Resume

V. A. Shiva Ayyadurai

Chairman & CEO, Cytosolve, Inc. Lecturer, MIT Biological Engineering Division Founder & Chairman, EchoMail, Inc. Executive Director, International Center for Integrative Systems Managing Director, General Interactive, LLC Lecturer, MIT Comparative Media Studies

Education

DEGREE	INSTITUTION AND LOCATION	YEAR(s)	FIELD
Ph.D.	MIT, Department of Biological Engineering	2004- 2007	Systems Biology
S.M.	MIT, Department of Mechanical Engineering	1988-1990	Applied Mechanics
S.M.	MIT Media Laboratory, Department of Architecture	1987-1989	Scientific Visualization
S.B.	MIT, Department of Electrical Engineering and Computer Science	1986	Operating Systems

Research Experience

2011-Present	Research Manager, Comparative Media Studies, MIT
2009-Present	Director, International Center for Integrative Systems
2008-2009	Fulbright Research Scholar, Systems Biology and Traditional Medicines, US Fulbright Program
2004-2008	Research Fellow, Computational Systems Biology, MIT Biological Engineering
1996-2004	Chief Scientist, Large Scale Architectures for Message Analysis, EchoMail, Inc.
1992-1996	Chief Technology Officer, Document Analysis & Modeling, Information Cybernetics, Inc.
1990-1992	Research Team Leader, Handwriting Recognition, MIT Sloan School of Management
1988-1990	Graduate Research Assistant, Wave Propagation Analysis and Modeling, MIT NDE Lab
1986-1988	Graduate Research Fellow, Automated Graphic Design System, MIT Media Laboratory
1984-1986	UROP Research, Particle Analysis in Fluidized Bed Reactors, MIT Langer Laboratory
1983-1984	UROP Research, Cryogenic Embryo Preservation, MIT Health Sciences and Tech.
1981-1983	UROP Research, Tadoma and Speech Recognition, MIT Research Lab for Electronics
1979-1981	Research Associate, Sleep Pattern Analysis, UMDNJ Biomedical Engineering
1977-1980	Research Associate, EMAIL System, UMDNJ Laboratory for Computer Science

Inventions

invent		
2009 - 2	2010	KnowThyFace
2008 - 2	2009	eMedics
2007 - 2	2008	LogoCat
2003 - 2	2007	CytoSolve
1999 - 2	2002	Interactive.com
1994 - 1	999	EchoMail
1993 - 1	994	Arts-Online
2004		U.S Patent: Filter for Modeling System and Method for Handling and Routing of Text Based Aynchronous Commmunications
2004		U.S Patent: System and Method for Content-Sensitive Automatic Reply Message Generationy
2003		U.S Patent: Relationship Management System and Method using Asynchronous Electronic Messaging
1992 - 1	993	Integrated Architecture for Handwriting Recognition
1990 - 1	993	Information Cybernetics: Generalized System for Pattern Recognition
1988 - 1	990	System for Classifying Fiber Composite Analysis
1986 - 1	988	Intelligent Design System for Graphics and Layout
1985 - 1	987	Workstation for Visualization of Fluid and Particle Motion
1983 - 1	984	Controller for CryoMicroscope System
1982		First Copyright for EMAIL Issued by United States Copyright Office
1978 - 1	981	World's First EMAIL System

Industry & Entrepreneurial Experience

2004-Present	Board Member, EchoMail, Inc.
2004-Present	Founder and Managing Director, General Interactive, LLC
1998-2004	Founder, President & CEO, EchoMail, Inc.
1996-1998	Founder, President & CEO, Media Production, Millennium Productions, Inc.
1994-1996	Founder, President & CEO, Arts-Online, the first online arts community
1990-1994	Director of Advanced Products, Dataware Technologies, Inc., CD-ROM Search Software
1986-1990	Senior Engineer, IBM/Lotus Development Corporation, Graphics Software
1984-1986	Senior Engineer, Information Resources, Inc., Marketing Analysis Software
1983-1984	Consulting Software Engineer, Chase, Inc., Hydrodynamics Software
1982-1984	Research Engineer, HP Medical Systems, Operating System for Cardiologist Workstation
1982-1983	Consulting Software Engineer, MIT Civil Engineering, Intelligent Signal Processing
1981-1982	Consulting Software Engineer, Number Nine, Inc., Advanced Graphics Hardware

