

CAUSE NO. \_\_\_\_\_

<b>STEVEN HOTZE, M.D,</b>	§	<b>IN THE DISTRICT COURT</b>
<b>Hotze Health &amp; Wellness Center,</b>	§	
<b>PASTOR JUAN BUSTAMANTE,</b>	§	
<b>City on a Hill Church,</b>	§	
<b>PASTOR GEORGE GARCIA,</b>	§	
<b>Power of Love Church,</b>	§	
<b>PASTOR DAVID VALDEZ,</b>	§	
<b>World Faith Center of Houston Church,</b>	§	<b>_____ JUDICIAL DISTRICT</b>
<b>PASTOR JOHN GREINER,</b>	§	
<b>Glorious Way Church,</b>	§	
	§	
<b>Plaintiffs,</b>	§	
	§	
<b>v.</b>	§	
	§	
<b>LINA HIDALGO, in her official capacity</b>	§	
<b>as Harris County Judge</b>	§	
<b>Defendant.</b>	§	<b>HARRIS COUNTY, TEXAS</b>

**AFFIDAVIT OF DR. SHIVA AYYADURAI**

Shiva Ayyadurai appeared in person before me today and stated under oath:

1. I am over the age of 18 and qualified to make this affidavit. I am a resident of the State of Massachusetts. I have no direct or indirect interest in the outcome of this case for which I am offering observation, analysis, opinions, and testimony.

2. I earned four (4) degrees from the Massachusetts Institute of Technology (M.I.T.) including:
  - a. Ph.D. from M.I.T. Department of Biological Engineering;
  - b. Masters from M.I.T. Department of Mechanical Engineering;
  - c. Masters in Visual Studies from M.I.T. Media Laboratory; and,
  - d. Bachelors from M.I.T. Department of Electrical Engineering & Computer Science.
  
3. I am a Fulbright Scholar, the Inventor of Email, a Lemelson-MIT Awards Finalist, First Outstanding Scientist Technologist of Indian Origin (STIO), Westinghouse Science Honors Talent Award recipient, and nominee for the United States National Medal for Technology and Innovation. My full curriculum vitae is in Appendix I.
  
4. I am a world-leading expert in systems biology, the immune system, personalized and precision medicine, systems science, data analysis and visualization, enterprise software development, email technology, and information technology. I have been invited to deliver Distinguished and Keynote lectures at institutions such as the National Science Foundation (NSF), the Massachusetts Institute of Technology (M.I.T.), Harvard Medical School, the Arthritis Foundation, American Society of Clinical Pharmacology and Therapeutics (ASCPT), University Health Network of Canada, Tufts Medical School, National Institute of Health (NIH)/ National Center for Advancing Translational Sciences (NCATS), Council for Scientific and Industrial Research, India (CSIR-India), to name a few.

### **General Overview of Data in the United States for COVID-19**

5. As of Saturday, April 3, 2020 at 4 PM, according to the U.S. Center for Disease Control (“CDC”): a) there have been 277,205 confirmed and suspected cases of the coronavirus (“COVID-19”) in the United States; b) **U.S. COVID-19 incidence rate** – the number of cases of a disease in the U.S. divided by the U.S. population of 317,000,000 - is

approximately 1 out of 1,000, or **0.09%** confirmed with or presumed to have the COVID-19; and, c) there have been 6,593 confirmed or presumed deaths due to the COVID-19. [Ref.: <https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html>]

6. As of Saturday, April 3, 2020 at 4 PM, according to the CDC, the overall **U.S. COVID-19 death rate** - the number of deaths in the U.S. - 6,593 - due to the diseases in the U.S. - divided by the U.S. population of 317,000,000 – is approximately 1 out of 50,000 Americans or **0.002%**. [Ref.: <https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html>]

