# SAMSON TIMONER, Ph.D.

44 Locke Street
Cambridge Ma, 02141

samson@alum.mit.edu
(617)-320-9413

## Education

Massachusetts Institute of Technology, Cambridge, MA. Sep. 1998 – Jun. 2003
Artificial Intelligence Lab, within Elect. Eng. and Comp. Sci. GPA 5.0/5.0

California Institute of Technology, Pasadena, CA. Sep. 1994 – Jun. 1997
B.S. with Honors, Applied Physics. GPA 4.0/4.0.

## Recent Professional Experience

Startup Advisor: Founder/CTO Jan 2014 – Current

Advising a number of startups in the Boston area in the Machine Vision/Graphics/ Visualization space. Areas of advice focus on choosing markets, product marketing, sizing a market, forming a business plan, setting milestones, bootstrapping and raising money.

Scalable Display Tech: Founder/CTO Jan 2004 – Dec 2013

Licensed technology out of MIT and founded company. Brought in co-founder, boot-strapped to first product, grew team, raised money, grew company to 17 people and profitability. Did initial product marketing looking for first target market and wrote the first version of the software. Managed engineering team early in the company before handing it off. Worked with clients to develop product needs and technology roadmap. Managed IP strategy. Formed technical vision for the company which was based around inexpensive hardware, working together with smart software and feedback. The company is ongoing and profitable.

VESA MPACS Standards Committee Co-Founder 2012-2014.
ProCams Machine Vision Workshop, Committee Member 2012, 2013

Software Consultant: Image Processing Oct 2003 – Dec 2004

Clients including Hologic and Brigham and Women's Hospital.

Harvard Medical: Postdoctoral Fellow: June 2003 – Dec 2003

Research in non-rigid registration of medical images in surgical planning, and morphological studies of sub-cortical structures.

## Patents

6 Patent Applications submitted in 5 countries.

## Recent Selected Honors and Awards

Red Herring: Top 100 Global Award (Award to Promising Startups) 2011
MIT 50K Business Plan Competition: Semifinalist 2003
MIT 1K Business Idea Competition: Winner 2002
Fannie and John Hertz Foundation Fellowship 1998 – 2003

## Skills

Expertise in: Product Management, Patents, Managing Teams. Early Stage Product Management, Growing Companies.

Expertise in: Detection and Estimation, Statistical Classification, Learning Methods, Vision algorithms, 2D and 3D image processing, Numerical methods (fast algorithms), Large collaborative programming projects.

Experience in: C++, Perl, Awk, Tcl/Tk, Fortran, SQL, PostScript. Windows & Linux.

Experience in: Electro-chemistry, Bio-chemistry, fluid mechanics, optical tables and optical systems, mechanical design, vacuum systems, micro-fabrication methods, STM, AFM.

## Earlier Professional Experience

Massachusetts Institute of Technology — Sep. 1998 – May 2003

Ph.D. Research Assistant: Developed new algorithms for representing medical shapes using tetrahedra, shape matching, and statistical shape analysis. Created novel adaptive methods for fast non-rigid registration of medical images.

M.S. Research Assistant: Developed new filter design techniques for sub-nanometer motion estimation of micro-mechanical devices as well as cell motion.

Swiss Federal Institute of Technology(EPFL): Visiting Scientist — Summer 2001

Develop methods for non-rigid registration of medical data.

Web Consultant — Sep. 1999 – May 2003

Developed Perl/Apache/SQL solutions for student groups.

IGEN International: Research Engineer — Jun. 1997 – Aug. 1998

Contributed to design of inexpensive cartridge to perform multiple blood tests from one drop of blood. Developed mixing methods inside the cartridge. Designed simple mechanical parts. Built test and measurement system.

Lucent Bell Labs (Murray Hill, NJ) — Summer 1996

Technical Associate: Showed it was possible to see and studied individual alkyl-thiols in a self-assembly using an AFM at room temperature and air pressure

Caltech: Research Assistant — 1994 – 1996

Researched making ordered array of 10 nm holes in aluminum oxide using an electrochemical process. Built electron beam projection system.

Caltech: Teaching Assistant — Fall 1995, 96

Laboratory instructor for introductory microfabrication class (Aph 9a).

Caltech: Research Assistant — 1994 – 1995

Performed molecular dynamics simulations to examine instantaneous inelastic energy loss effects and search for interesting physical phenomena.

## Earlier Selected Honors and Awards

| | |
|---|---|
| Carnation Scholarship: Full tuition to Caltech. | 1995, 1996 |
| Barry M. Goldwater Foundation Scholarship | 1996 |
| Perpall Scientific Speaking Competition: Second Place | 1995 |
| Co-Founder of Caltech Entrepreneur Club | 1994 |
| Member of Tau Beta Pi, the National Engineering Honor Society | |
| Member of Sigma Xi, the Scientific Research Society | |

## Selected Publications

J. L. Archdeacon, J. P. Gaska, S.J. Timoner: An Operationally Based Vision Assessment Simulator for Domes, Presented at the IMAGE Conference, Scottsdale, AZ. 2012.

L Zollei, M Jenkinson, S. J. Timoner, W. Wells: A Marginalized MAP Approach and EM Optimization for Pair-Wise Registration. IPMI 2007: 662-674.

S.J. Timoner, “Compact Representations for Fast Non-rigid Registration of Medical Images”, Ph.D. Thesis, Massachusetts Institute of Technology, May 2003.

S.J. Timoner, et al., “Performance Issues in Shape Classification”, Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2002.

S.J. Timoner, W. Grimson, R. Kikinis, W. Wells, “Fast Linear Elastic Matching Without Landmarks”, Medical Image Computing and Computer-Assisted Intervention (MICCAI), 2001.

S.J. Timoner, D. M. Freeman, “Multi-Image Gradient-Based Algorithms for Motion Estimation”, Optical Engineering. Sept 2001; 40(9):2003-2016.

S.J. Timoner, “Subpixel Motion Estimation From Sequences of Video Images”, Masters Thesis, Massachusetts Institute of Technology, June 1999.

S.J. Timoner, M.H. Shapiro, T.A Tombrello, "Molecular Dynamics Simulations of Inner-Shell Electronic Energy Losses in Cluster Surface Collisions" published in Nuclear Instruments and Methods B: June 1996.

**Invited Talks**: Numerous including Johns Hopkins CS, Society for Information Display, IHS Interactive Technology Summit, Projection Summit.