








VLSI PROJECT TOPICS-2015




2003

-  DCT-Based Image Watermarking Using Subsampling- Verilog with Matlab
-  VLSI Implementation of Invisible Digital Watermarking Algorithms- Verilog with Matlab





2004

-  An FPGA-based Architecture for Real Time Image Feature Extraction- Verilog with Matlab
-  Contrast Enhancement of Color Images using Tunable Sigmoid Function- Verilog with Matlab
-  Robust DWT-SVD Domain Image Watermarking Embedding Data in All Frequencies
-  Shift Invert Coding (SINV) for Low Power VLSI
-  VLSI Implementation of Discrete Wavelet Transform (DWT) and IDWT for Image Compression- Verilog with Matlab









2005

-  A VLSI Architecture for Visible Watermarking in a Secure Still Digital Camera (S2DC) Design (Corrected)- Verilog with Matlab
-  Digital Design of DS-CDMA Transmitter Using Verilog HDL and FPGA
-  Visual Attention Driven Image to Video Adaptation- Verilog with Matlab

2006

-  A Lossless Data Compression and Decompression Algorithm and Its Hardware Architecture
-  A Verilog Implementation of UART Design with BIST Capability
-  An Optimum ORA BIST for Multiple Fault FPGA Look-Up Table Testing
-  Image Compression with Different Types of Wavelets- Verilog with Matlab

2007

-  A Low-Power Multiplier With the Spurious Power Suppression Technique
-  A VLSI architecture for a Run-time Multi-precision Reconfigurable Booth Multiplier
-  Design and Implementation of a low complexity real lossless Image compression method for wireless endoscopy capture system- Verilog with Matlab
-  Implementation of a Multi-channel UART Controller Based on FIFO Technique and FPGA
-  Improvement of the Orthogonal Code Convolution Capabilities Using FPGA Implementation
-  Low-power and high-quality Cordic-based Loeffler DCT for signal processing
-  Low-Power Built-In Logic Block Observer Realization for BIST Applications-VHDL
-  Video Adaptation for Small Display Based on Content Recomposition- Verilog with Matlab

Verilog Course Team

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- ✚ VLSI Implementation of High Speed and High Resolution FFT Algorithm Based on Radix 2 for DSP Application

2008

- ✚ A Robust UART Architecture Based on Recursive Running Sum Filter for Better Noise Performance
- ✚ FPGA Based Design of a Novel Enhanced Error Detection And Correction Technique
- ✚ FPGA Implementation of USB Transceiver Macrocell Interface with USB2.0 Specifications
- ✚ FPGA Implementation of a Scalable Encryption Algorithm
- ✚ Fuzzy based PID Controller using Verilog HDL for Transportation Application
- ✚ Implementation of 64 Point FFT using Vedic Multiplier
- ✚ Implementation of IEEE 802.11 a WLAN Baseband Processor
- ✚ Multiplier design based on ancient Indian vedic multiplier
- ✚ Research on Fast Super-resolution Image Reconstruction Base on Image Sequence-Verilog with Matlab
- ✚ VLSI Implementation of an Edge-Oriented Image Scaling Processor- Verilog with Matlab

2009

- ✚ 3D Discrete Wavelet Transform VLSI Architecture for Image Processing- Verilog with Matlab
- ✚ A Fast Hardware Approach for Approximate, Efficient Logarithm and Antilogarithm Computations
- ✚ An Effective Fast and Small-Area Parallel-Pipeline Architecture for OTM- Convolutional Encoders
- ✚ Biometric Encryption using Fingerprint Fuzzy Vault for FPGA-based Embedded Systems- Verilog with Matlab
- ✚ CSI Multimedia Architecture
- ✚ Fast Scaling in the Residue Number System
- ✚ Design and Implementation of Boundary-Scan Circuit
- ✚ FPGA Based Power Efficient Channelizer For Software Defined Radio
- ✚ FPGA-Based Face Detection System Using Haar Classifiers- Verilog with Matlab
- ✚ Hardware Algorithm for Variable Precision Multiplication on FPGA
- ✚ Implementing Gabor Filter for Fingerprint Recognition Using Verilog HDL- Verilog with Matlab
- ✚ VLSI Implementations of the Cryptographic Hash Functions MD6

