

# Resumé

Mark Chen

## CONTACT

### WEBSITES:

**Angelia Technologies / IPCore Design, Hardware Verification with Artificial Intelligence**  
<https://www.ipcoredesign.net>

**Plutus Business Consultants (PBC) - Artificial Intelligence for Health, my current business focus**  
<https://www.ai4healthcare.uk/>

### Github

<https://github.com/worldsoft998>

### Comprehensive

<http://1596825.xyz/>

### Email:

[neoworldmark@tutanota.com](mailto:neoworldmark@tutanota.com)

## KEY COMPETENCES

Artificial intelligence for design verification of integrated circuits  
Artificial intelligence for health

## EDUCATION

### PhD Candidacy

PhD candidacy for several universities (1991-1992), incl:  
University of Glasgow (PhD for gas turbine combustion research)  
Université de Pierre et Marie Curie in Paris (University of Paris VI), (DEA de Cinétique Chimique Appliquée, option catalyse, Laboratoire de Réactivité de Surface et Structure).

### Master of Engineering in Thermophysics

Tongji University, 1986-1989, Shanghai, China

## BUSINESS

### 2009 – today IC Design

IC design verification,  
See [www.ipcoredesign.net](https://www.ipcoredesign.net) for details.

### 2021 – today Artificial Intelligence

Artificial intelligence for health,

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Provide consultation, develop tools and codes for AI/ML based healthcare. Develop a web portal for the AI health industry.

See [www.ai4healthcare.uk](http://www.ai4healthcare.uk) for details.

## Other Businesses

**2000 – 2009 NeoTech Consultants / Solaires Power International**, various technical consulting and information services in several sectors incl:

Solar energy, conventional energy and power consulting, Internet security, encryption and cryptographic services, language services, business aviation, yacht and other luxurious markets in China, incl.

**2007- 2009 NeoTech / HeliosLab**, Technical consulting and information services in various sectors:

**2004- 2007 Solaires Power International**, Power information consultant

**2004 Solaires Translation Services**, Language services

**2000- 2003 Softhousing** , Web development

## CAREER

### **1997.11 – 1999.11 Deutsche Babcock China (Beijing, China), Global Procurement Manager**

Joined a team from China and Germany for the sourcing for machinery, electric, steel, and other components from China for the company's utility boilers (about 300 – 700 MW boiler) projects worldwide – notably in Germany, India, and Turkey. Purchasing value at ca 200 million US at that time. Purchased US\$160 million worth of goods and services for utilities boilers of 600MW for the China, Dezhou, Shandong project.

### **1996.5 – 1997.10 GE ALSTOM East China (Shanghai, China) , Electrical Engineer focusing on Marketing**

Marketing and coordinating of sales in the Southeastern China area for Power Division (Power Plant equipment, mainly hydropower) , Industrial Division (industrial equipment incl. airport baggage handling and sorting system, automobile painting line equipment, pump and pumping stations, servo-motors, press machines for aircraft manufacture, valves and others) and Naval Division (shipbuilding, Chantier d'Atlantique). Handled a marketing value of more than 13 billion US Dollars.

### **1994.11 – 1996.4 TÜV Rheinland (Shanghai, China), (ISO 9000 Quality Certification) Project Engineer**

Quality Assurance Certification for exporters and major manufactures in China, e.g.  
The automobile industry (Volkswagen Shanghai),  
Aircraft maintenance (AMECO) – a Lufthansa/CAAC joint venture,  
Machinery (Schindler, Schenck),  
Electric (Siemens Automation) etc.  
Also pioneered the certification marketing in addition to certification services.

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## 1992.6 – 1994.6      **Siemens Heimann Optoelectronics (Shenzhen, China), Quality Dept Manager**

Manager of the Quality Department of the then Siemens subsidiary, a leader in the production of flash lights, opto-sensitive cells for cameras and radioactive detectors for customs offices and aeroplanes.

