

Dr. Vijay K. Madisetti

Fellow, IEEE

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Address:

225 Dodd Ln

Alpharetta, GA 30005

Employment:

- 1989-present: Full Professor of Cybersecurity & Privacy, and Electrical & Computer Engineering (**Georgia Tech, Atlanta, GA 30332**).

Areas of Technical Interest – Topics in Computer Science, Electrical Engineering, and Computer Engineering.

Education: **PhD** (EECS, University of California at Berkeley, 1989), **B.Tech** (Hons) in Electronics and Electrical Communications Engineering (Indian Institute of Technology, Kharagpur, 1984).

Startup Companies:

Director, **VP Technologies, Inc.** (1995-): A startup commercialized through Georgia Tech's Advanced Technology Development Corporation (ATDC) focusing on digital software and hardware design services for military market. <http://www.vptinc.net>

Director, **Soft Networks, LLC** (2001-2007): A startup commercialized through Georgia Tech support focusing on software development tools and compilers for Cellular/WiFi/VOIP/telecommunication products. <http://www.soft-networks.com>

Director, **Elastic Video Inc.** (2007- 2009): A startup commercialized through Georgia Tech's VentureLab (<http://venturelab.gatech.edu>) development image and video processing software for wireless & IP networking.

Litigation Experience (2019-2024) With Testimony

(Note: There may be multiple cases between the parties, e.g., District Court v. ITC, US versus Foreign Cases)

St. Lawrence Comm. v. Amazon

Case No. 2:19-CV-00027-JRG

Expert for Amazon

Technology: Multimedia Codecs

Submitted Expert Reports/Deposition (2020-2020)

PanOptis v. Apple

Case No. 2:19-CV-00066-JRG

Expert for PanOptis

Technology: LTE

Submitted Expert Reports/Deposition/Trial (2019-2020)

GAS v. Sprint Communications, Verizon et al.

Case No. 2:20-cv-00007-RWS

Expert for General Access (GAS)

Technology: LTE/5G

Submitted Expert Reports/Deposition (9/21-22)

Causam v. Ecobee, Itron, et al

Case No. ITC 337-TA-1277

Expert for Causum

Technology: Load Management

Submitted Expert Reports and Deposition (6/22-8/23)

Masimo v. Apple

Case No. ITC 337-TA-1276 and related cases (Trade Secret & Delaware)

Expert for Masimo (2018-)

Technology: Pulse Oximetry

Submitted Expert Reports, Deposition & Trial

TQ Delta v. Nokia, Adtran, CommScope, 2Wire, et al

Cases in Delaware & Texas

Expert for TQ Delta (2019 -)

Technology: DSL and Cable Modems

Submitted Expert Reports, Depositions & Hearings.

Paltalk Holdings v. Cisco Systems Inc.

Western District of Texas (6:21-CV-00757-ADA)

Expert for Paltalk Holdings (2022-2024)

Technology: VOIP Technologies

Submitted Expert Reports and Deposition

Ollnova Technologies v. Carrier Group, Ecobee, et al

Southern District of Florida (Case 9:22-cv-80388-DMM) & ED Texas

Expert for Ollnova (2022-2023)

Technology: IoT

Submitted Report and Deposition & Trial

VideoLabs v. Asus, et al

Case No: ITC 337-TA-1323

Expert for VideoLabs (2022-2023)

Technology: Video Conferencing

Reports and Depositions

ViaTech v. Adobe

District of Delaware (CA No. 20-358-RGA-MPT)

Expert for ViaTech (2019-2023)

Technology: Software Licensing

Reports, Deposition, and Trial Testimony

Zilkr v. Cisco

ED Texas, Marshall (Case 2:22-CV-166-JRB-RSP)

Expert for Zilkr (2022-)

Technology: Webex

Reports & Deposition

HouseCanary versus Amrock/Intuit

District Court Bexar County, Tx (2016-CI-06300)

Expert for House Canary (2023-)

Technology: Machine Learning

Reports & Deposition

SpaceTime 3D v. Apple

WD Texas Waco (1-23-cv-00553-ADA)

Expert for SpaceTime 3D

Technology: User Interfaces (2022-)

Reports & Deposition

Pantech v. LG

ED Texas Texarkana (5:22-cv-00113)

Expert for LG (2023-2024)

Technology: Multitasking in Mobile Platforms

Reports & Deposition.

Additional matters include declarations supporting IPRs at the PTAB for Google (US Patent 8,601,154), On Semiconductor (US Patent 6,212,079), Ubisoft (US Patent 5,490,216), Lumens JDA (2017-2019), Broadcom (WiFi), Sony (US Patent 6,101,534), Kia, (US Patent 5,530,431), Qualcomm, Ericsson, Daimler Benz, VW, Estech, Amazon, Ring, Digital Ally, On Semiconductor, LoganTree, Unified Patents, BMC Software, Masimo, Sentius, BMW, Facebook, LG, PAWS, Google, Daimler, FedEx, Surge LLC, and Dolby.

Earned Degrees

- 1. B. Tech (Hons), Electronics & Electrical Comm. Engineering**
Indian Institute of Technology (IIT), Kharagpur, India
1984.
- 2. Ph.D., Electrical Engineering & Computer Sciences (EECS)**
University of California (UC), Berkeley. CA
1989.

Books

- 1. VLSI Digital Signal Processors**
Madiseti, V.K.;
Boston: MA, IEEE Press: Butterworth Heinemann, 1995, 525 pp.
- 2. Quick-Turnaround ASIC Design in VHDL**
Romdhane, M., Madiseti, V.K., Hines, J.
Boston: MA, Kluwer Academic Press, 1996, 190 pp.
- 3. The Digital Signal Processing Handbook (First Edition)**
Madiseti, V. K., Williams, D. (Editors)
CRC Press, Boca Raton, Fla, 1998, 2500 pp.
- 4. VHDL: Electronics Systems Design Methodologies.**
Madiseti, V. K. (Editor)
Boston: MA, IEEE Standards Press, 2000, ISBN 0-7381-1878-8.
- 5. Platform-Centric Approach to System-on-Chip (SoC) Design.**
Madiseti, V. K., Arpnikanondt, A.
Springer, Boston: MA, Springer, 2004, 280 pp.