### **Comparative Analysis of COVID-19 Relative to Flu in the United States**

7. Compared to the 277,205 confirmed and presumptive cases of coronavirus COVID-19, per the CDC’s estimates, there have been nearly 54,000,000 - 54 Million (“Fifty-Four Million”) - cases of the flu in the U.S between October 1, 2019 and March 21, 2020. This means the **U.S. flu incident rate** – 54 Million divided by the U.S. population of 317 Million – is **17.03%** [Ref.: <https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm>]
8. There have been upwards of 730,000 hospitalizations and upwards of 62,000 deaths due to this year’s flu. That is upwards of 344 deaths per day due to the flu since October 1, 2019. **The U.S. flu death rate** - the number of deaths in the U.S. – 62,000 deaths due to the flu in the U.S. - divided by the U.S. population of 317,000,000 – is **0.02%** [Ref: <https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm>]
9. Compared to the **U.S. flu incident rate of 17.03%**, the **U.S. COVID-19 incident rate of is 0.09**. **This means the incident rate of the flu in the U.S. is nearly 200 times more than COVID-19.**

10. Compared to the U.S. flu death of .02%, the U.S. COVID-19 incident rate of is 0.02%. This means the death rate due to the flu in the U.S. is nearly 10 times more than COVID-19.

### **Analysis of COVID-19 Relative to Flu in the Texas**

11. According to the Texas Department of State Health Services (TDSHS), there have been 6,110 coronavirus COVID-19 cases reported in Texas as of Friday, April 3, 2020 at 8 PM. The **Texas COVID-19 incidence rate** – the number of cases of a COVID-19 in Texas divided by the Texas population of approximately 30,000,000 – is about 1 in 5000, or **0.02%**. The TDSHS reports 105 deaths in Texas from the COVID-19. The **Texas COVID-19 death rate** due to the coronavirus COVID-19 is about 3 out of 1,000,000 - 1 million – Texans, or **0.00035%**. [Ref: <https://dshs.texas.gov/coronavirus/>]
12. The TDSHS further reports that there have been **1106 cases of coronavirus COVID-19 in Harris County** as of Friday, April 3, 2020 at 8 PM. The incidence rate of the coronavirus in Harris County is 1 out of 5000. The TDSHS reports only **13 deaths** in Harris County due to the coronavirus COVID-19, <https://dshs.texas.gov/coronavirus/>.

### **A Perspective on the Lock Down**

13. The flu season, 2017 - 2018, was extremely severe. The U.S. CDC estimated that there were 45,000,000 cases of the flu with 810,000 flu related hospitalizations, and 61,000 deaths due to the flu. There was no lock down during these events. [Ref.: <https://www.cdc.gov/flu/about/burden/2017-2018.htm>].

14. The record shows that have been no widespread closings of businesses, churches, schools and public gatherings due to an epidemic in the U.S. since the Spanish flu epidemic of 1918, when it is estimated that 675,000 Americans died. As of writing of this Affidavit, approximately 7,000 deaths have occurred in the U.S. – that is 1% of the total number of Americans that died in the Spanish flu epidemic.
15. During the Obama administration the swine flu (H1N1) epidemic occurred between April 12, 2009 and April 10, 2010. The CDC estimated that there were 60,800,000 cases of the swine flu in the U.S. and 12,469 deaths. President Obama did not declare a national emergency until October 24, 2009, six (6) months after the swine flu (H1N1) had been recognized. In this incident, there was no lock down.
16. If the incident rate and the death rate, as aforementioned, for the annual influenza infection were the criteria for determining a public health hazard, and the basis for locking down a country, the COVID-19 rates being orders of magnitude less, would not constitute COVID-19 as a public health hazard, and therefore would not be a rational basis for a lock down.
17. If Americans were to react to the annual flu epidemic in the same way that people are reacting to COVID-19, then all Americans would isolate themselves from school, church services, work, and public gatherings for six (6) months annually during the flu season. But this is not what has occurred, and something Americans do not do.
18. Locking down and shutting down the country, based on the metrics available to date on COVID-19, seems to be setting a new norm – a new standard - for determining a public health hazard, and a new norm for the basis to shut down a country. If this is the new norm, a new paradigm will likely need to be created for the U.S. economy, if it is to survive in its current form.

