, Sept. 2007.
11. Surita Maini, Anupma Marwaha, **Sanjay Marwaha**, "Floating Sleeve Co-axial Antenna for Microwave Coagulation Therapy", International Journal of Engineering Research and Industrial Applications, ISSN 0974-1518, Vol. 1, No. VII, 2008, pp. 323-331.
12. Manpreet Singh Manna, **Sanjay Marwaha**, H.M. Rai, "Application of Finite Element Method to Find the Efficiency of Linear Induction Motor with Constant Voltage Feeding", International Journal of Electronic Engineering (IJEE), 2008.
13. Himanshu Monga, Anupma Marwaha, **Sanjay Marwaha**, "Finite Element Analysis of Switched Reluctance Motor Drive Under Fault Conditions", International Journal of Engineering Research and Industrial Applications, ISSN 0974-1518, Vol. 1, No. VII, 2008, pp. 51-60.

Papers in International Conferences

14. Manpreet Singh Manna and **Sanjay Marwaha**, "Finite Element Method as an tool to Machine Design", World Congress on Science, Engineering and Technology (WCSET-2008), Bangkok, Thailand, December 17-19. 2008.
15. Surita Maini, Anupma Marwaha, **Sanjay Marwaha**, "Microwave Ablation: Technical Challenges for Future", International Conference on Wireless Networks & Embedded Systems (WECON-2008), Chitkara Institute of Engg. & Tech., October 18-19th, 2008., pp. 601-602.
16. Manpreet S Manna, **Sanjay Marwaha** and Anupma Marwaha, "Eddy Current Analysis of Induction Machine by 3D FEM", IEEE Power India Conference, IIT Delhi, October 12-15, 2008.
17. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Dynamic Modeling of Brushless DC Motor using Finite Element Method", IEEE Sponsored International Conference on Recent Advancements and Applications of Computers in Electrical Engineering (RACE), Engineering College Bikaner (Rajasthan), India, March 24-25, 2007.
18. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Design and Transient Analysis of Outside Rotor Induction Motor using Finite Element Method", IEEE Sponsored International Conference on Recent Advancements and Applications of Computers in Electrical Engineering (RACE), Engineering College Bikaner (Rajasthan), India, March 24-25, 2007.
19. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Simulation of Faults of Switched Reluctance Motor using Finite Element Method", 3rd IASTED Asian Conference on Power and Energy Systems (AsiaPES 2007), Phuket, Thailand, April 2-4, 2007, pp. 394-398.
<http://www.actapress.com/Abstract.aspx?paperId=30301>
20. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Calculations of Generated Electric and Magnetic Fields by Power Transmission Lines Using FEM", International Conference on Intelligent Systems and Networks (IISN-2007), HEC Jagadhari, Yamunanagar, Feb. 23-25th, 2007.
21. Manpreet S Manna, **Sanjay Marwaha** and Anupma Marwaha "3D FEM Analysis of EM Force on End Winding Structure for Electrical Rotating Machines", The Fourth IASTED International Conference on Circuits, Signals, and Systems, San Francisco, California, USA, November 20 – 22, 2006, pp. 126-130.
<http://www.actapress.com/Abstract.aspx?paperId=29151>
22. Manpreet S Manna, **Sanjay Marwaha** and Anupma Marwaha, "Computation & Analysis of End Region EM Force for Electrical Rotating Machines using FEM", International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth-2006 (PEDES-2006), IIT Delhi, India, December 12-15, 2006.
<http://ieeexplore.ieee.org/iel5/4147829/4147830/04148004.pdf?tp=&arnumber=4148004&isnumber=4147830>
23. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Design and Transient Analysis of Cage Induction Motor Using Finite Element Method", International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth-2006 (PEDES-2006), IIT Delhi, India, December 12-15, 2006.
<http://ieeexplore.ieee.org/iel5/4147829/4147830/04147837.pdf?tp=&arnumber=4147837&isnumber=4147830>
24. Bhoj Raj Singla, **Sanjay Marwaha** and Anupma Marwaha, "Analysis S-Parameter Sensitivity of Waveguide Structures with FEMLAB", International Conference on