Teaching Experience

2011 - Present	Lecturer, Systems Visualization, MIT Comparative Media Studies
2008 - 2011	Lecturer, Systems Biology and Traditional Medicine, MIT Biological Engineering Department
2007	Instructor, Biological Pathway Design and Implementation, MIT SMA Boot Camp
2006	Instructor, Biological Pathway Design and Implementation, MIT SMA Boot Camp

2006	Teaching Assistant, Control Systems and Dynamics, 2.14, MIT Mechanical Engineering
1994-2004	Industry Expert, Dr. EMAIL Industry Lectures Worldwide, Global 2000 Companies
1992-1994	Instructor, Information Technology I, MIT Sloan School of Management
1990	Senior Engineer, Graphics Software, IBM/Lotus Development Corporation
1988	Instructor, Physics, MITES Program
1987	Teaching Assistant, Computer Graphics, 4.971, MIT Media Laboratory
1986	Teaching Assistant, Measurements Laboratory, 2.671, MIT Mechanical Engineering
1985	Teaching Assistant, Being There, MIT Humanities Department
1984	Tutor, Circuits and Electronics, 6.002, MIT Electrical Engineering and Computer Science
1983	Tutor, Structures & Programming, 6.001, MIT Electrical Engineering & Computer Science
1982	Instructor, IAP Course on Indian Art History, MIT Humanities Department

Selected Publications

- S. Ayyadurai, D. A. Nordsletten, B. Yankama, R. Umeton, C. F. Dewey Jr., Multi-scale Mathematical Modeling to Support Drug Development, *Proceedings of Biomedical Engineering Society (BMES)*, Hartford, CT, October 12-15, 2011.
- S. Ayyadurai, C.F. Dewey, Jr., CytoSolve: A Scalable Computational Method for Dynamic Integration of Multiple Molecular Pathway Models, *Biological Engineering Division*, *MIT*, Cambridge, MA, June 28, 2011.
- 3. S. Ayyadurai, Biomimetics of Communication and Media, *12th International Research Symposium on Service Excellence in Management*,, Ithaca, NY, June 2-5, 2011.
- 4. S. Ayyadurai, C.F. Dewey, Jr., A Distributed Computational Architecture for Integrating Multiple Biomolecular Pathways, *Biological Engineering Division, MIT*, Cambridge, MA, March 9, 2011.
- 5. S. Ayyadurai, Services-Based Systems Architecture for Modeling the Whole Cell: A Distributed Collaborative Engineering Systems Approach, *Communications in Medical and Care Compunetics*, Springer Publications, 16 November 2010.
- S. Ayyadurai, B. Yankama, R. Umeton, C. F. Dewey Jr., Editing and Aligning Complex Molecular Pathways Using 3D Models, *Proceedings of Biomedical Engineering Society (BMES)*, Austin, TX, October 6-9, 2010.
- 7. S. Ayyadurai, Commentary: Innovation Demands Freedom, Nature India, December, 2009.
- 8. S. Ayyadurai, A Scalable Computational Architecture for Integrating an Ensemble of Biological Pathway Models, *(in submission to Annals of Biomedical Engineering)*, November 2009.
- 9. S. Ayyadurai, Modeling the Cell, *Proceedings of BIO-IT Conference, In Silicon Modeling Section*, Boston. MA, April 2009.
- 10. S. Ayyadurai, Integration of Siddha with Systems Biology, *Proceedings of Fullbright Conference 2009,* Kolkata, India, March 2009.
- 11. S. Ayyadurai, Eva Sciacca, C. Forbes Dewey, Jr., A Web Based Tool for Integration of Molecular Pathway Models, *Proceedings of BioInformatics and BioEngineering, 8th IEEE International Conference*, 8-10 Oct. 2008.
- 12. S. Ayyadurai, Mission of Systems Biology, *Bio-IT Beyond Genome Conference Proceedings*, June 2008.
- 13. S. Ayyadurai, C.F. Dewey, Jr., Scaleable methods for large molecular pathway calculations: application to EGFR, *In Biomedical Engineering Society Annual Fall Meeting*, Los Angeles, September 2007.
- K. R. Stiehl, K. Dang, S. Ayyadurai, B.-S Seah, S. S. Bhowmick, C. Forbes Dewey, Jr., A New Approach to Database Creation Using Ontologies: OWLdb. K. Dang, K. R. Stiehl, S. Ayyadurai, B.-S Seah, S. S. Bhowmick, C. F. Dewey, Jr., An Information Architecture to Support Molecular Pathway

Models., In Biomedical Engineering Society Annual Fall Meeting, Los Angeles, September 2007.

