## **MY PROFILE**

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## **Brief Introduction**

I have an extraordinary career and life path behind me, which has witnessed both tides and ebbs.

This is a person who has studied, worked, lived and strived very hard and "hard" over the past years for freedom, academic achievement, career success and happy life. There is a long long story about my efforts to realize my plan.

I have sacrificed my own future for others, so that now I am myself in crisis.

Although I have been met with tremendous challenges, difficulties, and troubles over the last decade or so, yet I never give up and continue to survive in the world.

I come from a humble family in a small rural town of Zhejiang province, China. But I was able to go to one of the most prestigious universities (top20) in China, and after graduation I was able to work at some of the best organizations, institutions and corporations of the world, acquired six or seven foreign languages, developed a solar industrial web portal called www.solaires.com which won popularity in the industry worldwide and was valued at US\$ 15 mio by a British investor, acquired wide spectrum of knowledge and experience of power, energy, IT and Internet, aviation and other industries. I was once considered among some of the most privileged people with bright future. I have tried very hard in many fields and with various degrees of success. As a result, I have gained sufficient opportunities towards personal success, whether academic, entrepreneurial or political.

I hold a master of engineering degree in thermal science from Tongji Univ, Shanghai and was admitted into PhD programs of several well-known universities in the US, UK, Germany, France and Canada (such Univ. Glasgow, Univ Paris VII etc.).

Afterwards I have worked at major multinational corporations mainly from Germany, France and the U.S. (such as Siemens Heimann, Deutsche Babcock, GE/Alstom etc) as well as several local companies in various functions.

And since 2000 I have been doing my own businesses and undertaking my own studies and researches in various topics. I've been working as a freelancer, an independent entrepreneur over the last 20 years, and I have always been providing my services remotely over the Internet to my clients, many of them are big names such as Bayer, BPSolar, Saint Gobaint, Mannesmann, Braun, Vorwerk, JP Morgan etc. I own the necessary skill sets to deliver my services, such as superb IT and web skills, superior language skills, reliability, punctuality and professionalism.

As a long-time experienced consultant, engineer and senior manager, I have acquired rich knowledge and expertise in a variety of areas: senior management, procurement (worth hundreds of millions of US Dollars), marketing (with a market value of dozens of billions of US Dollars), quality management, design and engineering, trading, public administration etc, in multinational corporations, in engineering firms, in design institute, and in government authorities of China, ranging from the conventional power, hydropower, nuclear power, solar and other renewable energies, electronics industry, certification and quality accreditation, IT, and several others. Obviously my career path was painted with buntful colors and success.

Regardless of the hardship over the past years, and considering the fact that I am approaching 50, I am still able to maintain my optimistic view and enjoy my life. I am still looking very young – from my outer appearance I am like a graduate student with even younger mentality. People say I look like a shining boy and seem to never have met with troubles at all in my life. Surprising?

I have been one of the busiest guys in the world over the last years, chasing after my 7 languages (Latin, Greek, Hebrew, Fr, De, Ru, and your English of course), taking care of my parents – the greatest father and mother in the human history ever since human was evolved from monkeys millions of years ago in Africa, researching and studying science to advance myself onto top 50 best scholars of the world, trying the hardest to earn a little money for the survival in China and finally running all over the mountains in cities of my dwelling to become one of the healthiest guys in the city. The story has not yet ended and more are to come in this site...

I have never stopped learning a single day even at time of heavy workload and as a result my knowledge base is being expanding day by day. For example, my language skill is still improving: while at the age of 20 I was already in good command of English, German, Russian and French, I am still venturing into new culture which added new languages - Greek, Latin and Hebrew to my skill list.

For my spare time I am doing researches of varying topics ranging from thermodynamics, solar physics, solar radiation, cryptography and mathematics.

Out of my vast pools of expertise, you can always find out the ones you would love to have and pick them up as meeting your requirements, regardless whatever the nature of your organization may be and whatever talents you are hunting for, with my experiences and knowledge, my superb ability to learn and to adopt to new tasks and environment, my hard yet effective and efficient working style (there are people working hard for nothing), as well as my joyful personality. Upon request, I can also show you my website groups which will demonstrate to you how amazingly rich my past career, studies and life used to look like and how my future is planned. Hundreds of thousands of supporting documents and archives are available to further support my claims.