## Standardizing Our “Concern” for Public Health

19. The recent events provide an opportunity to develop a standard for modulating our “concern” for public health – in general. Consider that every year upwards of 650,000 people worldwide die of respiratory illness related to the flu. That is 1,781 per day. A million and a half, or 4,109 per day, die of tuberculosis. Over 800,000 children die of diarrhea annually—2,192 deaths per day. There are 200 million cases of malaria every year and nearly 450,000 deaths. That is 1,232 deaths daily.

20. Below are some statistics about illness and death in the United States. These statistics may vary; however, the error is likely to be no more than +/- 5% (“five-percent”)

- **Iatrogenic** (Medical Errors incl. Prescription Drugs): 780,000 deaths/yr, 2136/day
- **Heart Disease:** 650,000 deaths/yr, 1,772/day
- **Cancer:** 600,000 deaths/yr, 1,650/day
- **Traffic Deaths:** 37,000 deaths/yr, 100/day
- **Traffic Injuries:** 2.35 million/yr, 6,438/day
- **Lung Infections:** 160,000 deaths/yr, 438/day
- **Stroke:** 146,000 deaths/yr, 400/day
- **Alzheimer’s:** 121,000 deaths/yr, 332/day
- **Diabetes:** 84,000 deaths/yr, 230/day
- **Flu:** Ave. 50,000 deaths/yr, 278/day
- **Kidney Disease:** 51,000 deaths/yr, 140/day
- **Suicides:** 47,000 deaths/yr, 129/day
- **Abortions:** 800,000 deaths/yr, 2,192/day
- **Opioid/Narcotic Overdoses:** 47,000 deaths/yr, 129/day
- **HIV/AIDS:** 56,500 new cases/yr, 155/day
- **STD Infections (gonorrhea, syphilis & chlamydia):** 2.4 million cases/yr, 6,575/day
- **Coronavirus (Jan. 21 – April 3, 2020):** 6,593 deaths, 97/day

[Ref.: <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>].

21. If one considers that there are approximately 2.4 million injuries from traffic accidents every year, resulting in 37,000 deaths per year. That means there are 6,575 injuries per day, and 100 deaths per day from traffic accidents. We as society no doubt acknowledge that this is significant and ongoing public health issue. However, there appears to be

neither lock down orders being issued to stop driving nor outcry from our public health officials about eliminating all motor vehicles, and forcing Americans to only travel via bicycles and horses.

### **The Science**

22. When one rationally, with common sense, considers the current situation on COVID-19, the mathematics simply does not add up. The reaction – or, more specifically the over-reaction – is dissonant to the incident and death rates of COVID-19 situation, particularly given the data on the annual and daily death rates of other public health events.
23. For far too long, the scientific establishment has been motivated to misdirect the source of every new health problem or event to be an infectious disease and every solution a pharmaceutical drug or vaccine intervention. History shows the failure of this approach not only in the distant past on such non-infectious diseases such as scurvy, beriberi, pellagra, but also, more recently on Legionnaire’s disease and the egregious and erroneous HIV-AIDS causality.
24. The reality is that it is the over-reaction of a weakened and dysfunctional immune system, many times solved by food and nutrition that is the root cause of illness in most cases. In fact, a true understanding of the immune system reveals that it is *not* the pathogen or virus which damages cells and tissues, but rather the over-reaction via a “cytokine storm” of the individual’s own immune system attacking their own tissue and cells. The modern science of the immune system informs us that it is the over reaction of our OWN weakened and dysfunctional immune system attacking tissues and cells of our own body that harms and kills, versus the virus - be it COVID-19 or any other virus. In healthy individuals, the immune system processes pathogens with a natural immune response that is mild and non-lethal; however, in those who are immuno-compromised - elderly and those with pre-existing conditions - their own immune systems may overreact; and in the

case of COVID-19, attacking lung epithelial cells and tissues leading to hospitalization and mortality.”

25. In the current situation with COVID-19, the infection inspires a “cytokine storm” in those that have weakened and dysfunctional immune systems. As one ages, the immune system has a tendency to become weakened. Indicative of this is that the more serious symptoms, in the current situation, occur in those over the age of 60, who are debilitated and infirmed, and those with pre-existing conditions, such as heart disease, chronic lung disease, diabetes, and obesity. The older and sicker the individual, the more severe the disease tends to be. Younger and healthier people are less likely to manifest serious symptoms, even if they are infected. If they do have any symptoms, then they will be mild or moderate, and they will recover. Up to 25% of those who have the COVID-19 are without symptoms.