- Advances in Electronics and Communication Technology (ICAECT-2006), KC College of Engg. and IT, Nawanshahr, India, December 15-16, 2006.
25. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Efficient Use of Computational Resources for Designing of Detection Algorithm in Wireless Channel Receiver", International Conference on Advances in Electronics and Communication Technology (ICAECT-2006), KC College of Engg. and IT, Nawanshahr, India, December 15-16, 2006.
 26. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "Reduction of Cogging Torque in Permanent Magnet Generators : Analysis using Finite Element Method", Nordic Wind Power Conference (NWPC-2006), Finland, May. 22-23, 2006.
 27. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Management of Power Reduction Techniques in DSP Domain", Asian Conference on Intelligent Systems and Networks (AISN-2006), HEC Jagadhari, Feb. 24-25th, 2006.
 28. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "Finite Element 2D Steady State Time Harmonic Field Analysis of Induction Motor", IEEE INDICON 2004, IIT Kharagpur, pp. 570-574, Dec. 20-22, 2004.
 29. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Design Technique for Complex Energy Efficient FIR Filter in Communication Receiver", IEEE INDICON 2004, IIT Kharagpur, Dec. 20-22, 2004.
 30. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "Finite Element Analysis of Cogging Torque Reduction Techniques in a Permanent Magnet Wind Turbine Generator", 2004 European Wind Energy Conference, London, U.K, Nov. 22-25, 2004.
 31. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Aspects of Power Optimization for FIR Filters in Digital Processing Domain", 2004 Optimization Days Conference, Montreal, Canada, May 10-12, 2004.
 32. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "Modified FDTD Method for Analysis of Curved Boundaries" 46th Congress of the ISTAM (An International Meet), REC Hamirpur (in collaboration with IIT Kharagpur), Dec. 19-22, 2001.
 33. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "Simulation Model of Closed Loop Digital Adaptive Nulling Antenna", IEEE ACE-2001, IIT Delhi, Nov. 1-3, 2001.
 34. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "Wide-band Low-noise Antenna Elements Design", IEEE ACE-2001, IIT Delhi, Nov. 1-3, 2001.
 35. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "FE Analysis of Dielectric Loaded Pyramidal Horns", International Conference on Applied Electromagnetics and Communications – ICECOM 2001, Dubrovnik, Croatia, Oct. 1-3, 2001.
 36. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "Simulation and Analysis of Aperture Coupled Microstrip Antennas", International Conference on Applied Simulation and Modelling – ASM 2001, Marbella, Spain, Sept. 4-7, 2001.
 37. Anupma Marwaha, I.S.Hudiara and **Sanjay Marwaha**, "A Nonlinear Crptosystem using Product Transformation", International Conference on Communications, Computers & Devices, IIT Kharagpur, December 14-16, 2000

Papers in Symposia/Seminars/Conferences/Workshops

38. Manpreet S Manna, Sanjay Marwaha, Gurmeet S Grewal and Sarpreet Kaur, "3D FEM Analysis for Overfluxing in Power Transformer", National Conference on Computational Intelligence to Emerging Electric Power Systems (CIEEPS-2006), Pondicherry Engg. College, Pillaichavady, Pondicherry, pp. 255-258.
39. Rishi Sarup Sharma, **Sanjay Marwaha**, Anupma Marwaha, "Study and FE Analysis of Eddy Currents and Skin Effects in Magnetic Structures", National Conference on Computational Intelligence in Electrical Engineering, SLIET Longowal, pp.61-65, Nov. 18-19,2005.
40. Ajay Kumar, **Sanjay Marwaha**, Anupma Marwaha, "Finite Element Output Voltage Distortion Factor Analysis of Turbo Alternators", National Conference on Computational Intelligence in Electrical Engineering, SLIET Longowal, pp.66-68, Nov. 18-19,2005.
41. Pooja Sharma, **Sanjay Marwaha**, Anupma Marwaha, "Field Analysis of 2D Permanent Magnet Motor using FEM", National Conference on Computational Intelligence in Electrical Engineering, SLIET Longowal, pp.61-65, Nov. 18-19,2005.
42. Suresh Kumar, **Sanjay Marwaha**, "Design and Implementation of DSP Based Single Phase UPS Employing IGBTs", National Conference on Trends of Computational Techniques in Engineering, SLIET Longowal, pp. 5-7, Oct. 15-16th, 2004.
43. Anshuka Bansal, **Sanjay Marwaha**, "Model of Coupling through slot to a Cavity containing wires using FEM", National Conference on Trends of Computational Techniques in Engineering, SLIET Longowal, pp. 5-7, Oct. 15-16th, 2004.
44. Ajay Kumar, **Sanjay Marwaha** and Anupma Marwaha, "Finite Element 2D Analysis of Leakage Field of Turbo Alternators", National Conference on Trends of Computational Techniques in Engineering, SLIET Longowal, pp. 5-7, Oct. 15-16th, 2004.
45. Amanpreet Singh, **Sanjay Marwaha**, "The Impact of Photo Voltaic Generation on Electrical Power Systems with Thermal Generating Units", National Workshop on Emerging Scenario in Hydro-Thermal Power, SLIET Longowal, pp. 111-116, September 15th, 2004.
46. Ajay K Mahajan, Anupma Marwaha and **Sanjay Marwaha**, "Finite Element Output Voltage Harmonic Analysis of Synchronous Generator", National Workshop on Emerging Scenario in Hydro-Thermal Power, SLIET Longowal, pp. 111-116, Sept. 15th, 2004.
47. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Design Environment For Complex Energy Efficient Narrow Transition Band FIR Filter", National Conference on Intelligent Systems and Networks, HEC, Jagadhri, pp. 119-122, Feb. 27-28, 2004.
48. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Optimization Algorithms for Digital FIR Filters: Booth's Algorithm Vs Code Class", National Conference TICE-2004, pp. 644-648, TIET Patiala, Feb. 5-6, 2004.
49. Anshuka Bansal, **Sanjay Marwaha**, "Eddy Current Based Thermal Analysis of Induction Motor Using FEM", National System Conference (NSC), IIT Kharagpur, pp. 269-271, Dec. 17-19, 2003.
50. Amanpreet Singh, **Sanjay Marwaha** and Anupma Marwaha, "Low-Power Implementation of FIR Filtering Structures on Single Multiplier DSPs", National Symposium on Emerging Technologies for Efficiency Improvement in Energy Sector, SHSL-CIET Longowal, pp. 19-22, November 08-09, 2003.
51. Anshuka Bansal, **Sanjay Marwaha**, "Eddy Current Based FE Thermal Analysis of Induction Motor Using Parabolic Triangular Elements", National Symposium on Emerging Technologies for Efficiency Improvement in Energy Sector, SHSL-CIET Longowal, pp. 89-92, November 08-09, 2003.