Thus saying, it does not mean that I am omnipotent: I do have certain focuses at different period of time. At the moment these three elements: chip technology (not French fried potato chips but computer chips or in other words VLSI) and a bit languages (I've to care for my eight or so languages such as English, German, French, Russian, Greek, Esperanto, Latin and Hebrew in their order of proficiency).

My career path tells me there is nothing out of my capacity if I really try hard. Hardworking, ability to learn almost anything, flexibility to adopt to any environment and endurance of the harshest conditions – all these combined can overcome any challenges ahead of me.

I am now at my best time of my career. Unlike those at the same age, I am bodily and psychologically 15 to 20 years younger. and I still feel, study, work, live and even look like a graduate or PhD student, therefore don't imagine me as a mid-aged man at all.

## **ACHIEVEMENT & RECOGNITION**

Although I have won no prizes or awards, with no titles of professors or PhD, participate in no professional or academic associations, attended no seminars or conferences, I was/am recognized for some of my work over the past several years in one way or other, such as:

Named "The Solar PV expert" by NREL/US DOE (2006)

Quoted by the International Solar Energy Society, the French Solar Institute, the Norwegian Solar Society for my solar consulting, reporting and information (2004-2006)

Commented as very helpful – their key information sources - in their China solar investment strategy by Saint Gobain China (2004-2006)

Commented as "unusually gifted" by Prof. Joe Wolfe of the School of Physics of The University of New South Wales (2010)

Commented as with seas of knowledge by many foreign executives, investors and venture capitalists (2001-2008) Developed the China Solar Portal (2004-2007) which won international recognition (all major players in the solar, power industries, investors, funds and capitals, media and even governments)...

### Life Phases

#### My life is split to four parts

The most important is the spiritual life, where I am trying to adhere to the nature's principles and to keep me physically strong as well (I spend about 3 hours in sports).

The next is to maintain good relations with all my family, my closed tutors, colleagues, classmates, friends and relatives. Serving them and making them feel happy owing to my existence is my greatest goal which defines all other activities and mission. Of particular importance to me is my parents, because I came from them.

Further down is my efforts in academic endevors. I am excellently talented in learning, and have once admitted to some of the best universities for PhD studies, although these opportunities were given up due to private reasons. Right now I am focusing on the number theory and I am trying to figure out a way to do something in this area. I am reading hundreds of pages of various topics in math and other sciences a day, mostly in English, but sometimes also in other languages such as Chinese, German and French. I am also resuming my proficiency in Greek, Latin and Hebrew. I am also an enthusiastic learner of IT technologies and I am familiar with all major Internet and IT technologies, such as programming, databases, and data security.

Phases of Life

Briefly my life upto now can be divided into the following phases:

#### Phase I: Full Hope (1963-1989, age 0 to 26)

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During this time I've mostly devoted to studies and learning. I won a master degree at one of the top universities in China and have climbed to the top of the research at that time in the area of thermo-physics with special interests in air pollution control in combustion process. I have also managed to work at the heart of the Chinese government and was so close to the power center that it was nearly a matter of years to rise to the top of the Chinese political hierarchy. At this period of time I was considered as among the social elites and the best of my colleagues and was quite successful in the eyes of my people around me incl. the people in my hometown.

I was happy and hopeful all time during that period of time.

# Phase II Extreme Hopeless (1989-2005, age 26 to 42)

After the Tiananmen "rebellion", I saw no hope in China's future at least for another 20 years, and therefore decided to go abroad. However, the plan was interrupted by my unsuccessful love story with a girl from Taiwan, and all of my life was totally changed due to my giving up of doctoral studies at some of the most prestigious universities of the world. And the hypocrisy of my American friend has forced me to decide not to go to the States and the West and instead I stayed in China to pursue personal wealth. However, the system is so corrupt that I have again decided I won't feed up the corrupt officials by making a large enterprise, and instead I decided to make small money just enough for my living. But still I have planning for doing something really big and tried to implement the plan if China is going to be more and more free. But this turns unlikely in the foreseeable time.

Nevertheless, I have managed to gather working experiences in a variety of industries, roles in several forms or organizations and entities incl. Fortune 500 multinationals, design and research institute, private enterprises and more. I have partly achieved what I have planned for career – to work as in many firms and organizations in differing forms as possible. That goal was basically realized.

#### Phase III Live at Ease (2005 to Now, age 42 to eternity)

#### \_\_\_\_\_

To conclude, I find myself quite vacant with retrospection of my past. I have only realized a small part of my dream, but failed most other goals. Shall I end my life and career in this way? No, I'm determined to do something useful, to me and to the human kind over the next decades.