26. Based on the principles of modern personalized medicine, one size does not fit all, for using our vast scientific understanding of nutritional interventions to differentially support four groups: COVID-19 positive, those in critical care, immuno-compromised, and the healthy, to enable immune health, as well as to end the lock down so we can get our economy back in order, as stated in the Letter:

There is no need to shut-down our entire country. There is no need to quarantine all of our citizens. The solution herein provides a path to advance the immune health of all our citizens while getting our healthy people back to work – now.

SIGNED \_\_\_\_\_, 2020.

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Shiva Ayyadurai, Ph.D.



SIGNED under oath before me on \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public, State of Massachusetts

(SEAL)

## APPENDIX I

### CURRICULUM VITAE

Shiva Ayyadurai, Ph.D.

#### Education

##### INSTITUTION AND LOCATION DEGREE YEAR FIELD OF STUDY

MIT, Department of Biological Engineering Ph.D. 2007 Systems Biology  
MIT, Department of Mechanical Engineering S.M.M.E. 1990 Applied Mechanics  
MIT Media Laboratory, Department of Architecture S.M.V.S. 1989 Scientific Visualization  
MIT, Department of Electrical Engineering and Computer Science S.B.E.E. 1986 Operating Systems

#### Industry & Entrepreneurial Experience

2010-Present Founder, Chairman & CEO, Chief Scientist, CytoSolve, Inc.  
2009 Additional-Secretary, Indian Government & CEO, CSIR-Tech, India  
2004-Present Board Member, EchoMail, Inc., Enterprise Email Management  
2004-Present Founder and Managing Director, General Interactive, LLC, Venture Incubator  
1998-2004 Founder, President & CEO, EchoMail, Inc., Enterprise Email Management  
1994-1998 Founder, President & CEO, Millennium Productions, Inc., Software & Media Production  
1990-1994 Director of Advanced Products, Dataware Technologies, Inc., CD-ROM Search Software,  
1986-1990 Senior Engineer, Graphics Software, IBM/Lotus Development Corporation  
1984-1986 Senior Engineer, Information Resources, Inc., Marketing Analytics  
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,

#### Academic Teaching Experience

2010–Present Lecturer, Systems Thinking Workshops, Systems Health, LLC  
2010-2013 Lecturer, Systems Visualization, MIT Comparative Media Studies  
2007-2012 Lecturer, MIT Biological Engineering Department  
2007 Lecturer, Biological Pathway Design and Implementation, SMA 2007 Boot Camp  
2006 Lecturer, Biological Pathway Design and Implementation, SMA 2006 Boot Camp  
2006 Teaching Assistant, Control Systems and Dynamics, 2.14, MIT Mechanical Engineering  
1994-2004 Industry Expert, “Dr. E-Mail”, Lectures Worldwide, Global 2000 Companies  
1992-1994 Lecturer, Information Technology I, MIT Sloan School of Management  
1990 Teaching Assistant, Dynamics, 2.03, MIT Department of Mechanical Engineering.  
1988 Lecturer, 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 Lecturer, IAP Course on Indian Art History, MIT Humanities Department

### **Academic Research Experience**

2009-Present Director, International Center for Integrative Systems, Educational & Research Foundation

2013-2014 Visiting Scientist, Sociotechnical Systems Rsrch Ctr., Engineering Systems Division, MIT

2010-2011 Director, MIT Media & Organizational Biomimetics, Comparative Media Studies, MIT

2009 Scientist Level H, Council of Scientific and Industrial Research, New Delhi, India

2007-2009 Fulbright Scholar, Systems Biology-Traditional Medicines, US-India Fulbright Program

2004-2007 Research Associate, MIT Biological Engineering, Computational Systems Biology

1996-2004 Chief Scientist, EchoMail, Inc., Large Scale Architectures for Message Analysis

1992-1996 Chief Technology Officer, Information Cybernetics, Inc., Document Analysis & Modeling

