Keynote address

Digital systems design with ASIC and FPGA: a novel course using CD/DVD and on-line formats

Improving embedded systems education: laboratory enhancements using programmable systems on chip

Building up a course in reconfigurable computing

FPGA-based autonomous vehicle competitions in a Capstone design course

An analog leaf cell for analog circuit design

A study on renovative plan for engineering educational curricula and courses for SoC (system on chip) design architects in Korea's IT industry

Teaching digital ASIC design to students with heterogeneous previous knowledge

A cohesive FPGA-based system-on-chip design curriculum

Hardware lab at home possible with ultra low cost boards

Remote laboratory support for an introductory microprocessor course

Design of a microelectronic circuits course using interactive methods

Teaching SoC design in a project-oriented course based on robotics

ipPROCESS: using a process to teach IP-core development

Teaching nanotechnology by introducing crossbar-based architecture and quantum-dot cellular automata

Graduate class for system-level low-power design

Impact of an SoC research project on microelectronics education: a case study

Embedded system design with FPGAs using HDLs (lessons learned and pitfalls to be avoided)

Revolution in electronic EDA education/research: GOSPL

An educational program for engineering careers in analog and mixed-signal electronic design

Teaching game theory for computer engineering

A two-week program for a platform-based SoC design

Bridging circuits and electromagnetics in a curriculum aimed at microelectronic analog and microwave simulation and design

Real world SoC experience for the classroom

Hardware/software co-training lab: from VHDL bit-level coding up to CASE-tool based system modeling

A platform FPGA-based hardware-software undergraduate laboratory

A context-specific electronic design and prototyping course

Proxy-based integration of reconfigurable hardware within simulation environments: improving E-learning experience in microelectronics

Teaching SoC-oriented computer design course

What comes after most semiconductor fabs are "outsourced" to Asia?: major challenges in educating future RF/analog IC designers in the U.S.

Expandable and robust laboratory for microprocessor systems

A framework for high-level synthesis of system-on-chip designs

Using second generation SOPC boards for student design projects

The SoC-Mobinet model in system-on-chip education

A reprogrammable SoC design for a real-time control application
A manual on ASIC front to back end design flow p. 75
Teaching computer organization with HDLs: an incremental approach p. 77
Partnership between venture companies and universities through students’ extra-curriculum activities p. 79
Development of partnership between industry and university via customized field-oriented curriculum p. 81
A specialized graduate program in VLSI design tools and technology p. 83
An FPGA-based daughtercard for TI’s C6000 family of DSKs p. 85
Simplified micro-controller & FPGA platform for DSP applications p. 87
A simulink-to-FPGA implementation tool for enhanced design flow p. 89
Senior-level embedded system design project using FPGAs p. 91
On ensuring safety and liveness properties of concurrent models in SystemC p. 93
Teaching system-level design using SpecC and SystemC p. 95
Use of a soft-core processor in a hardware/software codesign laboratory p. 97
Legitimate peripheral participation on FPGA for fine grain microprocessor design education p. 99
Inexpensive student-assembled FPGA / microcontroller board p. 101
A complete MP3 decoder on a chip p. 103
Teaching formal methods within system-on-a-programmable-chip design p. 105
Growth areas in the electronics industry
PEER: enriching secondary engineering education through a college summer camp p. 109
A UAV-based computer engineering Capstone senior design project p. 111
Experts-in-team, interdisciplinary project p. 113
Tools for in-circuit testing of on-line content processing hardware p. 117
Teaching hardware description and verification p. 119
DefSim – the educational integrated circuit for defect simulation p. 121

Table of Contents provided by Blackwell’s Book Services and R.R. Bowker. Used with permission.