### My Life and Career so far can be summarized as below

2005 up to now:

Self-employed, with cooperation with others and the establishment of my own business, focusing on technical and academic learning. Business has been shifted to fluid technology consulting and services incl. CFD design, simulation and optimization for various processes and industries. Academic researches have been also turned to CFD and fluiddynamics with focus on small structures and Non-Newtonian.

#### 2000-2005

Self-employed with cooperation with others and the establishment of my own business.

Business was first concentrated on IT services mainly industry portal design and database design and management (2000-2003) and then solar business, conventional power and other renewable energy consulting, trading, and information. For very short period of time I was also engaged in business and private aviation and space travel, wealth management and capital consulting, cryptography and Internet security and privacy consulting and thermodynamic consulting.

Researches have been changing very tremendously from thermodynamics of various fields to cryptography, solar aviation, solar radiation, solar physics etc.

#### 1983-1986, 1989-1999

Career at major domestic and multinational organizations, corporations and institutions with functions such as procurement, marketing, quality assurance, design, coordination and planning, technical review and evaluation in the conventional power, nuclear power, telecommunications, electronics, certification industries.

1978-1983, 1986-1989

Studies for bachelor and master degrees in thermal engineering.

### Personalities

I am a passionate and highly motivated person, an active listener and a team player, yet with excellent ability to work independently. In addition, I have

strong expertise in IT technologies some understanding of western business conditions in China familiarization of the business atmosphere in major Chinese cities some Ties with Chinese officials at local as well as national levels strong analytical and advisory skills sound educational and professional background

## Hobby and Mission (outdated, to be revised)

My greatest hobby and mission is my love of mountains and the Nature. Nothing else can give me sense of happiness and peace than the mountains pure and quiet – no matter high or low. My second hobby is my love of languages and math. I am currently doing some researches there, but I have no ideas whether something may come out. Since 2014 I have also been involving in the research of advanced computer chip technologies such as quantum chips, spintronics based FET etc.

My interests have now shifted to be the researches of mathematics related to IT security and cryptography my business is redirected to the reporting, consultation and services with the coverage of the worldwide luxury yacht market with special focus on China. I also do some translations as my another hoppy.

### **My Education and Professional Background**

As a child, I dreamed to become Einstein No 2. And still this is my lifetime goal. In any case I shall keep myself competitive technically and scientifically in one way or another. Unfortunately I didn't continue with my PH.D. studies at one of the best universities in the world for private reason. My then girlfriend was a Taiwanese and her English or German or French was near zero, therefore I gave up my doctoral study plan and instead got a job in Taiwan (Bechtel's joint venture with the Ministry of Science in Taiwan). I also didn't't go to work in Taiwan due to dramatically change later on.

Nevertheless, I have been able to pursue a master study of thermophysics at one of the best universities in China, have learned four or five foreign languages, paving the way for to acquire information of the outside world without any difficulty and obstacle from any organizations. I have also learned almost all software and Internet technologies, enabling me design websites and related functions, so that I may promote my business without a third hand. Of course I've also learned a lot of other stuff, some are still useful, the majority is sleeping forever.

I was once one of the hardest learning students of the university. I was possibly the first student entering the door of the University Library in the morning and the last who left the library in the evening.

I was in one of the four best classes of the University when accepted by the university – the four were the mathematics, physics, chemical and applied mechanics where I was.

But I didn't stay there for long – only one semester, then the university asked me and several other classmates to transfer to the socalled "German Class" of two hundreds. The German Classes were formed to learn a year of German and then these students chosen from around all departments of the university will be sent to Germany to continue their studies in Germany, as part of the bilateral culture exchange. Of course, I didn't know the background

and paid little attention to the class. I also didn't like foreign languages at all, as I considered them as the courses for women only, and men shall learn physics and other complicated science and technology. Women are more talkative than men, they deserve the language studies, but men not, especially I am very quiet. Therefore during the early years I didn't learn hard enough so that I've missed a chance to go to Germany to continue my career.

However, my interest in foreign languages was aroused only two or three years after.

During my stay there I have studied not only the areas of my major, but all other sciences and technologies, arts, culture, religion, politics, economy, finance, in one word, every I can find on the library shelves. I was very thirsty of knowledge and studied deep into the night every day, so that my health was quite damaged.

During my studies, I have also developed my own thinking, my own way of working and living as well as my independence of anyone else. My working ability was also developed.