- 15. S. Ayyadurai, C.F. Dewey, Jr., Integrating an Ensemble of Biochemical Network Models, *In International Society of Computational Biology (ISCB 2007),* Vienna, July 2007.
- 16. S. Ayyadurai, Cytosolve, *In proceedings of the Singapore MIT Symposium for Computational and Systems Biology*, January 2007.
- 17. S. Ayyadurai, Integrating Biological Pathway Models, *In MIT CSBi Oktoberfest Proceedings,* Cambridge, October, 2006
- S. Ayyadurai, C. Forbes Dewey, Jr., C. Tan, Distributed Computing of Complex Collections of Biological Pathways, *In World Congress on Medical Physics and Biomedical Engineering (WC* 2006), Seoul, August-September 2006.
- S. Ayyadurai, C. F. Dewey, Jr., J. Bassingthwaighte, J. Butterworth, P. Villiger, P. Hunter, Normalization of Biological Pathways, *In World Congress on Medical Physics and Biomedical Engineering (WC* 2006), Seoul, August-September 2006.
- S. Ayyadurai, C.F. Dewey, Jr., Cytosolve: A Distributed Computational Architecture for the Integration of Biomolecular Pathways, *In Biomedical Engineering Society Annual Meeting*, Chicago, September 2006.
- C. F. Dewey, Jr., S. Ayyadurai, V. Rouilly, C. L. Poh, S. S. Bhowmick, J. Evans, R. I. Kitney, Footprints in the Sand: Supporting External Analysis of Medical and Biological Databases, *In World Congress on Medical Physics and Biomecal Engineering (WC 2006)*, Seoul, August-Sept 2006.
- 22. S. Ayyadurai, Modeling Actin Polymerization as a System of Integrated Biomolecular Pathways, *In Proceedings of the Annual MIT CSBi Oktoberfest*, October 2005.
- 23. S. Ayyadurai, C.F. Dewey, Jr., Computing unsteady phenomenon across multiple molecular pathways, In Biomedical Engineering Society Annual Meeting, Washington, D.C., September 2005.
- S. Ayyadurai, S. A. Cimaszewski, J. H. Williams, Jr.: Unsupervised Classification of Fiber Composite Interphases, In Proceedings of the Second International Conference on Acusto-Electronics, The American Society of Nondestructive Testing, June 24-25, 1993.
- A. Gupta, M. V. Nagendraprasad, A. Liu, Patrick Shen-Pei Wang, S. Ayyadurai: An Integrated Architecture for Recognition of Totally Unconstrained Handwritten Numerals, *In International Journal* of Pattern Recognition and Artificial Intelligence, Vol. 7, No. 4, pp. 757-773, 1993.
- G. V. Novakovic, L. E. Freed, S. Ayyadurai, H. Bernstein, Robert S. Langer and C. L. Cooney, Fluid-Dynamic Study of the Enzymatic Fluidized Bed Reactor for Blood Dehparinization, Fluidization VI, *In Proceedings of the International Fluidization Conference, Banff*, Canada, May 1989.
- 27. S. Laxminarayan, O. Mills, L. Rajaram, S. Ayyadurai, L.P. Michelson, Sleep Stage and Apnea Pattern Analysis, *In Proceedings of the International Conference on Medical and Biological Engineering, Espoo, Finland*, August 1985.

Patents

Patent No. 6,668,281, V.A. Shiva Ayyadurai, "Relationship management system and method using asynchronous electronic messaging", April 6, 2004.

Patent No. 6,718,368, V.A. Shiva Ayyadurai, "System and method for content-sensitive automatic reply message generation for text-based asynchronous communications", April 6, 2004.

Patent No. 6,718,367, V.A. Shiva Ayyadurai, "Filter for modeling system and method for handling and routing of text-based asynchronous communications", April 6, 2004.

Research Advisor & Thesis Support and Supervision

Ceryen Tan MIT UROP Project, Biological Engineering, Title: SBML API Programming for Biological Systems Integration, 2005-2007

Steven A. Cimaszewksi MIT Masters Thesis, Mechanical Engineering, Title: Statistical Analysis of Fiber Composite Interphase Inverse Problem, 1994.