52. Ajay Kumar, **Sanjay Marwaha**, "Leakage Field Analysis of Transformer by Finite Element Method", National Symposium on Emerging Technologies for Efficiency Improvement in Energy Sector, SHSL-CIET Longowal, pp. 8-11, November 08-09, 2003.
53. Ajay Kumar, H.K. Buttar and **Sanjay Marwaha**, "Finite Element analysis of Induction Motor", National Symposium on Emerging Technologies for Efficiency Improvement in Energy Sector, SHSL-CIET Longowal, November 08-09, 2003.
54. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "PC Based Numerical Positioner", National Seminar on Information & Data Security, CU Shah College of Engg. and Tech., Wadhawan City, Feb. 17, 2002.
55. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "Non-linear Cryptography using improved Product Transformation", National Seminar on Information & Data Security, CU Shah College of Engg. and Tech., Wadhawan City, Feb. 17, 2002.
56. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "Analysis of Dual Stacked Aperture Coupled Microstrip Antennas using FEM", NCC-2002, IIT Mumbai, Jan. 26-27, 2002.
57. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "Simulation & Analysis of Aperture Coupled Microstrip Antennas", 25th National Systems Conference-2001, PSG College of Technology, Dec. 13-15, 2001.
58. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "Modern & Future Trends in Protection Philosophy by Microcomputers", All India Seminar, Institution of Engineers (India), Vaish College of Engineering Rohtak, March 01, 1998.
59. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "FE Analysis of 500KV Transformer", All India Seminar on Efficient Use of Motors, Generator and Drives in Industries and Utilities for Energy Saving, Institution of Engineers (India), Karnal Local Center & CR State College of Engg. Murthal, Murthal (Sonipat), Feb. 16, 1997.
60. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "2-D Transient Analysis of Power Cables Using Triangular Elements by FEM", National Conference on Trends and Challenges in Large Interconnected Power Systems, REC Warangal, Feb. 14-15, 1998.
61. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "A New Encryption Scheme Using Product Transformation", Twentieth National Systems Conference-1996, VSSC Thiruvanthapuram, Dec. 19-21, 1996.
62. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "Simulation of Three Phase Induction Motor Fed by Current Inverter using HFEM", Twentieth National Systems Conference-1996, VSSC Thiruvanthapuram, Dec. 19-21, 1996.
63. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "Electromagnetic Field Computations in EHV Transformers by FEM", Ninth National Power Systems Conference (NPSC-1996), IIT Kanpur, Dec. 19-21, 1996.
64. Anupma Marwaha, I.S. Hudiara, **Sanjay Marwaha**, "Secure Communication Using Product Transformation", National Conference on Communication Highways, Institution of Electronics & Telecommunication Engineers (Bhopal Centre) & Maulana Azad College of Tech. Bhopal, Oct. 11-13, 1996.
65. **Sanjay Marwaha**, I.S. Hudiara, Anupma Marwaha, "Eddy Current Analysis of Energy Efficient Devices", National Seminar on Energy Management and Conservation in Industries and Farms, GNEC Ludhiana, Apr. 19, 1996.
66. **Sanjay Marwaha**, R.K. Jain, Anupma Marwaha, "Computer Based Electrical Field Analysis Using HFEM", National Symposium on Recent Trends in Computer Applications in Engineering, CET Bathinda, March 8-9, 1996.
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