After the postgraduate studies I was also admitted to PhD research programs of several well-known universities in the US, UK, Germany, France and Canada (such as Université de Pierre et Marie Curie in Paris (University of Paris VII), Université de Provence, University of Glasgow, Université Laval , Universit?t Gesamthochschule Essen and lastly quasi admitted into MPA program at Harvard etc). but these plans were given up due to an engagement with my then girlfriend.

And during the 2008-2011 period I have again tried to reenter the universities for either a PhD study or direct researches on various topics at Nanyang University of Technology and Zhejiang University, however, these efforts yielded no results, and hence I have now completely shunned away from the academic communities except with my own studies of computational number theory.

## **MY RESEARCHES & AUTHORING**

### Academic Endeavors

Over the last decades I've been doing researches of varying topics ranging from thermodynamics, solar physics, solar radiation, fluiddynamics, cryptography and mathematics etc, and now this will be limited to graph theory for the next generation of chip technologies.

For this purpose I am reading hundreds of pages of various topics in math and other sciences a day, mostly in English, but sometimes also in other languages such as Chinese, German and French.

Businesses are not all what I am doing now. In fact, they are only a small part of my life, and it is researches and studies that are my real career orientation, although over the last years I was refused by the academia to carry out my beloved researches in their organizations. Nevertheless, I am continuing on my researches, and at the present and in the forseeable time, my researches will be concentrating on modem IC technologies, particularly for satellite

broadband Internet. However, I will not publish my results, and I am just amusing myself through my studies and researches. There are no reasons why I shall publish my results.

Before that, I have spent decades on other researches, such as those listed below:

Next generations of chip technologies (2013-2018)

incl. quantum chip, starting from superconducting computer (2013- present)

Mathematics (2010 to 2017) Chip technology related math (graph theory particularly graph embedding) Number theory related to cryptology Differential and integral equations Functional analysis and Numerical computation

Fluiddynamics (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 (2007-2008) Solar physics, Solar radiation and its measurement technologies, solar aviation and aerospace, solar photovoltaics

### My Writing

Hundreds of study notes and memos and other records were written during the decade of researches.

During the last years since 2003 I have written hundreds or even thousands of academic, business and commentary notes in the forms of papers, presentation slides, reports, booklets and books in the areas such as solar physics, thermodynamics, fluid dynamics, IT (incl cryptography), VLSI chip design and mathematics, incl math for VLSI

design, among them are selected about 200+ pieces of quite comprehensive and indepth review and research as listed below.

I did not publish my academic writing results because none of these researches and writing are sponsored by any universities, institutions, other academic organizations and funds, for all of thousands of these organizations and professors have rejected my research incentives in the past. On the other hand, most of them are just my study aides or daily records, with exception of the business reports that are specifically prepared for a special purpose. Therefore they are mostly not written with the purpose of publication in mind. And my writing is to large extent only my hobby, for my own amusement, not for showing the world how capable I am. However, they are not necessary meant to be in low quality and just on contrary, they can be compatible with most published papers on the market.

Since 2003, especially during 2003 -2009 period, I've written quite a number of business reporting and analyses in some selected industries. Some of them were commercialized and the rest were not marketed yet.

I've also written some essays about the social life, politics etc, all after 2010.

Thus, with the exception of my master's thesis in 1989, all of my writings are dated back from 2003. Therefore what I have written before that and after 1978 when I first attended the university at the age of 15, are not known and are all lost. They might be yet another great number as well.

All books with a few exception are written in US English: a few in German and some others in Chinese.

#### Mathematics

I arrived at mathematics mainly because without a research position in an university or institution, I am unable to conduct my researches on physical sciences such as thermodynamics, solar physics, fluiddynamics. And also because math is the basic science without a solid foundation one has no chance to carry out real world researches in any other sciences. And I am so busy that I cannot afford to maintain competences both in math and phyusical sciences. There are possibly other reasons why I finally chose math as my research area, either as hobby or as my academic career.

Math is something I can do with pen and paper. I have tried, in vain, over the last couple of years to enter into a research institution to carry out my other, mostly physical scientific studies, therefore, without a costly lab and a good team at hands, what I can only do is my math talents.

I have tried several areas of math, incl. functional, computation, diffrential equations, number theory, etc - see the list below - and still I am reading some books or papers on these subjects, for graph theory has something to do with all of them. I finally come to graph theory becasue VLSI is very much related to and dependent on graph theory for its development. Of course graph theory as well as VLSI has much more math to relate to.