Peter L. Sparks MIT Bachelors Thesis, Electrical Engineering, Title: A Hybrid Method for Segmenting Numeric Character Strings, 1991.

Matthew J. Labrador **MIT Bachelors Thesis,** Electrical Engineering, **Title:** The Generalized Mass-Spring Lattice Model with Damping : A Lagrangian Dynamics Approach, 1990.

Honors and Awards

The Smithsonian's National Museum of American History accepts artefacts, papers and records of invention of EMAIL from V A Shiva Ayyadurai National Museum of American History, The Smithsonian Institution, Washington D.C, February 16, 2012

First Outstanding Scientist and Technologist of Indian Origin (STIO/H) Council of Scientific and Industrial Research (CSIR), India, 2009

Fulbright Scholar: US Fulbright, Washington, DC, 2008-2009

ISMB Travel Fellowship Award ISMB 2007, Vienna, Austria, 2007

Graduate Research Fellowship SMA Graduate Research Fellowship, 2004-2007

Communications SolutionsTM **Product of the Year Award** EchoMail RMOS Product Suite, November, 2003

Customer Interactive Solutions, TMC Labs Innovation Award EchoMail Customer Care, September, 2002

Massachusetts Interactive Media Council Award (MIMC)

Customer Support Applications, EchoMail CC/BI (Finalist) 2002

Silver Pencil Award, Integrated Branding

Wieden & Kennedy/EchoMail, cK one EMAIL Campaign, 2001

Lotus Beacon Award

EchoMail RMOS Product Suite, 2000

Best of Class Internet Commerce Expo Customer Service & Fulfillment, EchoMail CC, 1999

Massachusetts Interactive Media Council Award (MIMC)

Groupware/Collaborative Website (Finalist) World Music, 1998

Massachusetts Interactive Media Council Award (MIMC) Non-Profit/Public Service Online, AccessExpressed.org Online Community (Finalist), 1998

Who's Who in America Accepted in 1997

Lotus Beacon Award Best Messaging Solution, EchoMail Suite, 1997

Massachusetts Interactive Media Council Award Best EMAIL/ Fax Application, EchoMail suite, 1997

Discover Magazine Award for Technical Innovation XIVA $^{\rm TM}$ Core Technology, 1996

Finalist, Lemelson-MIT Award for Innovation

XIVATM Core Technology, 1996

Verizon (formerly GTE/BBN) Technologies Award ProVision Award, Interactive Marketing Creative Direction, 1996

PCWeek's Web Site of the Week Harvard-Square.com Online Community, 1996

Best of Europe Online Arts-Online.com Online Community, 1996

Yahoo! #1 What's Cool Harvard-Square.com Online Community, 1996

IBM Best Online Community Harvard-Square.com Online Community, 1996

DISNEY EPCOT Center Award for Exhibit Selected to be in Innoventions Exhibit, 1996

First Place, Competition for Automatic Categorization of Electronic Mail Office of the President, White House, Washington, DC, November, 1994.

Winner, Automatic Categorization of SGML Tagged Documents Information Handling Services (IHS), Boulder, CO, 1993

International Fellowship Research Grant, Research in the Cross-Language Translators Sloan School of Management and Industrial Liaison Program and the Italian Trade Commission, MIT, Cambridge, MA, 1992.

Elected Session Chairman, Session on Scientific Visualization International IEEE EMBS Conference, Institute of Electrical and Electronics Engineers (IEEE) Philadelphia, PA, 1991.

Founder and Organizer, Session on Scientific Visualization

International IEEE EMBS Conference, Institute of Electrical and Electronics Engineers (IEEE) Seattle, WA, 1990.

Full Member, SIGMA XI Since 1989

SIGMA XI UROP Award for Outstanding Undergraduate Research

MIT Mennen Scholar 1982-1986

Tau Beta Pi 1984.

ETA KAPPA NU 1984.

VI-A Hewlett-Packard COOP Assignment Biomedical Division, Andover, MA 1983

MIT Varsity Soccer 1982

Awarded Westinghouse Science Talent Search Award 1981

Thomas Alva Edison/Max McGraw Finalist 1981 Accepted to American Legion Jersey Boys State Program 1981

Outstanding Statesman Award, American Legion Jersey Boys State 1981

All-County Soccer Champions

All-County Soccer Champions

Individual First Place in Advanced Mathematics at New Jersey State Mathematics Competition 1981

Accepted to Gifted Students Program

New York University Program in Computer Science at Courant Institute of Mathematical Sciences for gifted students in Eighth Grade of Junior High School, 1977

Skills

Programming Languages C++, C, Java, HTML, ASP

Foreign Languages

Spanish, Italian, Tamil

General Skills

Problem Solving, Writing, Teaching and Lecturing, Fundraising, Research, Proposal Development, Software Architecture, Design and Development, User Interface Design, Mathematical Modeling, Organizational and Business Development, Crisis Management, Mentoring and Career Development, Negotiations.