6. The Digital Signal Processing Handbook – Second Edition.

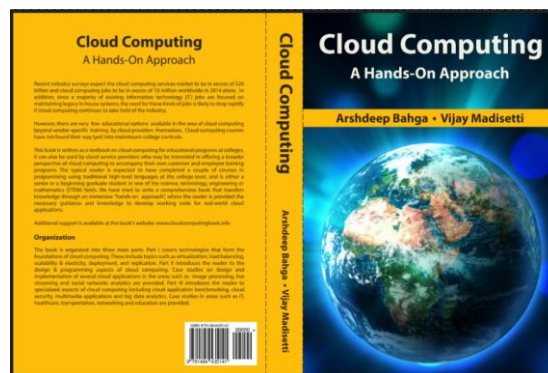
Madiseti, V. K. (2009)
CRC Press, Boca Raton, Fla.

7. Cloud Computing: A Hands-On Approach

A Bahga, V. Madiseti (2013)
KDP Press, 2013, 454 pp. Outside US Published by *Universities Press* (Ex-Pearson). Selected as *Best in Computing 2014* (By *ACM Computing Reviews*)

8. Internet of Things: A Hands-On Approach

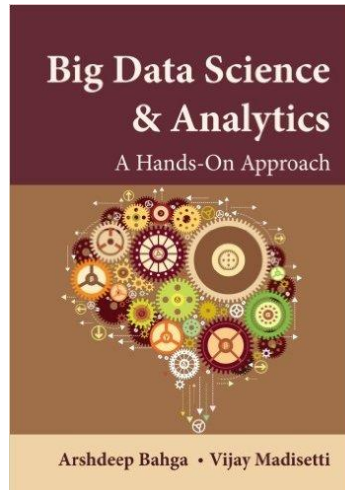
A Bahga, V. Madiseti (2014)
KDP Press, 2014, 450 pp. Outside US Published by *Universities Press* (Ex-Pearson),



9. Big Data Science & Analytics: A Hands-On Approach

A Bahga, V. Madiseti (2016)
KDP Press, 2016, 542 pp.

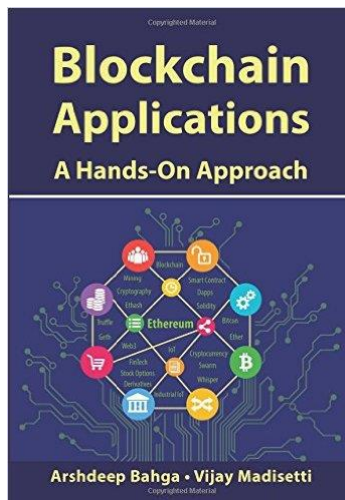
[The book will tremendously benefit those who are interested in BDA: ACM Computing Reviews]



10. Blockchain Applications: A Hands-On Approach

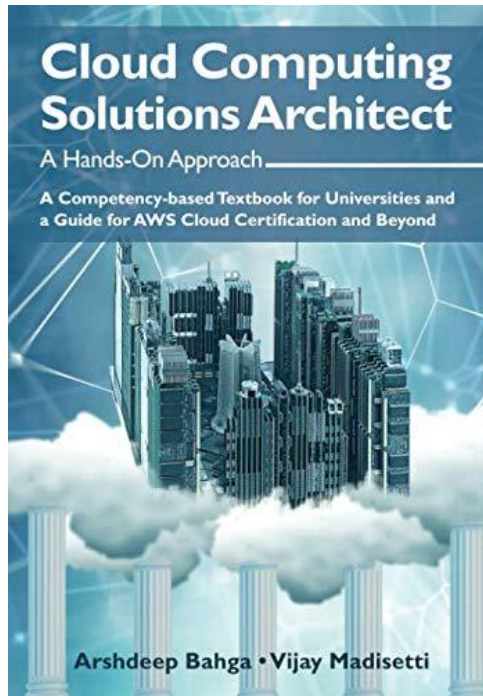
A Bahga, V. Madiseti (2017)
KDP Press, 2017, 380 pp.

[The balance between explanation of architecture and more technical proof of concept through code is quite engaging: ACM Computing Reviews]



11. Cloud Solutions Architect: A Hands-On Approach

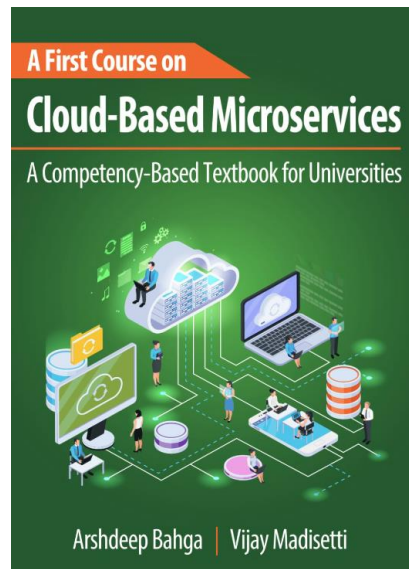
A Bahga, V. Madiseti (2020)
KDP Press, 2020, 930 pp.



12. A First Course in Cloud-Based Microservices

A Bahga, V. Madiseti (2024)

KDP Press, 2024, 590 pp.





Edited Books & Collection of Papers

- 1. Advances in Parallel & Distributed Simulation**
Madiseti, V.K.; Nicol, D., Fujimoto, R. (Editors)
San Diego, CA: SCS Press, 1991, 200 pp.
- 2. Modeling, Analysis, Simulation of Computer & Telecommunications Systems**
Madiseti, V., Gelenbe, E., Walrand, J. W. (Editors)
Los Alamitos: CA, IEEE Computer Society Press, 1994, 425 pp.
- 3. Modeling & Simulations on Microcomputers**
Madiseti, V.K. (Editor)
San Diego, CA: SCS Press, 138 pp. 1990.

