

## Brief Profile

<b>Name:</b>	Devendra Kumar Sharma
<b>Date of Birth:</b>	01/10/1966
<b>Educational Qualification:</b> <i>Ph. D.</i> <i>M. Tech</i> <i>B. Tech</i>	NIT Kurukshetra, Electronics & Comm.Engg. (VLSI Design) IIT Roorkee, Electronics & Comm. Engg M.N.N.I.T Allahabad, Electronics Engg.
<b>Work Experience:</b> • <i>Teaching</i> • <i>Research / Industry</i>	16 Years 8.5 Years in PSU
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<b>Area/Subjects of Interest</b>	VLSI interconnects, Electronic Circuits, Digital Design, Testing, Signal Processing
<b>Teaching:</b> <i>Subjects Taught at UG level</i>	Digital Integrated Circuits, Switching Theory, Electronics Circuits, Signals & Systems, Digital Signal Processing, Microwave Engg., Communication System, Satellite Communication
<i>Subjects Taught at PG level</i>	Digital Signal Processing
<b>Research Guidance</b> <i>No. of Ph.D./M.Tech Guided</i>	01
<b>Research Publications</b> • Journals • Conferences • Book Chapters	10 08 01
<b>Patent/IPR</b> (Books Published etc.)	-
<b>No. of National/International Conferences attended/ Paper Presented</b>	04
<b>STC/FDP/Summer/Winter Schools/Workshops/Seminars attended</b>	11
<b>Memberships of the Professional Societies</b>	LISTE, LIETE, VSI
<b>Awards/Honors</b>	Reviewer of many International Journals / Conferences
<b>Any other relevant Information</b>	2 Times GATE Qualified

# LIST OF PUBLICATIONS

## Journal Papers

- [1] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Impact of driver size and interwire parasitics on crosstalk noise and delay," *Journal of Engineering, Design and Technology*, Emerald Pub., U.K, vol. 12, issue 4, pp. 475-490, 2014 [*Indexed in Scopus*].
- [2] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Delay model for dynamically switching coupled on-chip interconnects," *Journal of Engineering, Design and Technology*, Emerald Pub., U.K, vol.12, issue 3, pp. 364-373, 2014 [*Indexed in Scopus*].
- [3] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "FDTD based transition time dependent crosstalk analysis for coupled *RLC* interconnects," *Journal of Semiconductors*, IOP Pub., China, vol. 35, no. 5, pp. 055001-5, May 2014 [*Indexed in Scopus*].
- [4] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Delay model for dynamically switching coupled *RLC* interconnects," *European Physical Journal-Applied Physics*, vol. 66, issue 1, Apr. 2014 [*Indexed in Scopus, SCI* ].
- [5] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Signal integrity and propagation delay analysis using FDTD technique for VLSI interconnects," *Journal of Computational Electronics*, Springer Pub., vol.13, issue 1, pp. 300-306, March 2014 [*Indexed in Scopus, SCI*].
- [6] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Effect of coupling parasitics and CMOS driver width on transition time for dynamic inputs," *International Journal of Electronics (Taylor Francis)*, vol. 101, issue 5, pp.654-666, 2014 [*Indexed in Scopus, SCI*].
- [7] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Effect of equal and mismatched signal transition time on power dissipation in global VLSI interconnects," *International Journal of VLSI Design & Communication Systems*, vol. 3, no. 4, pp. 111-119, Aug. 2012.
- [8] Devendra Kumar Sharma, R.K.Sharma, B.K.Kaushik and Pankaj Kumar, "Boundary scan based testing algorithm to detect interconnect faults in printed circuit boards" *Circuit World*, Emerald Pub., U.K, vol. 37, no. 3, pp. 27-34, 2011 [*Indexed in Scopus, SCI*].
- [9] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "VLSI interconnects and their testing –prospects and challenges ahead," *Journal of Engineering, Design and Technology*, Emerald Pub., U.K, vol. 9, issue 1, pp. 63-84, 2011 [*Indexed in Scopus*].
- [10] Devendra Kumar Sharma, R.K.Sharma and Suneel Yadav, "A novel approach for characterization of cardiac abnormalities using sub band coding," *International Journal of Applied Engineering Research*, vol. 4, no. 10, pp. 1931-1938, 2009. [*Indexed in Scopus*].

## Book Chapter:

- [1] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, "Testing of CMOS Driven VLSI Interconnects", Transmission line: Theory, Types and Applications, Book Chapter published by *Nova Science Publishers, Inc., New York, USA*, pp. 309-336, 4<sup>th</sup> quarter, 2011, ISBN no. 978-1-61761-300-5 (Editor: Dana M. Welton) .

## International Conferences:

- [1] Devendra Kumar Sharma, Shailesh Mittal, B.K. Kaushik, R.K. Sharma, K.L.Yadav and M.K.Majumder, “Dynamic crosstalk analysis in *RLC* modeled interconnects using FDTD method”, in *Proc. IEEE International Conference on Computer and Communication Technology (ICCCT 2012)*, 23-25 Nov. 2012, MNNIT Allahabad, pp. 326-330.
- [2] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, “Analysis of equal and unequal transition time effects on power dissipation in coupled VLSI interconnects”, in *Proc. International Conference on Signal, Image Processing and Pattern Recognition (ICCSEA 2012)*, 25-27 May, 2012, Delhi, *Advances in Computer Science, Engineering & Applications, Advances in Intelligent and Soft Computing, Springer Pub.*, vol. 166, 2012, pp. 137-144.
- [3] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, “Qualitative optimization of coupling parasitics and driver width in global VLSI interconnects”, in *Proc. International Conference on Computer Science and Information Technology (CCSIT 2012)*, 2-4 January, 2012, Bangalore, *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer Pub., vol. 85, 2012, pp. 1-10.
- [4] S. Mittal, B.K. Kaushik, K.L. Yadav, D.K. Sharma, and M.K. Majumder, “ Crosstalk effect in coupled interconnect lines using FDTD method,” in *Proc. IEEE International Conference on Communications, Devices and Intelligent Systems (CODIS), 2012*, Jadavpur University, Kolkata, pp. 365-368.
- [5] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, “A qualitative approach to optimize coupling capacitance for simultaneously switching scenario in coupled VLSI interconnects,” in *Proc. IEEE International Conference on Devices & Communication (ICDeCom-2011)*, 24-25 Feb. 2011, BIT Mesra, pp. 1-5.
- [6] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, “Effect of mutual inductance and coupling capacitance on propagation delay and peak overshoot in dynamically switching inputs,” in *Proc. IEEE International Conference on Emerging Trends in Engineering and Technology (ICETET-2010)*, 19-21 Nov. 2010, BITS Goa, pp.765-769.
- [7] Devendra Kumar Sharma, B.K.Kaushik and R.K.Sharma, “Effect of aggressor driver width on crosstalk for static and dynamic switching of victim line,” in *Proc. IEEE International Conference on Computer and Communication Technology (ICCCT 2010)*, 17-19 Sept. 2010, MNNIT Allahabad, pp. 667-672.
- [8] Pankaj Kumar, R. K. Sharma, D. K. Sharma, and B. K. Kaushik, “A novel method for diagnosis of board level interconnect faults using boundary scan” in *Proc. IEEE International Conference on Computer and Communication Technology ( ICCCT 2010)*, 17-19 Sept. 2010, MNNIT, Allahabad, pp. 270-275.