1990-1992 Research Team Leader, Sloan School of Mgmt, Offline Handwriting Recognition, MIT

1988-1990 Graduate Research Assistant, MIT NDE Lab, Wave Propagation Analysis and Modeling

1986-1988 Graduate Research Fellow, MIT Media Laboratory, Automated Graphic Design System

1984-1986 UROP Research, Particle Analysis in Fluidized Bed Reactors, Langer Laboratory, MIT

1983-1984 UROP Research, Cryogenic Embryo Preservation, Health Sciences and Tech., MIT

1982 UROP Research, History of India's Caste System, Prof. Noam Chomsky, MIT

1981-1983 UROP Research, Tadoma and Speech Recognition, Research Lab for Electronics, MIT

1978-1983 Research Associate, Sleep Pattern Analysis, Biomedical Engineering, UMDNJ

1978-1984 Research Fellow, Email System, Laboratory for Computer Science, UMDNJ

### **Political & Activism Experience**

#### **Republican Candidate for U.S. Senate 2020 from Massachusetts**

Running for U.S. Senate to represent MA in 2020

#### **Independent Candidate for U.S. Senate 2018 from Massachusetts**

Garnered a historic ~100,000 votes running aggressive ground campaign in MA. Number of votes was

five times greater than any other Independent candidate in MA history.

### **Industry Publications**

Dr. Shiva Ayyadurai is the author of over 200 hundred confidential industry publications, white papers

and studies performed in the fields of email technologies and systems biology for global 2000 companies.

The titles of those publications are available upon request. 1992 – Present.

### **Selected Academic Publications**

S. Ayyadurai, P. Deonikar, Modulation of Neural Signaling by Tetrahydrocannabinol (THC), Food

Chemistry, Submitted for Publication, June 2019.

S. Ayyadurai, M. Hansen, J. Fagan, P. Deonikar, *In-Silico* Analysis & *In-Vivo* Results Concur on Glutathione Depletion in Glyphosate Resistant GMO Soy: Advancing a Systems Biology Framework for

Safety Assessment of GMOs, American Journal of Plant Sciences, Vol. 7, No. 12, August 19, 2016.

M. Sweeney, S. Ayyadurai, B.V. Zlokovic, Pericytes of the neurovascular unit: key functions and signaling pathways, Nature Neuroscience, Vol. 19, No. 6, 771-83, May, 2016.

S. Ayyadurai, P. Deonikar, Do GMOs Accumulate Formaldehyde and Disrupt Molecular Systems Equilibria? Systems Biology May Provide Answers, Agricultural Sciences, Vol. 6, No. 7, July 10, 2015.

S. Kothandaram, P. Deonikar, M. Mohan, V. Venugopal, S. Ayyadurai, *In-Silico* Modeling of C1 Metabolism, American Journal of Plant Sciences, Vol. 6, No. 9, June 17, 2015.

S. Ayyadurai, The Control Systems Engineering Foundation of Traditional Indian Medicine: the Rosetta

Stone for Siddha and Ayurveda, Systems of Systems Engineering, Vol. 5, No. 2, 125-149, June, 2014.

A. Koo, S. Ayyadurai, D. Nordsletten, R. Umeton, B. Yankama, S. Ayyadurai, G. García-Cardeña, C.

Forbes Dewey Jr., *In Silico* Modeling of Shear-stress-induced Nitric Oxide Production in Endothelial Cells

through Systems Biology, Cell Biophysical Journal, Volume 104, Issue 10, 2295-2306, May 21, 2013.

S. Ayyadurai, S. Abraham, T. Zawacki, International Small Business Commerce (ISBC): Potential Source

of New Revenue for the United States Postal Service, U.S. Postal Service Office of Inspector General,

February 15, 2013.

S. Ayyadurai, D. Sparks, L.P. Michelson, S. Abraham, Email Management & Potential Opportunities for

United States Postal Service, U.S. Postal Service Office of Inspector General, August 24, 2012.

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.

S. Ayyadurai, Biomimetics of Communication and Media, 12th International Research Symposium on Service Excellence in Management, Ithaca, NY, June 2-5, 2011.