Editorship of Journals & Transactions

- 1. IEEE Design & Test of Computers**
Special Issue: Reengineering Digital Systems
April – June 1999 (Vol 16, No 2)
Madiseti, V.K (Editor)
Los Alamitos: CA, IEEE Computer Society Press, 1999.

2. IEEE Design & Test of Computers

Special Issue: Rapid Prototyping of Digital Systems

Fall 1996 (Vol 13, No 3)

Madiseti, V., Richards, M. (Editors)

Los Alamitos: CA, IEEE Computer Society Press, 1994, 425 pp.

3. IEEE Transactions on Circuits & Systems II

Associate Editor: 1993-1995.

4. International Journal in Computer Simulation

Associate Editor: 1990-1993

5. International Journal in VLSI Signal Processing

Editorial Board: 1995 - Present

Issued US Patents (Recent)

- [1] 11,580,540 Methods and systems for smart contracts for security and filtering, Issued February 14, 2023
- [2] 11,556,928 Methods and systems for smart contracts for security and filtering, Issued January 17, 2023
- [3] 11,553,039 Service meshes and smart contracts for zero-trust systems, Issued January 10, 2023
- [4] 11,538,031 Method and system for identity and access management for blockchain interoperability, Issued December 27, 2022
- [5] 11,528,147 Verifying integrity and secure operations of cloud-based software services, Issued December 13, 2022
- [6] 11,526,879 Method and system for zero-knowledge and identity based key management for decentralized applications, Issued December 13, 2022
- [7] 11,494,764 Methods and systems for smart contracts for security and filtering, Issued November 8, 2022

- [8] 11,483,622 Hybrid blockchains and streamchains using non-crypto hashes for securing audio-, video- image-, and speech-based transactions and contracts, Issued October 25, 2022
- [9] 11,379,612 Method and system for securing cloud storage and databases from insider threats and optimizing performance, Issued July 5, 2022
- [10] 11,316,933 Service meshes and smart contracts for zero-trust systems, Issued April 26, 2022
- [11] 11,316,690 Blockchain token-based cloud orchestration architecture for discrete virtual network instances, Issued April 26, 2022
- [12] 11,314,695 Method and system for real-time collaboration and annotation-based action creation and management, Issued April 26, 2022
- [13] 11,283,865 Service meshes and smart contracts for zero-trust systems, Issued March 22, 2022
- [14] 11,250,394 Method and system for blockchain-based gemstone ownership, identity, custody, supply-chain transfer, trading, and secure payments, Issued February 15, 2022
- [15] 11,226,938 Method and system for real-time collaboration and event linking to documents, Issued January 18, 2022
- [16] 11,223,877 Hybrid blockchains and streamchains using non-crypto hashes for securing audio-, video-, image-, and speech-based transactions and contracts, Issued January 11, 2022
- [17] 11,222,331 Method and system for blockchain-based gemstone ownership, identity, custody, supply-chain transfer, trading, and secure payments, Issued January 11, 2022
- [18] 11,212,268 Method and system for identity and access management for blockchain interoperability, Issued December 28, 2021
- [19] 11,080,240 Method and system for real-time collaboration and annotation-based action creation and management, Issued August 3, 2021

- [20] 11,074,650 Method and system for blockchain-based gemstone ownership, identity, custody, supply-chain transfer, trading, and secure payments, Issued July 27, 2021
- [21] 10,983,768 Method and system for persistent helpers for functions as a service (FAAS) in cloud computing environments, Issued April 20, 2021
- [22] 10,853,772 Method and system for exchange of value or tokens between blockchain networks, Issued December 1, 2020
- [23] 10,579,643 Method and system for tuning blockchain scalability, decentralization, and security for fast and low-cost payment and transaction processing, Issued March 3, 2020
- [24] 10,503,927 Method and system for securing cloud storage and databases from insider threats and optimizing performance, Issued December 10, 2019
- [25] 10,460,283 Smart contract optimization for multiparty service or product ordering system, Issued October 29, 2019
- [26] 10,459,946 Method and system for tuning blockchain scalability, decentralization, and security for fast and low-cost payment and transaction processing, Issued October 29, 2019
- [27] 10,402,589 Method and system for securing cloud storage and databases from insider threats and optimizing performance, Issued September 3, 2019
- [28] 10,394,845 Method and system for tuning blockchain scalability for fast and low-cost payment and transaction processing, Issued August 27, 2019
- [29] 10,289,631 Method and system for tuning blockchain scalability for fast and low-cost payment and transaction processing, Issued May 24, 2019
- [30] 10,255,342 Method and system for tuning blockchain scalability, decentralization, and security for fast and low-cost payment and transaction processing, Issued April 9, 2019

- [31] 10,243,743 Tokens or crypto currency using smart contracts and blockchains, Issued March 26, 2019
- [32] 10,204,339 Method and system for blockchain-based combined identity, ownership, integrity and custody management, Issued February 12, 2019
- [33] 10,204,148 Method and system for tuning blockchain scalability, decentralization, and security for fast and low-cost payment and transaction processing, Issued February 12, 2019
- [34] 10,121,143 Method and system for blockchain-based combined identity, ownership, integrity and custody management, Issued November 6, 2018
- [35] 10,102,526 Method and system for blockchain-based combined identity, ownership, integrity and custody management, Issued October 16, 2018
- [36] 10,102,265 Method and system for tuning blockchain scalability for fast and low-cost payment and transaction processing, Issued October 16, 2018
- [37] 9,935,772 Methods and systems for operating secure digital management aware applications, Issued April 3, 2018
- [38] 9,769,213 Method and system for secure digital object

8 International Journal of Electronic Commerce Studies

Ranked #8 in the list of issued US patents in the area of blockchain

Ranking in the area of US patents issued in the area of blockchain technology in 2020