2010

- ✚ FPGA Implementations of the Hummingbird Cryptographic Algorithm
- ✚ A High-speed 32-bit Signed Unsigned Pipelined Multiplier
- ✚ Software-Defined Radio for OFDM Transceivers
- ✚ VLSI Implementation of Fully Pipelined Multiplier less 2D DCT IDCT Architecture for JPEG- Verilog with Matlab
- ✚ Product Reed-Solomon Codes for Implementing NAND Flash Controller on FPGA chip

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- ✚ High Speed and Low Space Complexity FPGA Based ECC
- ✚ FPGA Implementation of Parallel 2-D MRI Image Filtering Algorithms- Verilog with Matlab
- ✚ FPGA Implementation of Modular Multiplication methods using Cellular Automata
- ✚ FPGA Implementation of High Performance LDPC Decoder using Modified 2-bit
- ✚ Design of Low-Power High-Speed Truncation-Error-Tolerant Adder
- ✚ Design of Low-Cost High-performance Floating-point Fused Multiply-Add with Reduced Power
- ✚ Coherent Amplitude Modulated QAM-QPSK
- ✚ A Pipeline VLSI Architecture for High-Speed Computation of the 1-D Discrete Wavelet Transform- Verilog with Matlab
- ✚ A New VLSI Architecture of Parallel Multiplier–Accumulator Based on Radix-2 Modified Booth Algorithm
- ✚ A Memory-Efficient and Highly Parallel Architecture for Variable Block Size Integer Motion Estimation in H.264AVC- Verilog with Matlab
- ✚ A High Performance Binary to BCD Converter for Decimal Multiplication.

2011

- ✚ A New Reversible Design of BCD Adder
- ✚ A Multichannel Watermarking DCT-DWT- Verilog with Matlab
- ✚ An Efficient Implementation of Floating Point Multiplier
- ✚ An implementation of a 2D FIR filter using the signed-digit number system- Verilog with Matlab
- ✚ Automatic Road Extraction using High Resolution Satellite Images based on Mean Shift Method- Verilog with Matlab
- ✚ Built-In Generation of Functional Broadside Tests Using a Fixed Hardware Structure
- ✚ Design and FPGA Implementation of CORDIC-based 8-point 1D DCT Processor
- ✚ Design and Implementation of APB Bridge based on AMBA 4.0
- ✚ Design and VLSI implementation of high-performance face-detection engine for mobile applications- Verilog with Matlab
- ✚ Design Enhancement of Combinational Neural Networks Using HDL based FPGA Framework for Pattern Recognition- Verilog with Matlab
- ✚ Efficient VLSI Architecture for Discrete Wavelet Transform- Verilog with Matlab
- ✚ FPGA based FFT Algorithm Implementation in WiMAX Communications System
- ✚ FPGA Implementation of an Adaptive Filter Robust to Impulsive Noise Two Approaches- Verilog with Matlab
- ✚ High Speed ASIC Design of Complex Multiplier Using Vedic Mathematics
- ✚ Image Encryption Based On AES Key Expansion- Verilog with Matlab
- ✚ Parallel Architecture for Hierarchical Optical Flow Estimation Based on FPGA- Verilog with Matlab
- ✚ PCFICH Channel Design for LTE using FPGA- Verilog with Matlab
- ✚ Pipelined Architecture for FPGA Implementation of Lifting-Based DWT- Verilog with Matlab

