

Curriculum Vitae Of

TRI CAO HUU

San Jose State University
Dept. of Electrical Engineering
San Jose, CA 95192-0084
(408) 924-3951

RESEARCH INTEREST

- Computer architecture and runtime reconfigurable architecture
- Parallel VLSI computation
- Advanced microprocessor systems
- Embedded System
- HDL/FPGA based design methodology, ASIC design
- Asynchronous Digital System Design

EDUCATION

Ph. D., Electrical Engineering, Texas A&M University, Dec. 1989.
Dissertation Title: "A Special Purpose Architecture for a Real-time Stereo Vision Model"

M.S., Electrical Engineering, San Jose State University, Jun. 1972
Thesis Title: "Cellular Array Arithmetic Unit"

B.S., Electrical Engineering (with honors),
San Diego State University, Jan. 1971

WORK EXPERIENCE

Professor, Department of Electrical Engineering
San Jose State University, September 1990 to present
Courses taught: Micro-computer system design, Advanced computer architectures,
Multicore Architectures, Advanced logic design, Embedded system design and Short
courses in HDL-based design methodology.

Guest Professor, Institute of Microelectronic Systems
Darmstadt University of Technology, 1998-1999
German

Adjunct Assistant Professor, Department of Computer Science
Texas A&M University, Jan. 1990 to Sep. 1990
Lecturer (part-time), Department of Electrical Engineering
Texas A&M University, Sep. 1986 to Dec. 1989

Director of R&D, EMC Ltd.

Toronto, Ontario, Jan. 1982 to Aug. 1986

Responsible for research and development of EMC product line. Responsible for project management and supervision of technical staff. Preparation of technical proposals, seeking funds and serving as liaison with the National Research Council, Canada (NRC) and other clients for consulting and researching contracts. EMC Ltd. is a small R&D and manufacturing company in highly distributed SCADA systems with emphasis on the 'Smart Sensor' concept.

Senior Research Engineer, Barringer Research Ltd.

Toronto, Ontario, Oct. 1979 to Jan. 1982

Investigated and developed computer systems applying the COTRANTM principle (Correlation of Transient Response) to a number of applications in tramp metal detection (US Steel, Rexnord) and airborne exploration survey.

Member of Scientific Staff, Bell Northern Research

Ottawa, Ontario, Jun. 1977 to Oct. 1979

System Integrity group, supporting the development of the digital switching system

System Design Engineer, Leigh-Marsland Engineering Ltd.

Waterloo, Ontario, Sep. 1972 to Jan. 1977

Responsible for the design and implementation of a Pattern Recognition Unit (high-speed, bit sliced, MECL technology) for OCR application. Canadian patent awarded.

Other Related Experiences

Consultant for HP, Computer Enterprise Division,	2001-02
Consultant for Quantum,	Winter 99
Consultant for IBM, Storage Division,	Summer 1998
Consultant for Loral Western Lab,	Summer 1994.
Consultant for SixGraph Computing Ltd.,	Summer 1992
Consultant for FUJITSU AMERICA INC.,	Summer 1991

PUBLICATION

- Tri Caohuu and John Edwards, “*Implementation an Efficient Library for Asynchronous Circuit Design on Synopsys*”, ICSE2014, Aug. 19-21, Las Vegas, Nevada.
- Tin-Yam Yau, Tri Caohuu, and JeongHee Kim, “*An Efficient All-Digital Phase-Locked Loop with Input Fault Detection*”, Proc. of the Int. Conf. on Information Science and Applications (ICISA 2011), April 26-29, Jenu, Korea.
- Tejesh Makanawala and Tri Caohuu, “*Robotic FPGA Tool Box*”, in the Proc. of the 14th Int. Conf. on Methods and Models in Automation and Robotics (MMAR2010), Aug. 23-26, Miedzzydroje, Poland.
- Nicholas J. Pouliot, Tri Caohuu and Le Hoai Nghia, “*Integration of Asynchronous Components into Synthesis Tools*”, Int of the Proc. of the Int. Conf. on Information Technology Education (IT-EDU2010), Aug.18-21. HCM City, Vietnam
- Marc Theisen, Juergen Becker, Manfred Glesner, and Tri Caohuu, “*Parallel Hardware Compilation in Complex Hardware/Software Systems based on High-Level Code Transformation*”, "Architektur von Rechensystemen "Workshop(ARCS'99), Oct. 4-7, Jena, Germany
- Tri Caohuu, Juergen Becker, Manfred Glesner, and Thuy Le, “*Reconfigurable Reduced Crossbar: a Novel Approach to Large Scale Switching*”, in the Proc. of the Ninth International Workshop on Field Programable Logic and Application(FPL'99), Aug. 30 - Sep. 2, Glasgow, Scotland, UK.
Note: Extended version is published as Short Paper in the "Lecture Notes in Computer Sciences", LNCS 6173, Lysaght-Irvine-Hartenstein (Eds.), UK, 99.
- Thuy Le, Tri Caohuu, Manfred Glesner, and Juergen Becker, “*Hardware Performance and Communication Models of a Distributed Memory Parallel Computer: a Case Study*”, in the Proc. of the International Symposium on High Performance Computer Systems (HPCS'99), June 15, 99, Kingston, Canada.
- Tri Caohuu and Sushma Muddana, "Reduced Cross-bar: A Novel Approach to Non-Blocking Network", pp. 83. to 89., Vol. 2, VACETS Technical Journal, Feb. 1997
- Tri CaoHuu, Ravi Ramanathaswamy, and H. S. Ramagopal, “*On the Design and Implementation of a Real-time Morphology Processor*“, pp. 27 to 36., Vol 1, April 96, International Journal of Computers and Their Applications.
- Tri CaoHuu, H. S. Ramagopal, and Ravi Ramanathaswamy, "On the Design and Implementation of a Morphology Processor Using SMESH Architecture", in Proc. Int. Society for Computers and Their Applications (ISCA'95), Nov. 28 - Dec. 1, 95, Honolulu