S. Ayyadurai, C.F. Dewey, Jr., A Distributed Computational Architecture for Integrating Multiple Biomolecular Pathways, Biological Engineering Division, MIT, Cambridge, MA, March 9, 2011.

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.

S. Ayyadurai, Commentary: Innovation Demands Freedom, Nature India, December, 2009.

S. Ayyadurai, Modeling the Cell, Proceedings of BIO-IT Conference, In Silicon Modeling Section, Boston, MA, April 2009.

S. Ayyadurai, Integration of Siddha with Systems Biology, Proceedings of Fullbright Conference 2009, Kolkata, India, March 2009.

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.

S. Ayyadurai, Mission of Systems Biology, Bio-IT Beyond Genome Conference Proceedings, June 2008.

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

S. Ayyadurai, C.F. Dewey, Jr., Integrating an Ensemble of Biochemical Network Models, In International Society of Computational Biology (ISCB 2007), Vienna, July 2007.

S. Ayyadurai, Cytosolve, In proceedings of the Singapore MIT Symposium for Computational and Systems Biology, January 2007.

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.

S. Ayyadurai, Modeling Actin Polymerization as a System of Integrated Biomolecular Pathways, In Proceedings of the Annual MIT CSBi Oktoberfest, October 2005.

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.

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.

## **Books**

### **The Climate of Science**

August 2019

### **The Future of Email: What We Must Do to Protect Ourselves**

A review of email's origin and where email is going including opportunities and dangers.

Publisher: General Interactive, Cambridge, 2016

### **Systems Health**

A three-volume set that is the text book for the Systems Health® course.

Publisher: General Interactive, Cambridge, 2016

### **The Science of Everything**

An integration of eastern medicine & western systems theory to reveal the “science of everything.”

Publisher: General Interactive, Cambridge, 2016

### **Your Body, Your System**

How to achieve health and well-being by treating the body as a complex system of systems.

Publisher: General Interactive, Cambridge, 2016

### **The System and Revolution**

Provides an accessible guide to power of systems thinking and how it can revolutionize everything.

Publisher: General Interactive, Cambridge, 2015

### **The EMAIL Revolution: Unleashing the Power to Connect**

Provides the history of email and how modern AI is advancing email across major organizations: small

and large.

Publisher: Skyhorse & Penguin, New York, 2013

### **The Internet Publicity Guide: How to Maximize your Marketing and Promotion in Cyberspace**

Educational guide for online retailers on how to build sales through the emerging online medium.

Publisher: Allworth Press, New York, 1997

### **Arts and The Internet: A Guide to the Revolution**

A guide to educate artists on the power of the Internet for new forms of art and distribution.

Publisher: Allworth Press, New York, 1996

## **Honors and Awards**

**“Star” Scientist in Feature Documentary *Poisoning Paradise***

Poisoning Paradise winner of multiple film awards, 2019

**Inventor of Email Honor by Government of Argentina**

Invited by the Government of Argentina, Tucuman Province and the University of Technology National to give lectures on innovation, June, 2019

**Clinical Research Summit 2019**

Distinguished Lecture Award, March, 2019

**State of the Art Lecture Award**

American Society for Clinical Pharmacology and Therapeutics, 2017

**MIT Presidential Fellows Distinguished Lecture**

Selected to give annual MIT Presidential Fellows Lecture, September 2017

**#1 Reviewer’s Choice for The Future of Email Book**

Midwest Book Review: Small Press Bookwatch, 2017

**Email @33: Inventor of Email Honoring**

Digital India Foundation, September 2015

**Serial Entrepreneur of the Year**

Entrepreneur Magazine, 2015

**Nominated National Medal of Technology and Innovation (NMTI)**

US Patent and Trademark Office, September 2014

**Livingston Hall of Fame**

Livingston Educational Foundation (LEF), June 2014

**ASSIST World Records Research Foundation Honorary Award**

ASSIST World Records Research Foundation, Puducherry, India July 2013

**Honorary Doctorate**

Vinayaka Missions University, Salem, India July 2013

**SKP Lifetime Achievement Award for Science and Technology**

SKP Engineering College, Tiruvannamalai, India July 2013

**Sri Sakthi Institute of Technology Lifetime Achievement Award**

Sri Sakthi Institute of Technology, Coimbatore, **India July 2013**

**The Smithsonian's National Museum of American History Acceptance of EMAIL papers, artifacts**

National Museum of American History, The Smithsonian Institution, Washington D.C, February 16, 2012