Invited Lectures & Talks

MIT Lecture Series

Address: EAST MEETS WEST: Traditional Medicines + Modern Systems Biology MIT, Cambridge, MA September 9, 2010 to December 9, 2010

Customer Response Summit

Address: PREDICTING THE FUTURE: Are You REALLY Ready to Listen? Westin Kierland Resort & Spa, Scottsdale, AZ November 3rd & 4th, 2010

Visual Interpretations Conference

Address: Collaborative Cave Drawings of Social Interactions: Simple Visualizations of Complex Phenomena humanities + digital Visual Interpretations Conference @ MIT, Cambridge, MA May 2010

BIO-IT Conference In Silico Biology

Address: Modeling the Cell BIO-IT Conference, Boston, MA April 2009

Sri Ramachandra University

Address: Integration of Yogic Science and Systems Biology Sri Ramachandra University, Chennai, IN, March 2009

SIAM Conference on Multi-Scale Systems

Address: Scalable Architecture for Integrating Multiple Biological Pathway Models Montreal, CANADA August 2008

Genome Biology Conference - KEYNOTE SPEAKER

Address: The Mission of Systems Biology Genome Biology Conference, San Francisco, CA June 2007

MIT UROP Panel

Address: Opportunities for Research at MIT MIT UROP, Cambridge, MA February 2007

MIT Singapore Symposium

Address: Cytosolve SMA Alliance Symposium, Singapore, January 2007

MIT GAME Seminar

Address: Modeling the Cell Graduate Mechanical Engineering Students Seminar, Cambridge, MA 2005

Effective EMAIL Marketing Campaigns

Address: Measure your Success: New Metrics for EMAIL Marketing The Institute for International Research, San Francisco, CA, February 2002

Excellence in E-CRM Conference

Address: The Big Lie of CRM Allstate Corporation Conference Center, Northbrook, III. November 2001

E-Marketing / E-Service Seminar Series

Address: EMAIL Project Solutions Cambridge Education Center, Cambridge, MA December 2001

EU Conference: Artificial Intelligence

How to Increase Banking Business and Open New Dialogue with On-line Customers Address: E-Business Strategies for CRM Realvision Vicenza e NTI UK Italia, Vicenza, *Italy, June 2001*

Pre-Conference Lecture, EMAIL2001 @ MIT Conference

Keynote Address: The Pulse of the Industry Becton, Dickinson and Company, Franklin Lakes, New Jersey, May 2001

Nothing But New Forum at Fidelity Center for Applied Technology

Keynote Address: EMAIL Marketing Strategies Fidelity Center for Applied Technologies, Boston, MA, *April 2001*

EMAIL2001@MIT Conference: Intelligent Life

Keynote Address: The Corporate Nervous System MIT University Park Hotel, *Cambridge, MA, January 2001*

Southern India E-Commerce Conference 2000

Keynote Address: EMAIL = E-Commerce Advertising Club of Madras, *Chennai, India, December 2000*

Le Potenzialita del Marketing On-line in Italy

Keynote Address: Marketing On-line in Italy: How It Can Be Done Brodeur Image Time, *Milan, Italy, December 2000*

2000 General Motors Dealer Summit

Keynote Address: eCRM - How EMAIL Helps Your Business Maritz Performance Improvement Company, *Scottsdale, AZ, October 2000*

Producing Sales in Call Centers Keynote Address: Implementing Interactive Web Institute of International Research, *Washington, D.C., June 2000*

Measuring and Managing the Quality of EMAIL Response

Keynote Address: Using Automated Systems to Improve EMAIL Response InfoCast, *San Francisco, CA, May 2000*

JCPenney Internet Day

Keynote Address: EMAIL - The Ultimate Relationship Builder JCPenney, *Huston, TX, May 2000*

Annual Investment Conference for Private Companies

Keynote Address: Electronic Customer Relationship Management Massachusetts Software and Internet Council, World Trade Center, *Boston, MA, April 2000*