Table 3. Patent by assignee

Applicant (Assignee)	Patents	%	Applicant (Assignee)	Patents	%
IBM	47	14.0%	Wells Fargo Bank	4	1.2%
Accenture Global Solutions	28	8.4%	Alibaba	3	0.9%
Bank of America	24	7.2%	Dell	3	0.9%
Capital One Services	12	3.6%	The Bank Of New York Mellon	3	0.9%
Mastercard	11	3.3%	The Toronto-Dominion Bank	3	0.9%
Guardtime IP Holdings Limited	8	2.4%	Verizon Patent And Licensing	3	0.9%
Madiseti Vijay K.	8	2.4%	Winklevoss I.P.	3	0.9%
Black Gold Coin, Inc.	7	2.1%	SAP	2	0.6%
Cisco	7	2.1%	Sony	2	0.6%
Acronis International	5	1.5%	Stampery	2	0.6%
Blockchain Asics	5	1.5%	Uipco	2	0.6%
Tran Bao	5	1.5%	Vmware	2	0.6%
Intel	4	1.2%	Walmart Apollo	2	0.6%
Northern Trust	4	1.2%	Wiig Rex	2	0.6%
Shocard	4	1.2%	Xage Security	2	0.6%

management, Issued September 19, 2017

Refereed Journal Publications

1. Trends in the Electronic Control of Mine Hoists

*Madisetti, V. and Ramlu, M.,
IEEE Transactions on Industry Applications, Vol IA-22, No. 6,
November/December 1986. Pages 1105-1112*

2. Multilevel range/NEXT performance in digital subscriber loops

Brand, G.; Madisetti, V.; Messerschmitt, D.G.;
Communications, Speech and Vision, IEE Proceedings I [see also IEE
Proceedings-Communications] ,Volume: 136 , Issue: 2 , April 1989
Pages:169 – 174

3. Seismic migration algorithms on parallel computers

Madisetti, V.K.; Messerschmitt, D.G.;
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and
Signal Processing, IEEE Transactions on], Volume: 39 , Issue: 7 , July 1991
Pages:1642 – 1654

4. Asynchronous algorithms for the parallel simulation of event-driven dynamical systems

Madisetti, V.K.; Walrand, J.C.; Messerschmitt, D.G.:
ACM Transactions on Modeling and Computer Simulation, v 1, n 3, July 1991,
Pages: 244-74

5. Synchronization mechanisms for distributed event-driven computation

Madisetti, V.K.; Hardaker, D.:
ACM Transactions on Modeling and Computer Simulation, v 2, n 1, Jan. 1992,
Pages: 12-51

6. Efficient VLSI Architectures for the Arithmetic Fourier Transform (AFT)

Kelley, B.T.; Madisetti, V.K.;
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and
Signal Processing, IEEE Transactions on] ,Volume: 41 , Issue: 1 , January
1993
Pages:365-378

7. The fast discrete Radon transform. I. Theory

Kelley, B.T.; Madisetti, V.K.;
Image Processing, IEEE Transactions on ,Volume: 2 , Issue: 3 , July 1993
Pages:382 – 400

8. The Georgia Tech digital signal multiprocessor

Barnwell, T.P., III; Madisetti, V.K.; McGrath, S.J.A.;
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and
Signal Processing, IEEE Transactions on] ,Volume: 41 , Issue: 7 , July 1993
Pages:2471 – 2487

9. The MIMDIX Environment for Parallel Simulation

Madisetti, V.K.; Hardaker, D.; Fujimoto, R.M.:
Journal of Parallel and Distributed Computing, v18, no. 4, August 1993,
Pages: 473-83.

10.LMSGEN: a prototyping environment for programmable adaptive digital filters in VLSI

Romdhane, M.S.B.; Madisetti, V.K.;
Chapter in VLSI Signal Processing, VII, 1994.,
Pages:33 – 42

11. Fixed-point co-design in DSP

Egolf, T.W.; Famorzadeh, S.; Madisetti, V.K.;
Chapter in VLSI Signal Processing, VII, 1994.,
Pages:113 - 126

12. A fast spotlight-mode synthetic aperture radar imaging system

Madisetti, V.K.;
Communications, IEEE Transactions on ,Volume: 42 , Issue: 234 , February-
April 1994
Pages:873 – 876

13. Rapid prototyping on the Georgia Tech digital signal multiprocessor

Curtis, B.A.; Madisetti, V.K.;
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and
Signal Processing, IEEE Transactions on] ,Volume: 42 , Issue: 3 , March
1994
Pages:649 – 662

14.Low-power signaling in asymmetric noisy channels via spectral shaping

Sipitca, M.; Madisetti, V.K.;
Signal Processing Letters, IEEE, Volume: 1 , Issue: 8 , Aug 1994
Pages:117 – 118

15. A quantitative methodology for rapid prototyping and high-level synthesis of signal processing algorithms

Madisetti, V.K.; Curtis, B.A.;
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and

Signal Processing, IEEE Transactions on] ,Volume: 42 , Issue: 11 , Nov. 1994
Pages:3188 – 3208

16. Computer Simulation of Application-Specific Signal Processing Systems

Casinovi, G.; Madisetti, V.K.;

International Journal in Computer Simulation, Vol. 4, No. 4, Nov 1994.

17. System partitioning of MCMs for low power

Khan, S.A.; Madisetti, V.K.;

Design & Test of Computers, IEEE ,Volume: 12 , Issue: 1 , Spring 1995
Pages:41 – 52

18. Error correcting run-length limited codes for magnetic recording

Jaejin Lee; Madisetti, V.K.;

Magnetics, IEEE Transactions on ,Volume: 31 , Issue: 6 , Nov. 1995
Pages:3084 – 3086

19. Virtual prototyping of embedded microcontroller-based DSP systems

Madisetti, V.K.; Egolf, T.W.;

Micro, IEEE ,Volume: 15 , Issue: 5 , Oct. 1995
Pages:9 – 21

20. Constrained multitrack RLL codes for the storage channel

Lee, J.; Madisetti, V.K.;

Magnetics, IEEE Transactions on ,Volume: 31 , Issue: 3 , May 1995
Pages:2355 – 2364