Discrete Mathematics Complexity theory

ALGEBRA / Linear Algebra Boolean Algebra / Logic Algebra Category Theory Computer Algorithm / Programming Information Theory **Probability Theory** (Computational) Geometry COMPUTATION NUMBER THEORY Cryptography Fractal Geometry FUNTIONAL ANALYSIS COMPLEX Calculus **Differential Equations ERGODIC THEORY** FOURIER ANALYSIS INVARIANT THEORY Laplace Equation Math4GoogleMaps Math4Music Math4Programming Math4SearchEngines Math General

but without any publications yet, and now I am working mainly on graphy theory, combinatorics and all other math related to chip technology. See my other pages of this site.

### My Math Research Plan

Since 2006, after the death of my father, people have persuaded me to do something to contribute to the society and not to waste my talents. Over this time period, I have studied very hard and tried many areas of researches and studies before finally and eventually fixing my research area of computational number theory, particularly primality testing in November 2011..

My current and future research area is and will always be number theory, and particularly prime number prove and later integer factorization related to cryptography. I was not born mathematician. It took me a long long way to finally decide to do math. My major was in thermal science and I have been in the energy and power industry since long. Over the past several years since 2007, I have tried various branches of sciences with some sorts of researches and authoring in process.

I chose number theory as my future research area because first all my previous attempts in other branches of science were failed and no universities and organizations were willing to support my researches, and second,

without good experimental facilities and a good team I am unable to continue most of my research projects. Number theory on other hand depends mainly on my personal talent and intelligence. On other hand, any serious researches on whatever topics you may choose involves lots of math, and sometimes math is a determining tools in researches of other sciences. But I don't have so much time to cope with both of them. I came to number theory also as a result of my combat to Internet blockade. In 2009 I was determined to work on Internet security in order to ensure my free access to and my security of my identity while using the Internet with various encryption services. I was attracted by the cryptographic technologies, and later it was found the its mathematical foundation is modern algebra (DES) and number theory (RSA). So it was a natural conclusion that these sciences will become parts of my studies objects.

During the first years, I will be focusing on prime number testing and integer factorization. But in my later years my researches will also extend to other branches of number theory. And finally I wish to join the world mathematician communities again with my researches on number theory, particularly those related to cryptography.

I plan first to propose my own improvements to existing deterministic, unconditional and polynomial time prime number tests – particularly the AKS test and go a step further to figure out my own. My second phase of research will be to benchmark the probabilistic and the deterministic primality tests based on complexity considerations in order to find out the threshold between these two and to put forward criteria of the real world optimal algorithms for various applications. I hope these studies will contribute to the development of practical cryptographic systems used for Internet security over the next years.

Currently I am doing my researches on my own – that is, I do not work in any university or any math institute in China. I also pay all the expenses in doing the researches, therefore I have to earn money to support my researches. But it is very difficult, if not impossible, to achieve what I have in mind when I continue to do this way, because during the day I have to earn money and only in the evening can I find 1 or 2 hours for number theory, if I still have to study number theory alone.

Although there is no way to enter the academic world except with my own research at hand, yet I am determined to carry out my researches on my own at any cost under any circumstances, how hard my condition may be. Therefore considering all the constraints to research capacity as a solo researcher without the necessary supports and working atmosphere of a well established academic entity, I am determined to reorient myself as a number theorist, in connection with cryptography and Internet security. With my superb math foundation and learning capacity, I can step in the number theory and other math and science areas fairly quickly.

#### Why Science?

Why do I plan to return to Universities or institutes for scientific researches?

The main reason of this fundamental change of my life and career is my firm belief that only the acquaintance with science and studies of the Nature can give me some sort of satisfaction and happiness. In my childhood, I have always been thinking about becoming a top scientist and this is still my unrealized dream. I am thirsty to learn

everything about the Nature and her principles. All branches of sciences are attracting me – mathematics, physics, chemistry..... When dived into the realm of science, I forget the rest of the world.

Secondly, I've found the industry, commerce and politics all full of crimes, evils, lies, corruption and injustice (in fact they are synonyms), and I hate all these, therefore, after so many years there, I want to keep myself distant away from them and concentrate myself on pure scientific researches.

Thirdly, my personality is very fit for scientific researches. Although working in the industry and business over the last two decades, I am still maintaining my habit to learn new sciences every day without interruption. My reading and study capability is unique. Each day I might read more than 100 pages of books of various kinds. I am able to read papers in English, German and French and I am still improving my Russian.