Innovators Breakfast Series

Open Discussion: The eCRM Problem Massachusetts Institute of Technology, New York Academy of Sciences, New York, NY, April 2000

Innovators Breakfast Series

Open Discussion: The Power of EMAIL - Brand Loyalty in Real Time Massachusetts Institute of Technology, National Press Club, *Washington, D.C., April 2000*

American Express, Naples Conference

Keynote Address: Electronic Customer Relationship Management American Express, *Naples, FL, March 2000*

American Express, Bermuda Conference

Keynote Address: Electronic Customer Relationship Management American Express Delivery Group, *South Hampton, Bermuda, March 2000*

Customer EMAIL Management

Keynote Address: Using Automated Systems to Improve EMAIL Response International Quality & Production Center, *London, England, February 2000*

GM e-Wow Speaker Series: Building Customer Relationships Online

Keynote Address: Electronic Customer Relationship Management General Motors Global Brand Management College, *Detroit, Michigan, February 2000*

Innovators Breakfast Series

Open Discussion: Is software That Answers EMAIL Automatically the Future of On-line Marketing? Massachusetts Institute of Technology, *Cambridge, MA, February 2000*

Internet Customer Relationship Management

Keynote Address: Electronic Customer Relationship Management The Institute for International Research, *San Diego, CA, January 2000*

Electronic Commerce World 1999 Conference

Educational Track: EMAIL--The Ultimate Relationship Builder EC World 2001 Conference, *Orlando, FL, October 1999*

Technology Based Customer Care ICM Conference

Keynote Address: EMAIL = E-Commerce ICM Conferences, *Atlanta, Georgia, February 1999*

DISNEY INSTITUTE/ OOPS Conference

Address: Object Oriented Programming, 1998 Other Seminar Leaders: Alan Kay

Industry RFP Awards

Allstate Corporation, Business Intelligence and Customer Care Technology (\$1,500,000.00)

AT&T, Business Intelligence and Customer Care Technology (\$120,000.00)

American Express, Business Intelligence and Customer Care Technology (\$4,120,000.00)

BancOne Services Corporation, Business Intelligence and Customer Care Technology (\$920,000.00)

BThree (Warner), Business Intelligence and Customer Care Technology (\$520,000.00)

Bausch & Lomb, Business Intelligence and Customer Care Technology (\$25,000.00)

Becton Dickinson, Business Intelligence and Customer Care Technology (\$1,110,000.00)

Bush for President, Inc., Business Intelligence and Customer Care Technology (\$820,000.00)

Cendant, Business Intelligence and Customer Care Technology (\$20,000.00)

Citigroup, Business Intelligence and Customer Care Technology (\$3,150,000.00) Calvin Klein Cosmetics Company, Business Intelligence and Customer Care Technology (\$830,000.00) Classified Ventures, Inc., Business Intelligence and Customer Care Technology (\$710,000.00) Dial Corporation, Business Intelligence and Customer Care Technology (\$110,000.00) Entertainment Media Services, Inc., Business Intelligence and Customer Care Technology (\$150,000.00) Fireman's Fund Insurance Company, Business Intelligence and Customer Care Technology (\$80,000.00) Gateway, Business Intelligence and Customer Care Technology (\$1,170,000.00) GEICO, Business Intelligence and Customer Care Technology (\$2,250,000.00) Hasbro Interactive, Inc., Business Intelligence and Customer Care Technology (\$510,000.00) Hershey Foods Corporation, Business Intelligence and Customer Care Technology (\$9,500.00) Hilton Hotel, Business Intelligence and Customer Care Technology (\$1,050,000.00) HomePortfolio, Inc., Business Intelligence and Customer Care Technology (\$315,000.00) The IT Group, Business Intelligence and Customer Care Technology (\$25,000.00) John Hancock Financial Services, Business Intelligence and Customer Care Technology (\$660,000.00) JCPenney, Business Intelligence and Customer Care Technology (\$5,230,000.00) LA Times, Business Intelligence and Customer Care Technology (\$20,000.00) Lycos, Inc., Business Intelligence and Customer Care Technology (\$670,000.00) Kimberly Clark Corporation, Business Intelligence and Customer Care Technology (\$130,000.00) People, Business Intelligence and Customer Care Technology (\$120,000.00) Procter & Gamble Company, Business Intelligence and Customer Care Technology (\$340,000.00) Purina, Business Intelligence and Customer Care Technology (\$280,000.00) QVC, EMAIL Management: Inbound and Outbound EMAIL (\$890,000.00) Rx.com, Inc., Business Intelligence and Customer Care Technology (\$70,000.00) Salomon Smith Barney, Business Intelligence and Customer Care Technology (\$120,000.00) Silicon Graphics, Inc., Business Intelligence and Customer Care Technology (\$310.000.00) Sprint Spectrum, Business Intelligence and Customer Care Technology (\$850,000.00) **TELUS Corporation**, Business Intelligence and Customer Care Technology (\$90,000.00) **Time Incorporated.** Business Intelligence and Customer Care Technology (\$45,000.00) Turner Entertainment, Business Intelligence and Customer Care Technology (\$9,500.00) United States Senate, Business Intelligence and Customer Care Technology (\$890,000.00) Unilever Consumer Services, Business Intelligence and Customer Care Technology (\$780,000,00)