## 1990.6 – 1992.6      **Dayabay Nuclear Power Plant, quality assurance engineer**

Quality Assurance for the construction, installation, start up and commissioning of the nuclear and conventional islands according to IAEA (International Atomic Energy Agency), French (EDF) and US (Bechtel) practices.  
GNPJVC: Guangdong Nuclear Power Joint Venture Company.

etc

## RESEARCHES & STUDIES

### **Artificial intelligence for design verification of integrated circuits (2023 -)**

### **Researches on Math (AI & Heuristics) for IC Design Verification and Quantum Computer (2022 - 2023)**

### **Researches on IC for Satellite Internet Modem (2017 - today)**

### **Researches on Other IC Technologies (2013 - 2017)**

New generation of IC technologies (2015-2017):

**Graph theory** (particularly graph embedding) for conventional silicon based IC design (2013-2015).

### **Mathematics (2010 to 2017)**

Number theory related to cryptology – current focus

Differential and integral equations

functional analysis and

numerical computation

### **Fluid dynamics (2010)**

Micro/Nano Flows

CFD - computational fluid dynamics

### **Thermal Physics & Thermodynamics (2008-2009)**

Nanothermodynamics,

Mesoscopic Thermodynamics (Thermodynamics Of Small Structures),

Cosmic Thermodynamics Or Thermodynamics Of The Universe,

Thermodynamics Of Cancers,

Thermodynamics & Thermophysics Of Life, and Biology

Solar Thermodynamics & Thermophysics,

Thermodynamics And Thermophysics In Solar Radiation And Measurement,

Thermodynamics Of Solar Energy Systems, Solar Technology, Industry And Applications

### **Solar related (solar physics, solar thermodynamics, solar PV etc)(2007-2008)**

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Solar physics,  
Solar radiation and its measurement technologies,  
solar aviation and aerospace,  
solar photovoltaics

## Authoring & Books

Authored hundreds of books in various fields of math, science, engineering, business and society over the last decades. Details refer to the docs below at the following sites of mine:

### **What's written between 2003 and 2017: WhatsWritten2003to2017.pdf**

[https://drive.google.com/file/d/1FdfR-ODftjRHCT8cG2a5y66lltXtKWjB/view?usp=drive\\_link](https://drive.google.com/file/d/1FdfR-ODftjRHCT8cG2a5y66lltXtKWjB/view?usp=drive_link)  
<http://1596825.xyz/WhatsWritten2003to2017.pdf>  
<https://github.com/worldsoft998/worldsoft998/blob/main/WhatsWritten2003to2017.pdf>

### **What's written between 2003 and 2017: WhatsWritten2003to2017.ppt**

[https://docs.google.com/presentation/d/1u7cRlgW\\_rtlfbC\\_LyrpwPRUDgRxIU2sp/edit?usp=drive\\_link&oid=112827134497950592985&rtpof=true&sd=true](https://docs.google.com/presentation/d/1u7cRlgW_rtlfbC_LyrpwPRUDgRxIU2sp/edit?usp=drive_link&oid=112827134497950592985&rtpof=true&sd=true)

### **What's written since 2018: writing2018uptonow\_pub.pdf**

[https://drive.google.com/file/d/1TwoD6LUF\\_966T8rEEzwmTW7KiJ8bscJD/view?usp=drive\\_link](https://drive.google.com/file/d/1TwoD6LUF_966T8rEEzwmTW7KiJ8bscJD/view?usp=drive_link)  
<http://1596825.xyz/writing2018uptonow.pdf>  
<https://github.com/worldsoft998/worldsoft998/blob/main/writing2018uptonow.pdf>

## OTHER USEFUL SKILLS

### LANGUAGES

English, German, French, Russian, Greek, Latin, Hebrew etc

### IT & INTERNET

Familiar with key IT technologies, incl programming, databases, web development incl. also mobile apps and web search etc.