



## WALTER Y. MOK

Adjunct Professor, School of Business,  
The Chinese U. of Hong Kong

Affiliated Scientist, SLAC National Lab. Stanford  
Nanotechnology Management

### **Knowledge Space:**

Silicon Valley Study, Entrepreneurship  
Collaborative innovation, R & D management

Laser Optics, Medical devices  
Nano-structure, Digital Medicine  
Unconventional Nuclear fusion

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### **Education**

**Ph. D. (Physics) University of California, Davis, 1980**

**Distinguished Scholar awards.**

Thesis Advisors:

Professor E.L.Hahn, Department of Physics, U. of California, Berkeley.

Professor T.K.Gustason, EE and Computer Science, U. of California,  
Berkeley.

Field: Non-linear Plamonic Optics

MSc. (Physics) Sam Houston State U. Huntsville, Texas

Thesis: Electronic Spin Resonance of Gd<sup>3+</sup> in LiNbO<sub>3</sub>.

Advisors: Professor Perry, F. McDonald. Professor E. Rex Isham.

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## Teaching Statement

Entrepreneurship is a living skill born with every one of us. A teacher's role is to help our students to discover what they have within and make the best out of it. Living is a continuous process of discovery of our selves, others and the world around us. Teacher is a tour guide helping students to create value, enjoy the journey and appreciate the beauty of life. The ultimate goal of education is to assist our students to become their own teacher.

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**2020 Highlight: “Project Entrepreneurial Nation”,**

Mission: Proliferation of Silicon Valley Startup Culture across America.

**2019 Scientific publication: Appl. Phys. Lett.** Total Downloads: 371 (05, 2020)

**Scanning microwave imaging of optically patterned Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>:**

Appl. Phys. Lett. 114, 093109 (March 2019)

## Public Talk:

2020 May 29, Friday, Unleash The Innovation, Silicon Valley to Hong Kong  
CUHK Business School

2019 Nov. 1<sup>st</sup>. Unleash the Creative Power, Silicon Valley Business Culture  
HKBUST

2018 – Sep 22. How Silicon Valley Works  
Startup Forum, HKUST Alumni Association, Silicon Valley  
<https://www.evensi.us/startup-forum-2018-aig-training-room-9/268341810>

## Award

**Faculty Teaching award 2012 - 2013**,  
DSE 6688, Startup- From Idea to Reality  
Dean: **Professor Vernon Hsu**

**Faculty Teaching Award 2010 – 2011**  
DSE 6688, Startup- From Idea to Reality  
Dean: **Professor T.J. Wong**

**Certificate of Achievement, SLAC National Laboratory - 2014**  
Science Undergraduate Laboratory Internship Program  
To inspire the next generation of scientist and engineers  
Director, SLAC, National Lab, Stanford University

## Research

**Managerial Economics**: Creating a tech business habitat in a non-tech region; Evolving corporate & business management style in Silicon Valley; Entrepreneurial capitalism to reduce wealth disparity.

**Business Education**: How Silicon Valley works; Technology Business - from idea to reality; **Entrepreneurial process; Cultural entrepreneurship**  
<https://asia.stanford.edu/course/entrepreneurship-in-asian-high-tech-industries/2010-entrepreneurship-in-asian-high-tech-industries>

**Nano-Fabrication Technology (NFT) at SLAC National Laboratory**  
NFT is the new frontier in technology with a wide range of commercial applications in X-ray laser, medicine, IT devices and energy storage.

2019, Publication: (Applied Physics Letter, 08 March, 2019)  
Scanning Microwave Imaging of Optically Patterned Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>.  
[https://www.dropbox.com/s/zaah4qpwdab90bg/GST\\_paper\\_7-27.pdf?dl=0](https://www.dropbox.com/s/zaah4qpwdab90bg/GST_paper_7-27.pdf?dl=0)  
MIM\_Appl.Phys.Lett.114, 093106 (2019); <https://doi.org/10.1063/1.5052018>

## Social Service

**2017, Nov. 17 Commercialization of Nuclear Fusion** - Co-Chair,  
Secretary

An open citizen forum addressing some of the critical issues and solution of national scale and global impact in nuclear fusion, through multi-disciplinary collaboration. Venue: SLAC National Lab

### **Citizen Forum**

Video Link: Nuclear Fusion: Reacting to Commercialization

[https://www.youtube.com/results?search\\_query=vlab+nuclear+fusion+videos](https://www.youtube.com/results?search_query=vlab+nuclear+fusion+videos)

(This video details different approaches in commercializing nuclear fusion, opportunities and challenges.)