21. Rapid digital system prototyping: current practice, future challenges

Madisetti, V.K.;

Design & Test of Computers, IEEE ,Volume: 13 , Issue: 3 , Fall 1996
Pages:12 – 22

22. Conceptual prototyping of scalable embedded DSP systems

Dung, L.-R.; Madisetti, V.K.;

Design & Test of Computers, IEEE ,Volume: 13 , Issue: 3 , Fall 1996
Pages:54 – 65

23. Advances in rapid prototyping of digital systems

Madisetti, V.K.; Richards, M.A.;

Design & Test of Computers, IEEE ,Volume: 13 , Issue: 3 , Fall 1996
Pages:9

24. Combined modulation and error correction codes for storage channels

Jaemin Lee; Madiseti, V.K.;

Magnetics, IEEE Transactions on ,Volume: 32 , Issue: 2 , March 1996

Pages:509 – 514

25. Model-based architectural design and verification of scalable embedded DSP systems-a RASSP approach

Dung, L.-R.; Madiseti, V.K.; Hines, J.W.;

Chapter in VLSI Signal Processing, IX, 1996.

Pages:147 – 156

26. Low-power digital filter implementations using ternary coefficients

Hezar, R.; Madiseti, V.K.;

Chapter in VLSI Signal Processing, IX, 1996.,

Pages:179 – 188

27. All-digital oversampled front-end sensors

Romdhane, M.S.B.; Madiseti, V.K.;

Signal Processing Letters, IEEE, Volume: 3 , Issue: 2 , Feb. 1996

Pages:38 – 39

28. Modeling COTS components in VHDL

Calhoun, S., Reese, R; Egolf, T., Madiseti, V.K.;

Journal of VLSI Signal Processing, Volume: 14 , Issue: 2 , Nov 1996

Pages: 24 – 31

29. VHDL-Based Rapid Systems Prototyping

Egolf, T.; Madiseti, V.K.;

Journal of VLSI Signal Processing, Volume: 14 , Issue: 2 , Nov 1996

Pages: 40-52

30. Interface design for core-based systems

Madiseti, V.K.; Lan Shen;

Design & Test of Computers, IEEE ,Volume: 14 , Issue: 4 , Oct.-Dec. 1997

Pages:42 - 51

31. Incorporating cost modeling in embedded-system design

Debardelaben, J.A.; Madiseti, V.K.; Gadiant, A.J.;

Design & Test of Computers, IEEE ,Volume: 14 , Issue: 3 , July-Sept. 1997

Pages:24 – 35

32. On homomorphic deconvolution of bandpass signals

Marenco, A.L.; Madiseti, V.K.;

Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and

Signal Processing, IEEE Transactions on] ,Volume: 45 , Issue: 10 , Oct. 1997
Pages:2499 – 2514

33. A case study in the development of multi-media educational material: the VHDL interactive tutorial

Gadient, A.J.; Stinson, J.A., Jr.; Taylor, T.C.; Aylor, J.H.; Klenke, R.H.; Salinas, M.H.; Madisetti, V.K.; Egolf, T.; Famorzadeh, S.; Karns, L.N.; Carter, H.W.;
Education, IEEE Transactions on ,Volume: 40 , Issue: 4 , Nov. 1997
Pages:17 pp.

34. Adaptive mobility management in wireless networks

Jeongwook Kim; Madisetti, V.K.;
Electronics Letters ,Volume: 34 , Issue: 15 , 23 July 1998
Pages:1453 – 1455

35. Efficient implementation of two-band PR-QMF filterbanks

Hezar, R.; Madisetti, V.K.;
Signal Processing Letters, IEEE ,Volume: 5 , Issue: 4 , April 1998
Pages:92 – 94

36. On fast algorithms for computing the inverse modified discrete cosine transform

Yun-Hui Fan; Madisetti, V.K.; Mersereau, R.M.;
Signal Processing Letters, IEEE ,Volume: 6 , Issue: 3 , March 1999
Pages:61 – 64

37. System on chip or system on package?

Tummala, R.R.; Madisetti, V.K.;
Design & Test of Computers, IEEE ,Volume: 16 , Issue: 2 , April-June 1999
Pages:48 – 56

38. Reengineering legacy embedded systems

Madisetti, V.K.; Jung, Y.-K.; Khan, M.H.; Kim, J.; Finnessy, T.;
Design & Test of Computers, IEEE ,Volume: 16 , Issue: 2 , April-June 1999
Pages:38 – 47

39. Reengineering digital systems

Madisetti, V.K.;
Design & Test of Computers, IEEE ,Volume: 16 , Issue: 2 , April-June 1999
Pages:15 – 16

40. Parameter optimization of robust low-bit-rate video coders

Sangyoun Lee; Madisetti, V.K.;
Circuits and Systems for Video Technology, IEEE Transactions on, Volume: 9

Issue: 6 , Sept. 1999
Pages:849 – 855

41. Closed-form for infinite sum in bandlimited CDMA

Jatunov, L.A.; Madisetti, V.K.;
Communications Letters, IEEE ,Volume: 8 , Issue: 3 , March 2004
Pages:138 – 140

42. A new protocol to enhance path reliability and load balancing in mobile ad hoc networks

Argyriou, A.; Madisetti, V.K.;
Journal of Ad Hoc Networks, Elsevier Press, 2004

43. Closed-form analysis of CDMA systems using Nyquist pulse

Jatunov, L.A.; Madisetti, V. K.;
Communications Letters, IEEE (Under Revision), 2005.

44. Systematic Design of End-to-End Wireless Mobility Management Protocols,

Argyriou, A.; Madisetti, V. K.;
ACM/Springer Wireless Networks (WINET), Accepted 2005.

45. A Novel End-to-End Approach for Video Streaming Over the Internet,

Argyriou, A.; Madisetti, V. K.;
Kluwer Telecommunications Systems, Vol. 28, No. 2, Pages 133-150, Jan 2005. *Special Issue on Multimedia Streaming.*

46. An Analytical Framework of RD Optimized Video Streaming with TCP,

Argyriou, A.; Madisetti, V. K.;
IEEE Transactions on Multimedia, Submitted for review in March 2005.