**The Man Who Invented Email**

Time Magazine, November, 2011

**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

**Travel Fellowship Award**

ISMB 2007, Vienna, Austria, 2007

**Fulbright Scholar**



US Fulbright, Washington, DC, 2007

**Graduate Research Fellowship**

SMA Graduate Research Fellowship, 2004-2007

**Communications Solutions™ 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 E-Mail 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**

Since 1997

**IBM/Lotus Beacon Award**

Best Messaging Solution, EchoMail Suite, 1997

**Massachusetts Interactive Media Council Award**

Best E-Mail/ Fax Application, EchoMail suite, 1997

**Discover Magazine Award for Technical Innovation**

XIVATM Core Technology, 1996

**Lemelson-MIT Award for Innovation**

XIVATM Core Technology (Finalist), 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**

1985

**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**

Essex County, New Jersey, 1981

**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

### **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 and Thesis Supervision**

Ceryen Tan, **MIT UROP Project**, Biological Engineering, **Title:** SBML API Programming for Biological

Systems Integration, 2005.

Steven A. Cimaszewski, **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.

### **Professional Societies**

TIE, Charter Member

Tau Beta Pi, Lifetime Member

Sigma Xi, Full Member

Eta Kappa Nu, Member

Oxford-Cambridge Society, Member

The Indus Entrepreneur (TIE), Charter Member

Biomedical Engineering Society (BMES), Student Member

### **Skills**

#### **Programming Languages**

C++, C, Java, HTML, ASP

#### **Foreign Languages**

Spanish, Italian, Tamil, Hindi

#### **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 (selected ones)**

**Association of Systems Pharmacologists**

**Karunya University, National Level Symposium**

Address: Inventions and Innovations for Sustainable Development  
Coimbatore, India March 2014

**Hindustan Educational Institutions**

Address: Innovate to Lead  
Coimbatore, India March 2014

**Indian Institute of Technology, Mumbai**

Address: Innovation Anytime, Anyplace by Anybody  
Mumbai, India March 2014

**Indian Institute of Technology, Delhi**

Address: Innovation Anytime, Anyplace by Anybody  
New Delhi, India March 2014

**Penguin Publication Book Tour**

Address: The EMAIL Revolution  
India, March 12 to March 25, 2014

**Chopra Center: Journey to Healing**

Address: Systems Health  
San Diego, CA March 2014

**Sages and Scientists**

Address: Systems and Revolution  
San Diego, CA August 2013

**MIT Conversations on Sociotechnical Systems**

Address: Rethinking Narrative and Systems of Innovation: Innovation Anytime, Anyplace by Anybody  
MIT, Cambridge, MA October 2013

**Chopra Center: Journey to Health**

Address: Systems Health  
San Diego, CA August 2013

**Hindustan University**

Address: Innovation Anytime, Anyplace by Anybody  
Chennai, India July 2013

**Velammal Vidyalaya**

Address: Innovation Anytime, Anyplace by Anybody  
Chennai, India July 2013

**SCAD Engineering College**

Address: Innovation Anytime, Anyplace by Anybody  
Tirunelveli District, India July 2013

**PSR Engineering College**

Address: Innovation Anytime, Anyplace by Anybody  
Sivakasi, India July 2013

**Kalasalingam University**

Address: Innovation Anytime, Anyplace by Anybody  
Virudhunagar, India July 2013

**Kalaingar Institute of Technology**

Address: Innovation Anytime, Anyplace by Anybody  
Coimbatore, India July 2013

**Sri Sakthi Institute of Technology**

Address: Innovation Anytime, Anyplace by Anybody  
Coimbatore, India July 2013

**SCAD Engineering College**

Address: Innovation Anytime, Anyplace by Anybody  
Coimbatore, India July 2013

**Akshara Vidyaashram**

Address: Innovation Anytime, Anyplace by Anybody  
Cuddalore, India July 2013

**CK College of Engineering & Technology**

Address: Innovation Anytime, Anyplace by Anybody  
Cuddalore, India July 2013

**Sathyabama University**

Address: Overcoming Hurdles and Believing in Oneself to Fulfill One's Destiny  
Chennai, India July 2013