Venue: SLAC National Accelerator Laboratory and Stanford University

Laptop Radio : Stanford

The basic of Nuclear fusion

<https://medium.com/@laptopradio/the-basics-of-nuclear-fusion-b84e42978ddf>

**2019 High Energy Laser conference and workshop at SLAC**  
**Participant**

## Academic position (Business Education)



香港中文大學  
The Chinese University of Hong Kong

**Adjunct Professor**

2005-

present

Department of Decision Science, School of Business  
Chinese University of Hong Kong

### **Teaching:**



**Technology Start Up- from idea to reality**

**With emphasis on IT business**

2005 - 2016

DSME 6668 *MSc. Program on IT Management*

2018 - 2020

**Silicon Valley field trip**

2005 - Now

Environ, History, Business culture and IT business trend  
of Silicon Valley



EMBA week at Stanford, UCB and Silicon Valley  
2011 -2016  
CUHK EMBA (English) and EMBA (Chinese)

Video Link: “ From Technology to Business” at Stanford and Silicon Valley  
[https://www.youtube.com/watch?v=\\_m42xGwlk4Q](https://www.youtube.com/watch?v=_m42xGwlk4Q)

A one-week intensive program with interactive talks from Stanford faculty, Stanford School of business, Stanford management Science, Stanford School of Design, School of Business, UC Berkeley, Panel discussions with opinion leaders, VC, CEO of SV,

Lecture series:

- Innovation, the Silicon Valley Way,
- Emulating Silicon Valley;
- The Tao of Silicon Valley,
- The Business Eco-system of SV
- Characteristics of Silicon Valley,
- Doing Business in Silicon Valley,
- Translating Silicon Valley to Asia
- Venture Capital Finance in SV



EMBA class of 2013 with members of C-100, USA, at Stanford University



EMBA (Chinese) Class of 2016 with Professor Steve Chu (Center, in yellow shirt), Nobel Laureate, at Stanford University

**Academic Position (Physical Science)**



**Visiting Scientist, SLAC National Accelerator Laboratory 2011- Now**  
Nano-technology, Synchrotron Light Diagnostic, Photon Science  
Time Correlated Single Photon Counting Spectroscopy

## SLAC Facilities Overview

SLAC



Overview of the LLRF Activities at SLAC—LLRF 2013  
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SLAC's Arrillaga Science Center – Nanofabrication facility , 2019



Professor Charles Kao, Nobel Laureate, visited Professor Piero Pianetta, Director of Stanford Synchrotron Light Source with Prof. Walter Mok



**Faculty, United States Accelerator Physics School,**

Jan-2008-10

University of California, Santa Cruz

Instructor, Synchrotron Light diagnostic techniques



**Faculty: Synchrotron light Diagnostic Workshop**

2008

Shanghai Synchrotron Radiation Facility (SSRF)

Nov-

Material Research Laboratory, Chinese Academy of Science



With researchers at Shanghai Synchrotron Light Source



**Visiting Scholar, Stanford University**  
**Ginzton Laboratory, Department of Applied Physics,**  
Fiber optics

1986 - 1987

### **Conference and Pubic Forum (Science and Citizen)**

Organize special event to address some of the critical problems of national scale and global impact through multi-disciplinary collaboration



**Commercialization of Nuclear Fusion**

Nov.

17, 2017

A convergence of academic, industrial scientists, CEO, founders, entrepreneurs Venture Capitals, financial institutions and policy makers, where they meet and collaborate to make nuclear fusion a reality with money, technology and talents.

Participating organizations: Tri-Alpha Energy, Lockheed Martin, Helion Energy, MIT enterprise Forum, VLAB, Goldman Sachs and more...



Venue: SLAC National Accelerator Laboratory and Stanford University

Video Link: Nuclear Fusion: Reacting to Commercialization

[https://www.youtube.com/results?search\\_query=vlab+nuclear+fusion+videos](https://www.youtube.com/results?search_query=vlab+nuclear+fusion+videos)

(This video details different approaches in commercializing nuclear fusion, opportunities and challenges.)