47. Modeling the Effect of Handoffs on Transport Protocol Performance,

Argyriou, A.; Madisetti, V. K.;
IEEE Transactions on Mobile Computing, Submitted for review in March 2005

48. Throughput Models for Transport Protocols with CBR and VBR Traffic Workloads",

Argyriou, A.; Madisetti, V. K.;
ACM Transactions on Multimedia Computing, Communications & Applications, Submitted for review in April 2005.

49. "Electronic System, Platform & Package Codesign",

Madisetti, V. K.

IEEE Design & Test of Computers, Volume 23, Issue 3, June 2006. pages 220-233.

- 50. "The Design of an End-to-End Handoff Management Protocol",**
A. Argyriou, Madiseti, V. K.
Wireless Networks, Springer, May 2006.
- 51. "A Soft-Handoff Transport Protocol for Media Flows in Heterogeneous Mobile Networks ",**
A. Argyriou, Madiseti, V. K.
Computer Networks, Vol 50, Issue 11, Pages 1860-1871, August 2006.
- 52. "Computationally Efficient SNR Estimation for Bandlimited WCDMA Systems"**
L. Jatunov, Madiseti, V. K.
IEEE Transactions on Wireless Communications, Volume 5, Issue 13, December 2006, Pages 3480-3491.
- 53. "Space-Time Codes for Wireless & Mobile Applications",**
M. Sinnokrot, Madiseti, V.K.
DSP Handbook, Second Edition, 2009 (to be published)
- 54.A. Bahga, V. Madiseti, "Rapid Prototyping of Advanced Cloud-Based Systems",** *IEEE Computer*, vol. 46, no. 11, Nov 2013, pp 76-83, 2013
- 55.A. Bahga, V. Madiseti, "Cloud-Based Information Integration & Informatics Framework for Healthcare Applications",** *IEEE Computer*, February 2015.
- 56.A. Bahga, V. Madiseti, "A Cloud-based Approach for Interoperable EHRs",** *IEEE Journal of Biomedical and Health Informatics*, vol. 17, no. 5, Sep 2013, pp. 894-906, 2013
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68. A. Bahga, V. Madiseti, "**A Value-Token Transfer Protocol (VTP) for Decentralized Finance**", *Journal of Software Engineering and Applications*, Vol 13, No. 11, February 2020
69. V. Madiseti, S. Panda, "**A Dynamic Leader Election Algorithm for Decentralized Networks**", *Journal of Transportation Technologies*, Vol 11, No 3, July 2021
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2. **Seismic migration algorithms using the FFT approach on the NCUBE multiprocessor**
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3. **Seismic migration algorithms on multiprocessors**
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- 4. WOLF: A rollback algorithm for optimistic distributed simulation systems**
Madisetti, V.; Walrand, J.; Messerschmitt, D.;
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Pages:296 – 305
- 5. Efficient distributed simulation**
Madisetti, V.; Walrand, J.; Messerschmitt, D.;
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- 6. High speed migration of multidimensional seismic data**
Kelley, B.; Madisetti, V.;
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- 7. Performance of a fast analog VLSI implementation of the DFT**
Buchanan, B.; Madisetti, V.; Brooke, M.;
Circuits and Systems, 1992., Proceedings of the 35th Midwest Symposium
on, 9-12 Aug. 1992
Pages:1353 - 1356 vol.2
- 8. Task scheduling in the Georgia Tech digital signal multiprocessor**
Curtis, B.A.; Madisetti, V.K.;
Acoustics, Speech, and Signal Processing, 1992. ICASSP-92., 1992 IEEE
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- 9. The fast discrete Radon transform**
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- 10. Yield-based system partitioning strategies for MCM and ASEM design**
Khan, S.; Madisetti, V.;
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- 11. Multitrack RLL codes for the storage channel with immunity to intertrack interference**
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12. A parallel mapping of backpropagation algorithm for mesh signal processor

Khan, S.A.; Madisetti, V.K.;
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13. Virtual prototyping of embedded DSP systems

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16. DSP design education at Georgia Tech

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17. Rapid prototyping of DSP systems via system interface module generation

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18. Rapid prototyping of DSP chip-sets via functional reuse

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19. A constructive deconvolution procedure of bandpass signals by homomorphic analysis

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Perez-Jacome, J.E.; Madiseti, V.K.;

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DeBardelaben, J.A.; Madiseti, V.K.; Gadiant, A.J.;

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Pauer, E.K.; Pettigrew, M.N.; Myers, C.S.; Madisetti, V.K.;
VHDL International Users' Forum, 1997. Proceedings, 19-22 Oct. 1997
Pages:33 – 42

26. System design and re-engineering through virtual prototyping: a temporal model-based approach

Khan, M.H.; Madisetti, V.K.;
Signals, Systems & Computers, 1998. Conference Record of the Thirty-Second Asilomar Conference on, Volume: 2 , 1-4 Nov. 1998
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27. Web-Enabled Information Appliances for Broadband Residential Networks”, F. Ahmed, V. Madisetti, Y. Jiao, V. Dasigi, Yamacraw IAB

Presentation, 2000. Atlanta, GA

28.Web-Enabled Transcoding for Broadband Residential Networks (BRAN), M. Rahim, V. Madisetti, K. Naik, V. Dasigi, Yamacraw IAB

Presentation, 2000, Atlanta, GA.

29. Enforcing Interdependencies and Executing Transactions Atomically Over Autonomous Mobile Data Stores Using SyD Link Technology, S.