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2012

- ✚ A Pipeline VLSI Architecture for Fast Computation of the 2-D Discrete Wavelet Transform- Verilog with Matlab
- ✚ A Region Merging Approach for Image Segmentation on FPGA- Verilog with Matlab
- ✚ An Efficient Viterbi Decoder
- ✚ Design of 64-bit low power parallel prefix VLSI adder for high speed arithmetic circuits
- ✚ Design of Low Power TPG Using LP-LFSR
- ✚ FPGA Based Real Time Face Detection using Adaboost and Histogram Equalization- Verilog with Matlab
- ✚ HDL Design for Image Segmentation using Gabor filter for Disease Detection- Verilog with Matlab
- ✚ High Speed and Area Efficient Vedic Multiplier
- ✚ High Speed Modified Booth Encoder Multiplier for Signed and Unsigned Numbers
- ✚ Improved Architectures for a Fused Floating-Point Add-Subtract Unit
- ✚ Low-Power and Area-Efficient Carry Select Adder
- ✚ Low-Power Variation-Aware Flip Flop
- ✚ Modified Architecture for Real-Time Face Detection using FPGA- VHDL with Matlab
- ✚ Very Low Resolution Face Recognition Problem- Verilog with Matlab
- ✚ Viterbi-Based Efficient Test Data Compression
- ✚ VLSI Architecture of Arithmetic Coder Used in SPIHT- Verilog with Matlab

2013

- ✚ Cordic for Fixed Angle Rotation
- ✚ Design and Implementation of 32 Bit Unsigned Multiplier Using CLAA and CSLA
- ✚ Design Of High Speed Floating Point Mac Using Vedic Multiplier And Parallel Prefix Adder
- ✚ Design of High Speed Low Power Multiplier using Reversible logic-a Vedic Mathematical Approach
- ✚ Design of High-speed low power Reversible Logic BCD Adder Using HNG gate
- ✚ Low-Power, High-Throughput, and Low-Area Adaptive FIR Filter Based on Distributed Arithmetic Techniques for Compensating Memory Errors in JPEG2000- Verilog with Matlab
- ✚ Visible and Infrared Image Fusion using the Lifting Wavelets- VHDL with Matlab
- ✚ VLSI Implementation of an Adaptive Edge -Enhanced Image Scalar for RealTime Multimedia Applications- Verilog with Matlab
- ✚ VLSI Implementation of an Adaptive Edge-Enhanced Color Interpolation Processor for Real-Time Video Applications- Verilog with Matlab

2014

- ✚ A Distributed Canny Edge Detector Algorithm and FPGA Implementation- Verilog with Matlab
- ✚ A New Secure Image Transmission Technique via Secret-Fragment-Visible Mosaic Images- Verilog with Matlab

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- ✚ Design and Implementation of Orthogonal Code Convolution Using Enhanced Error Control Technique
- ✚ FPGA Implementation of the C-Mantec Neural Network Constructive Algorithm
- ✚ High Speed Convolution and Deconvolution Algorithm (Based on Ancient Indian Vedic Mathematics)
- ✚ SW-HW Implementation of Image Covariance Descriptor For Person Detection Systems
- ✚ VLSI Based Image Zooming Application by a Novel Adaptive Edge Enhancement Technique- Verilog with Matlab
- ✚ Hardware Efficient VLSI Architecture for 3-D Discrete Wavelet Transform-Verilog with Matlab
- ✚ Area-Delay-Power Efficient Fixed-Point LMS Adaptive Filter With Low Adaptation-Delay-Verilog with Matlab
- ✚ ASIC Implementation of Two Stage Pipelined Multiplier
- ✚ Hardware Software Co-Simulation of Edge Detection for Image Processing System-Verilog with Matlab

2015

- ✚ Reviewing High-Radix Signed-Digit Adders
- ✚ A New-High Speed-Low Power-Carry Select adder Using Modified GDI
- ✚ Fully Pipelined Low-Cost and High-Quality Color Demosaicking VLSI Design for Real-Time Video Applications-Verilog HDL with Matlab
- ✚ A Modified Partial Product Generator for Redundant Binary Multipliers

The above listed topics are just for reference. If you have any new Ideas/Papers send to us at **info@verilogcourseteam.com** or Call **+91 98942 20795**.