### **Nuclear Fusion Seminar Series at SLAC**

2017

To build a direct link between Industrial scientists and technology experts to explore new ideas in developing the unconventional enabling technology for nuclear fusion



### **Opportunity conference** (CUHK, HK),

2007 - 2016

Forum on new Tech business Opportunity in Hong Kong

Opportunity conference is an annual outreach tech business event organized by the MSc. Program of IT management. It is designed to connect the university with citizens by establishing a dialog between practitioners, professionals and policy makers, and to explore doable ideas to create an environment conducive to technology startups in Hong Kong.

Co-sponsored by HK Science and Technology Park, ASTRI, Li and Fung Institute of Logistics, Chief sponsor: Information and Technology management program, CUHK, Department of Decision Science

### **VC round Table, CEO forum and Startups showcases**

2010 - 2016

To establish a dialog between CEO's from HK and China with opinion leaders of Silicon Valley in the EMBA Week at Stanford.

## **Industrial Position**



**Chief Technology Officer, lifeit.net, Life Imaging Technology, Palo Alto** 1993 – present

Provide unconventional solutions with uncommon requirements for the renewable energy industry. The latest invention is a real time CIGS solar cell thin film efficiency monitor, an indispensable tool for the solar cell research and manufacturing.

A system developer for the fortune 500 companies, including Hewlett Packard, Seagate Technology, Weyerhaeuser, Read-Rite Corporation and Silicon Valley Startups in renewable energy, DAYSTAR technologies.

Achieve many “first” in the semi-conductor industry, including vision guided micro-manufacturing system with nanometer position accuracy, laser texturing of optical storage disk with nanometer bump height control, large field of view / high resolution I.C. inspection system, Con-focal microscope, Single photon counting system for solar cell performance evaluation.



***Director of Research and Development***

1992 – 1993

Humphrey-Zeiss-Welch Alan Instrument, CA. USA

- Revitalized the R & D of a world leading ophthalmic instrument company
- Implemented the concurrent engineering management.
- Led a team of sixty engineers and one Canadian division.
- Completed a 5-products parallel development program in record-breaking time. --Transferred technologies from Germany to build products for the US Market. -----Generated Record sales from the new products invigorated the company’s 70 million dollar revenue stream.

**Technology Business**  
**From Garage to corporation**



Three Phds and one MD worked in  
The garage

***Executive Vice President, V P of R & D, Co-Founder***

1986 - 1990

MCM Laboratory, Mountain View, CA. USA

-Co-founded a medical device (Laser angioplasty) company in my Palo Alto garage with a cardiologist from Stanford University

-Coined the phrase of "Smart Laser"

-Pioneered Laser Spectroscopy for biomedicine

-Starting with 5 thousand dollars, teamed with angel investors, venture capitals, major drug companies, Bristol Meyer Squibb and Johnson and Johnson, worth over 400 million (2014 \$) in two years

**Industrial Position (Research) - with Fortune 500 companies**  
**Aerospace technology for down to earth application**



***Staff Scientist***

1982-

1986 Lockheed-Martin Corporation, USA

Developed high power laser technology, adaptive optics and high speed imaging sensor



***Manager of analysis and modeling,***

1981 –

1982 Burroughs Computer Corporation, USA

Optical media and data storage, funded by IBM Corp



***Member of Technical Staff – Project Leader***

1978 – 1981

Rockwell- Boeing Corporation, USA

Developed high power laser technology

**Professional Education**

Dale Carnegie Management Courses, 1988

General Management, American Management Association, 1981

**Project Management, Rockwell International**

**Publication, Invited presentation and News**

Walter published extensively in referenced journal, conference proceedings, book articles, lecture notes, videos and patents covering in many different fields of physics and medicine covering synchrotron light beam diagnostics, probe and fire laser angioplasty, solid state laser for medicine, laser interferometry, high speed spatial light modulator, time correlated single photon spectroscopy. Lately he got into material science and nano-technology.

Walter's patents on "Probe and fire" laser system and laser catheter design are frequently referenced in the field of medical device.

Walter's public lectures and talks covered "Innovation", "culture of Silicon Valley" and "Start up business" in the valley.

In 1989, Walter and his business partner Dr. Murphy, M.D. made national headline for their work on laser angioplasty. Walter was invited by the National Science Council as a member of the delegate from US to draft the first Taiwan Photonic industry development plan under the leadership of professor Li Yuen Jet, Nobel Laureate.



WALTER MOK, left, and Douglas Murphy-Chaturian show off the thin optical fiber used in laser angioplasty. During surgery, one end of the fiber is inserted into the patient's arteries to the site of the blockage, where it then