K. Prasad, V. Madisetti, et al, IEEE International Conference on Distributed Computing, 2003.

30. A debugger RTOS for embedded systems

Akgul, T.; Kuacharoen, P.; Mooney, V.J.; Madisetti, V.K.;
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31. Adaptability, extensibility and flexibility in real-time operating systems

Kuacharoen, P.; Akgul, T.; Mooney, V.J.; Madisetti, V.K.;
Digital Systems, Design, 2001. Proceedings. Euromicro Symposium on, 4-6 Sept. 2001
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32. Effect of handoff delay on the system performance of TDMA cellular systems

Turkboylari, M.; Madisetti, V.K.;
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33. Enforcing interdependencies and executing transactions atomically over autonomous mobile data stores using SyD link technology

Prasad, S.K.; Bourgeois, A.G.; Dogdu, E.; Sunderraman, R.; Yi Pan; Navathe, S.; Madisetti, V.;

Distributed Computing Systems Workshops, 2003. Proceedings. 23rd
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34. Performance evaluation and optimization of SCTP in wireless ad-hoc networks

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35. Implementation of a calendar application based on SyD coordination links

Prasad, S.K.; Bourgeois, A.G.; Dogdu, E.; Sunderraman, R.; Yi Pan; Navathe, S.; Madiseti, V.;
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36. Bandwidth aggregation with SCTP

Argyriou, A.; Madiseti, V.;
Global Telecommunications Conference, 2003. GLOBECOM '03. IEEE Volume:
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Design, Automation and Test in Europe Conference and Exhibition, 2003
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38. Frequency-dependent space-interleaving for MIMO OFDM systems

Mohajerani, P.; Madiseti, V.K.;
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39. A media streaming protocol for heterogeneous wireless networks

Argyriou, A.; Madiseti, V.;
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40. Realizing load-balancing in ad-hoc networks with a transport layer protocol

Argyriou, A.; Madiseti, V.;
Wireless Communications and Networking Conference, 2004. WCNC. 2004

IEEE, Volume: 3, 21-25 March 2004
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41.Streaming H.264/AVC video over the Internet

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Consumer Communications and Networking Conference, 2004. CCNC 2004.
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Other Publications

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Madisetti, V., Argyriou, A.
IETF Internet-Draft, Jul 25, 2002.
- 2. Voice & Video over Mobile IP Networks <draft-madisetti-argyriou-voice-video-mip-00.txt>**
Madisetti, V., Argyriou, A.
IETF Internet-Draft, Nov 20, 2002.
- 3. Enhancements to ECRTTP with Applications to Robust Header Compression for Wireless Applications. <draft-madisetti-rao-suresh-rohc-00.txt>**
Madisetti, V.; Rao, S., Suresh, N.
IETF Internet-Draft, June 30, 2003.

Ph.D. Students Graduated

- 1. Brian T. Kelley, 1992**
VLSI Computing Architectures for High Speed Signal Processing
Member of Technical Staff, Motorola

Winner of Dr. Thurgood Marshall Dissertation Fellowship Award
- 2. Bryce A. Curtis, 1992**
Special Instruction Set Multiple Chip Computer for DSP
Member of Technical Staff, IBM
- 3. Jaejin Lee, 1994**
Robust Multitrack Codes for the Magnetic Channel
Professor, Yonsei University, Korea

- 4. Mohamed S. Ben Romdhane, 1995**
Design Synthesis of Application-Specific IC for DSP
Director of IP, Rockwell
- 5. Shoab A. Khan, 1995**
Logic and Algorithm Partitioning on MCMs
Professor, National University of Science & Technology, Pakistan
- 6. Lan-Rong Dung, 1997**
VHDL-based Conceptual Prototyping of Embedded DSP Architectures
Professor, National Chaio Tung University, Taiwan

Winner of VHDL International Best PhD Thesis Award, 1997
- 7. Thomas W. Egolf, 1997**
Virtual Prototyping of Embedded DSP Systems
Distinguished Member of Technical Staff, Agere
- 8. Alvaro Marenco, 1997**
On Homomorphic Deconvolution of Bandpass Signals
Professor, Texas A&M University

Winner of GIT ECE Outstanding Teaching Assistant Award
- 9. Shahram Famorzadeh, 1997**
BEEHIVE: A Distributed Environment for Adaptive Signal Processing
Member of Technical Staff, Rockwell
- 10. Timothy J. Klausutis, 1997**
Adaptive Lapped Transforms with Applications to Image Coding.
US Air Force/Univ. of Florida
- 11. Lan Shen, 1998**
Temporal Design of Core-Based Systems
Member of Technical Staff, IBM
- 12. James DeBardelaben, 1998**
Optimization Based Approach to Cost Effective DSP Design
Research Scientist, Johns Hopkins University

Georgia Tech ECE Faculty Award
- 13. Sangyoun Lee, 1999**
Design of Robust Video Signal Processors
Professor, Yonsei University

US Army Sensors Lab Research Excellence Award, 1999
- 14. Rahmi Hezar, 2000**
Oversampled Digital Filters
Member of Technical Staff, Texas Instruments
- 15. Yong-kyu Jung, 2001**

Model-Based Processor Synthesis
Professor, Texas A&M University

16. Mustafa Turkboylari, 2002

Handoff Algorithms for Wireless Applications
Member of Technical Staff, Texas Instruments

17. Yun-Hui Fan, 2002

A Stereo Audio Coder with Nearly Constant Signal to Noise Ratio
Post-Doctoral Research Associate, Northeastern University

18. Subrato K. De, 2002

Design of a Retargetable Compiler for DSP
Member of Technical Staff, Qualcomm

US Army Sensors Lab Research Excellence Award, 1999

19. Chonlameth Aripnikanondt, 2004

System-on-Chip Design with UML
Professor, King Mongkut's University, Thailand

US Army Sensors Lab Research Excellence Award, 1999

20. Loran Jatunov, 2004

Performance Analysis of 3G CDMA Systems
Senior Research Scientist, Soft Networks, LLC. Now at Samsung