Professional Art RFP Awards

Aaron Concert Management, Art Promotional Support Online Branding Grant (\$15,000.00) American Indian Contemporary Arts, Art Promotional Support Online Branding Grant (\$15,000.00) Allworth Press, Art Promotional Support Online Branding (\$15,000.00) Alvin Ailey American Dance Theater, Art Promotional Support Online Branding Grant (\$80,000.00) Art Complex Museum, Art Promotional Support Online Branding Grant (\$15,000.00) **Boston Ballet**, Art Promotional Support Online Branding Grant (\$40,000.00) Boston Casting Company, Art Promotional Support Online Branding Grant (\$15,000.00) **Cambridge Art Cooperative,** Art Promotional Support Online Branding Grant (\$15,000.00) Cambridge Multi-Cultural Art Center, Art Promotional Support Online Branding Grant (\$15,000.00) Dance Umbrella, Art Promotional Support Online Branding Grant (\$15,000.00) **Fashion Cafe.** Art Promotional Support Online Branding (\$15,000.00) Green Linnet/Xeonphile. Art Promotional Support Online Branding (\$15.000.00) Handel & Haydn Society, Art Promotional Support Online Branding Grant (\$15,000.00) Honolulu Academy of Arts, Art Promotional Support Online Branding Grant (\$15,000.00) International Arts Manager, Art Promotional Support Online Branding Grant (\$15,000.00) Houston Ballet, Art Promotional Support Online Branding Grant (\$15,000.00) Lyric Stage, Art Promotional Support Online Branding Grant (\$15,000.00) MMC Recordings, Art Promotional Support Online Branding (\$15,000.00) **MUSICIAN Magazine**, Art Promotional Support Online Branding (\$40,000.00) National Association Performing Artists Managers of America (NAPAMA). Online Branding Grant (\$15,000.00) New Age Voice, Art Promotional Support Online Branding Grant (\$15,000.00) Poetry Alive! Art Promotional Support Online Branding Grant (\$15,000.00) Sedia Furniture Design, Art Promotional Support Online Branding Grant (\$15,000.00) Sculpture Review, Art Promotional Support Online Branding Grant (\$15,000.00) Strand Theater, Art Promotional Support Online Branding Grant (\$15,000.00) Very Special Art, National, Art Promotional Support Online Branding Grant (\$70,000.00) Very Special Art, Massachusetts, Art Promotional Support Online Branding Grant (\$30,000.00) World Music, Art Promotional Support Online Branding Grant (\$15,000.00) Young Concert Artists, Art Promotional Support Online Branding Grant (\$15,000.00)

ZIMA, Art Promotional Support Online Branding Grant (\$15,000.00)

Books and Chapters in Books

EMAIL: The Ultimate Relationship Builder, Volume (In Progress) Volume I, Volume II, Volume II

Author: V.A. Shiva

The Internet Publicity Guide: How to Maximize your Marketing and Promotion in Cyberspace Author: V.A. Shiva Publisher: Allworth Press, New York, 1997

Arts and The Internet: A Guide to the Revolution, Author: V.A. Shiva

Publisher: Allworth Press, 1996, New York

Chapter on Electrodynamics, Dynamics,

Chapter in Book by Prof. Williams

Chapter in Communications Arts

Computer Assisted Automatic Indexing

Document Analysis Conference, October, 1994 Author: V.A. Shiva Ayyadurai, Submitted for Publication

Unsupervised Hierarchical Clustering of Fiber Interphases for Materials Classification

American Society of Non-Destructive Testing (ASNT) Conference, April, 1993 Authors: V.A. Shiva Ayyadurai, S. Cimaszewski, J.H. Williams. Jr.