**Infosys**

Address: How Innovation can Happen: Innovation Anytime, Anyplace by Anybody  
Chennai, India July 2013

**GT Aloha Vidyamandir**

Address: Integrate and Innovate  
Chennai, India July 2013

**Vellore Institute of Technology**

Address: Siddha: The First Systems Biology  
Vellore, India July 2013

**Sri Sairam Engineering college & Sri Sairam Homoeopathy Medical College**

Address: Innovation and the Invention of Email / Integration of Ancient and Alternative  
Medicine  
Systems  
Chennai, India July 2013

**Sona University**

Address: Innovation Anytime, Anyplace by Anybody

Salem, India July 2013

**Vinayaka Missions University**

Address: Innovation Can Happen Anywhere

Salem, India July 2013

**Sastha Tamil Foundation**

Address: Innovation and Systems

Plano, TX April 2013

**The Consortium of Health and Military Performance**

Address: A Revolution in Medical Education

Uniformed Universities of Health Sciences, April 2013

**MIT Traditional Medicines Society**

Address: EAST MEETS WEST: Traditional Medicines + Modern Systems Biology

MIT, Cambridge, MA February 5, 2013 to April 21, 2013

**MIT Biological Engineering Department Lecture Series**

Address: EAST MEETS WEST: Traditional Medicines + Modern Systems Biology

MIT, Cambridge, MA September 9, 2011 to December 5, 2011

**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 E-Mail Marketing Campaigns**  
Address: Measure your Success: New Metrics for E-Mail 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, Ill. November 2001

**E-Marketing / E-Service Seminar Series**  
Address: E-Mail 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, E-Mail2001 @ 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: E-Mail Marketing Strategies  
Fidelity Center for Applied Technologies, *Boston, MA, April 2001*

**E-Mail2001@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: E-Mail = 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 E-Mail 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 E-Mail Response**  
Keynote Address: Using Automated Systems to Improve E-Mail Response  
InfoCast, *San Francisco, CA, May 2000*

**JCPenney Internet Day**

Keynote Address: E-Mail - The Ultimate Relationship Builder

JCPenney, *Houston, 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 E-Mail - 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 E-Mail Management**

**Keynote Address: Using Automated Systems to Improve E-Mail 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 E-Mail 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: E-Mail--The Ultimate Relationship Builder

EC World 2001 Conference, *Orlando, FL, October 1999*

**Technology Based Customer Care ICM Conference**

Keynote Address: E-Mail = E-Commerce

ICM Conferences, Atlanta, *Georgia, February 1999*

**DISNEY INSTITUTE/ OOPS Conference**

Address: Object Oriented Programming, 1998

Other Seminar Leaders: Alan Kay

**Books and Chapters in Books**



**The EMAIL Revolution**

Author: V.A. Shiva

Publisher: Allworth Press, New York, 1997

**E-Mail: 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 Propagation 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

**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**, E-Mail Management: Inbound and Outbound E-Mail (\$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)  
**Handle & 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)

**PROFESSIONAL ART WORKSHOPS**

**Arts & The Internet**

Art Promotional Through Online Branding

**Arts & The Internet: A Guide to the Revolution**

Empowering the artist and art organization to reach a global audience, using new technological tools.

MIT Classroom of the Future, 1996

**Research Interests**

Mathematical Modeling, Email Technologies, Systems Thinking, Organizational Structure and Planning, User Interface Design, Visual Arts, Politics, Nutrition & Health

**Community Interests**

MIT Graduate Alumni Consortium for Improving MIT Community, Very Special Arts, World Music, Read Across America, Spare Change, The Meena Scholarship Fund for Gifted South Indian Students, Kauai Hindu Temple Construction Fund