- Tri Caohuu and Micheal Chan, "Special Memory Structure for Image processing", in Proc. Sixth Int. Conf. on Signal Processing Applications and Technology, Oct. 24-26, 95, Boston. MA.
- Tri Caohuu, Nguyen Le , and Khoi Nguyen, " Real-time Video Compressor Using SMESH", in Proc. Int. Conf. on Signal Processing Applications and Technology, Oct. 24-26, 95, Boston. MA.
- Cao Tuan and Tri Caohuu, "Jacobi Relaxation Convergence for Truly Volumetric Positron Emission Tomography on Advanced Parallel Machine Systems", in Proc. SPIE's International Symposium, Jul. 24-29, 1994, San Diego.
- Tri Caohuu, " Performance Analysis of Coherent Cache Protocols for Multiple Processor Systems", in Proc. Fourth Annual Informatics Week Conference, Aug. 2-8, 1994, Ho Chi Minh City, Viet Nam.
- Tri CaoHuu, Winson Young, and Kwangho Lee, " Universal Read/Write Buffer For Multiprocessor Cache Coherancy Schemes ", in Proc. 27th Asilomar Conference on Signals, Systems, and Computers, Nov. 1-3, 1993, Monterey, CA.
- Tri CaoHuu and Jeffrey Lee, " Efficient Real-time Image Processing on Parallel Multiple DSP architecture", in Proc. Int. Conf. on Signal Processing Applications and Technology, Nov. 2-5, 92, Cambridge, MA.
- Tri CaoHuu, Jeffrey Lee, " Effective 2-D convolution and 2-D FFT on Mesh Connected TMS32C40 Architecture", in Proc. 26th Asilomar Conference on Signals, Systems, and Computers, Oct. 26-28, 1992, Monterey, CA.
- Tri CaoHuu, "A Special Purpose Architecture for Parallel Implementations of Morphological Filters in Real-time", in Proc. SPIE's 1990 International Symposium on Optical & Optoelectronic Applied Science & Engineering, San Diego, Jul. 1990.
- Cao Tuan, Joaquin Chan, Tri CaoHuu, Tom Sankar and Huguette Remy, "Medical Volumetric", International Journal of Modeling and Simulation, Feb. 1990.
- Cao Tuan, Tri CaoHuu, Joaquin Chan and Huguette Remy, "Fast Display Methods of Medical Objects", in Proc. IASTED '90, The International Symposium on Applied Informatics, Innsbruck, Austria, Feb. 1990.
- Tri CaoHuu et al., "Reconstruction Tridimensionnelle en Imagerie Medical: Application en Imagerie Scanner X et Imagerie par Resonance Magnetique", in Proc. ACFAS '90, 58e Congres de l'ACFAS, Laval, Quebec, Canada, May 1990.

- Tri CaoHuu, Cao Tuan, Helene Remy and Joaquin Chan, "Computer Graphics Techniques in Diagnostic Radiology" The 10th Symposium of Engineering application of Mechanics, EAM '90, Queen University, Ontario, Canada, May 1990.
- Tri CaoHuu, Pierce Cantrell, Norman Griswold and Yu-Ying Leung, "Real-time Convolution and Morphology on VLSI-based Mesh: a Systolic Approach," in Proc. ISCAS '89, International Symposium on Circuits and Systems, Oregon, May 1989.
- Tri CaoHuu, "Real-time UNIX on NS32016," in Proc. Conf. des Systemes d'Informatique, Universite de Laval, Quebec, Oct. 1985.
- Bernard Fleet, Tri CaoHuu, and Sankar D. Gupta, "Prospects of the use of microprocessor in the development of Intelligent Sensors," in Proc. Int. Conf. on Chemical Sensors, Fukuoka, Japan, Sep. 1983.

SUPPLEMENTARY INFORMATION

Familiar with and having working experience with these following tools:

Programming languages: Assembler (80X86, MC680X0, TMS 30CX0), C++, LISP)

Digital design using VHDL/Verilog/ FPGA

CAD tools: Xilinx, Synopsys, and Cadence

PERSONAL INFORMATION

Birthdate: February 1, 1950

Birthplace: Hue, Vietnam

Citizenship: USA

Languages: Vietnamese, English, French, some German

Marital Status: Married