Neural Network Based Hybrid System for Handwritten Character Recognition

Sloan School of Management Technical Report Fall, 1991 Author: Shiva Ayyadurai

Visualization of Wave Propogation in Anisotropic Media

Master of Science Thesis, MIT Media Laboratory February, 1990 Author: S. Ayyadurai

A Workstation for Particle Motion and Flow Analysis

IEEE Computers in Medicine, New Orleans, LA, November, 1988 Authors: Ayyadurai, Novakovic, Gordana, Langer, Bob

Blood Deheparinization in a Fluidized Bed Reactor

Proceedings of the Canadian Conference on Fluid Dynamics, 1987 Author: Novakovic, G., Ayyadurai, S., Michelson, L.

Prototype Expert System for Bridge Deck Deteriorization

Project Report to NSF, September, 1986 Authors: Maser, Ken, Schott, Jean-Pierre, Ayyadurai, Shiva

Sleep Stage and Apnea Pattern Analysis, pp. 505-506

Journal of the International Federation of Medical and Biological Engineering, Espoo Finland, August, 1985 Authors: Laximinarayan, S. Ayyadurai, S., Michelson, L.,

Ayyadurai's Four Point Theorem

The Mathematics Teacher, Spring, 1981 Author: Shiva Ayyadurai

Media Appearances

The Hindu: Fulbright-Nehru Fellowship Announcement, March, 2009

Times of India: Fulbright-Nehru Fellowship Announcement, March, 2009

MIT Tech Talk: Fulbright Scholar on New Adventure, September, 2007

Wall Street Journal: EchoMail Can Sort, Answer Deluge of EMAIL, 2001

Wall Street Journal: Amid Anthrax, Businesses Sour On U.S. Mail, 2001

Boston Business Journal: EMAIL Marketing Looks Past Spam to Viral Affection, 2001

Wall Street Journal: Mail Scare Could be Lethal for Businesses, 2001

B2B Magazine: Technology Leads Prospects to Sales, 2001

Customer Interactive Solutions: TMC Labs 2nd Annual Innovation Award, 2001

Mass High Tech's On the Move with Dyke Hendrickson, 2001

Forrester Research: "Effective Email Marketing" by Shar VanBoskirk with Charlene Li and Jennifer Parr, 2001

Customer Interactive Solutions: Solutions for EMAIL and Speech Interfaces, 2001

CFO Magazine: The Customers Always Write, by Alix Nyberg, 2001

Summit Strategies: On the Radar column by Associate Analyst Kate Claus, 2001

Business 2.0 with John Tomasic: 2001

Summit Strategies: UpFront column by Associate Analyst Kate Claus, 2001

Congress Online Project: EMAIL Overload in Congress Managing a Communications Crisis, 2001

Read Across America: Daniel Haggerty Elementary School and EchoMail, 2001

ZD Net: During a Recent Visit to India EchoMail CEO, V.A. Shiva, Meets The Press, 2001

MIT Technology Review: Dr. EMAIL Will See You Now, Cover Story by Deborah Shapley, 2000

CIO Magazine: Electronic Electorate, 2000

Tech Republic, The EMAIL Doctor is In, 2000

The Boston Globe: As far as the Senate is concerned, 'Dr. EMAIL' is in, 1999

Fast Company: The EMAIL Prescription, 1999

Internet World, Sites Invest Big in Technology to Improve Service, 1999

Fortune Magazine, Handling Customer Service on the Web, 1999

Adweek: Dr. EMAIL, 1999

Silicon India: Antidote for the EMAIL IIIs, 1998

ComputerWorld: EMAIL Adds Aura to Calvin Klein Campaign, 1998

Mass High Tech: General Interactive May Rule the World of EMAIL, 1998

Continental Magazine: EchoMail's V.A. Shiva Has A Vision For The Internet That Begins With EMAIL, 1998

Exhibitor Magazine: IBM's Lead Retrieval System, 1998

Internet World: Companies Seek Solutions to EMAIL Flood, 1998

Electronic Messaging News: EchoMail® Executive Briefing, 1998

The Forrester Report: Commerce Technology Strategies, 1998

Times Union (Albany, NY) : The Web as a Black Hole, 1998

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