21. Antonios Argyriou, 2005, Research Scientist, Philips

22. Pilho Kim, 2009, Scientist, VP Technologies, Inc.

23. M. Sinnokrot, 2009, Staff Engineer, Apple

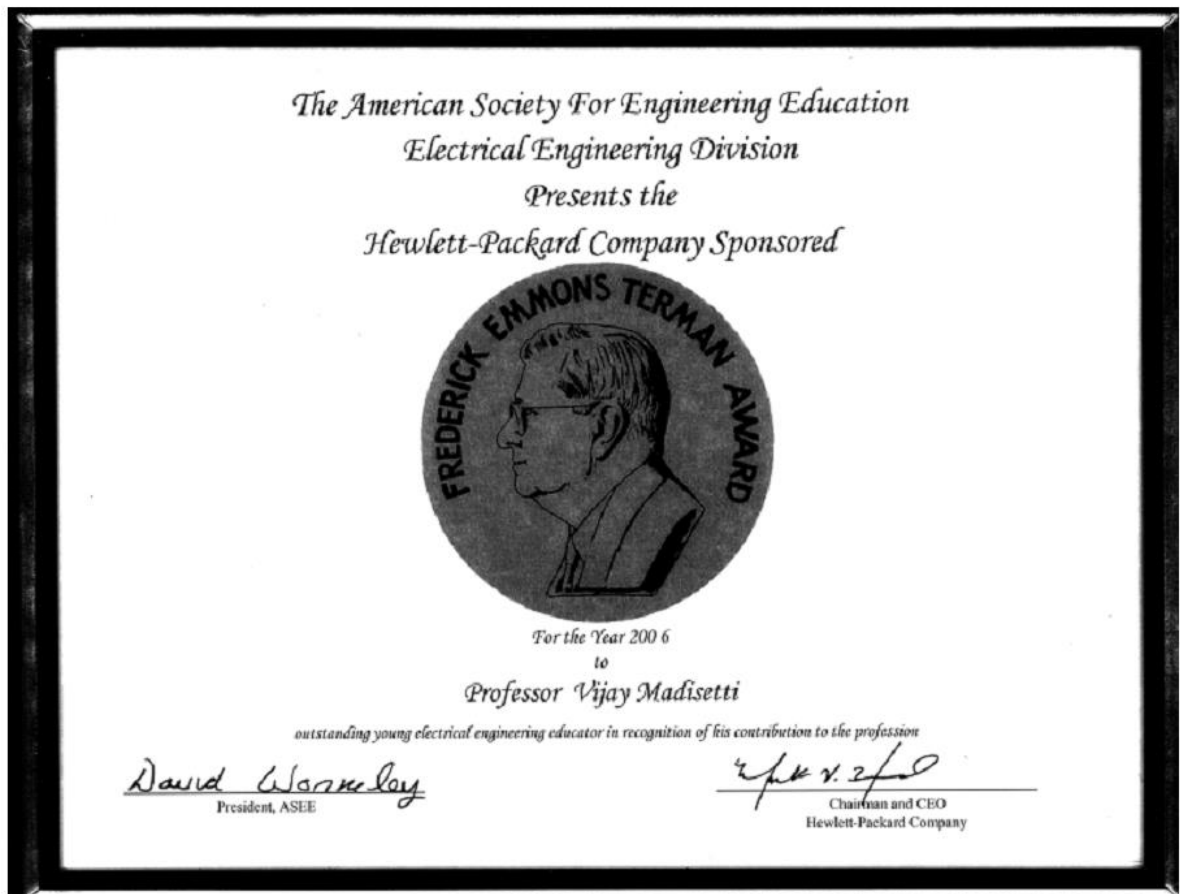
24. A. Yusuf, 2013, Professor, National University, Pakistan

25. Joel Corporan, 2023, Senior Scientist, Warner Media, USA

Awards & Honors

1. **Jagasdis Bose National Science Talent Fellowship**, Indian Institute of Technology, Kharagpur, 1980-1984
2. **General Proficiency Prize**, Indian Institute of Technology, Kharagpur, 1984
3. **Demetri Angelakos Outstanding Graduate Student Award**, Univ. of California, Berkeley, 1989

4. **Ira Kay IEEE/ACM Best Paper Award** for Best Paper presented at IEEE Annual Simulation Symposium, 1989
5. **IBM Faculty Development Award** 1990
6. **Technical Program Chair**, IEEE Workshop on Parallel and Distributed Simulation. 1990
7. **Technical Program Chair**, IEEE MASCOTS'94
8. **NSF RI Award**, 1990
9. **VHDL International Best PhD Dissertation Advisor Award**, 1997
10. **Georgia Tech Outstanding Doctoral Dissertation Advisor Award**, 2001
11. **ASEE 2006 Frederick Emmons Terman Medal**, 2006
12. **Fellow of IEEE**



Intellectual Property Disclosures (Georgia Tech)

<u>Patent</u>	<u>Date</u>	<u>Description</u>
2843	2004	Method and Apparatus for Improving the Performance of Wireless LANs
2825	2003	Method and Apparatus for Optimal Partitioning and Ordering of Antennas for Layered Space-Time Block Codes in MIMO Communications Systems
2815	2003	How to Rapidly Develop a SyD Application
GSU-023	2003	Rapid Development of SyD Applications
2810	2003	System on Mobile Devices Middleware Design
2718	2003	A Transport Layer Algorithm for Improved Anycast Communication
2717	2003	A Novel Transport Layer Load-Balancing Algorithm
2716	2003	A Transport Layer QoS Algorithm
2715	2003	A Novel Transport Layer Algorithm for MPLS Performance
2659	2002	A New Algorithm and Technology for Implementing Mobile IP with Applications to Voice and Video over Mobile IP
2656	2002	Debugging with Instruction-Level Reverse Execution
2655	2002	Embedded Software Streaming
2539		System of Databases: An Enabling Technology for Programming
2517	2002	A Dynamic Instantiated Real-Time Operating System Debugger
2516	2002	A Dynamic Real-Time Operating System
GSU-009	2001	System of Databases: Architecture,, Global Queries, Triggers and Constraints
2480	2001	Mobile Fleet Application based on SyD Technology
2479	2001	System of Databases: A model with coordination links and a calendar application
1893	1999	Beehive
1726	1995	Very High Scale Integrated Circuit Hardware Description Language Models (VHDL Models)
1401	1995	Self-Compensation Receiver (SCR)