And lastly, I should have been among the top scientists if I have accepted the Ph.D studies I won from several European and N. American universities such as University of Glasgow (gas turbine combustion), University of Paris (surface chemistry), Laval University, and universities of Germany and other countries during 1991-1992 shortly after graduation as a master of science. I was unable to attend these universities because of private reasons Further in 1996, I was nearly admitted by Harvard to pursue a MPA when my former boss told me that the job at Alstom was worth more than a Harvard MPA, a wrong judgment of course.

For short, only a scientific career can fulfill my dream of lifetime endeavors.

## My Linguistic Background

Expert of Localization and Globalization of Website, Software, Database and Multimedia

I'm multilingual - English, German and some French, Russian and Greek. Few local Chinese are as competent as I am – with my multilinguism I am very competitive in serving the international world. Earlier I have sold reports about the Chinese energy and power industries particularly the solar industries to Fortune 500 corporations such as Bayer, Mannesmann, Saint Gobain and Wacker. I have developed a website about Chinese solar industry – also in English (for a very short period even with 4 languages – EN, DE, FR, and CN), which was referred by the best names in the international solar communities – such as NREL/DOE, ISES and lots of others.

In China, you can hardly find someone else who can write better English reports from a local hand, as commented by one of the most favored foreign expatriates of the State Council – he is also my friend and partner.

I have spent billions of hours on language studies, from Greek to Hebrew, eight in all. See languages.htm and lang.chm for some details.

I have studied relatively more languages, not for immigrating to other countries. Like many other colleagues, I am also not keen to leave China for a better life in western countries. By mastering the prevailing world languages, I am freely accessibly to all information of the outside world so that nobody can cheat me. Just like mastering the IT technologies has opened the information age in front of me, although I don't need to be a linguist or an IT

industrialist.

I started to learn foreign languages very young and by 20, I was able to use 5 languages – English, German, French, Russian and Esperanto, among them, only German and Russian was learned from classes while the rest – French, English and Esperanto was totally my own initiative. Since then I have never stopped learning these languages over the long long period. I have special enthusiasm for German, German literature, science and the German nation. I am reading German daily and particularly those books written by famous German novelists such as Thomas Mann, Günther Grass and of course Goethe and Schiller. And since 2007 I have even added two other languages to my competence list – Greek and Latin. I have superb learning capacity.

But I have not shown any special talent nor any interest in language learning at the beginning of my university days after well three to four years in about 1981 when I have completed my German studies at Tongji University. Only afterwards I was very much attracted by foreign languages and their cultures and by end 1983 I have already completed the studies of basic languages skills of English, German, French, Russian and even Esperanto, an universal and man-made language. And ever since I found foreign languages very fun, and I have been keeping learning these languages – English, German, French and Russia – occasionally also some others – till now. It's part of my life now.

At my days we all were learning Russian, although China and the Soviet Union were fighting for more than a decade since the early 60's. Apparently there was no alternatives - english, german, french all capitalistic, Japan our traditional rivalry and what else ?

Enrolled at Tongji, I continued my Russian studies, and my scores were quite good. I was able to read some scientific literature such as math, physics. I studied for a semester then as you know I was regrouped in a german class. After the german class, I continued my Russian studies, and at the same time also my german studies during my bachelor studies from 1978 to 1983.

At that time, learning materials were scarcely to be found. I went to the foreign language bookstore at Fuzhou Road not far from the People's Square in Shanghai, and bought whatever was available. I also went to the Shanghai Library located at the end of the East Nanjing Road close to the Square to find any german literature.

About two years before graduation in 1981, I found people were all learning english, was also found that english is more popular and useful than my languages. If I couldn't learn english, it might be difficult to survive in the world. And I turned to english, and happily to find it much easier to learn, especially if you have already learned russian and german whose grammars were much more complex than english. For example, russian and german verbs, adjectives have to be changed along with the subjects, english have not such necessary or much simpler. The "Nebensatz" or subordinate sentences are very complicated in german, and many times I would simply forget to put the verbs at then end in speaking. The prepositions are also sophisticated, and even today they make me headaches.

During my postgraduate studies, I continued my studies in English, German and French but forgot all others. I couldn't manage the others. If I don't want to be a linguist then stop there.

After finishing my schools, I've never stopped learning foreign languages and reading their literatures for a single days, to maintain at least or even to improve them a little bit. For example I was able to work in a number of foreign companies of nationalities of the U.S., U.K., Germany, France and several others, so at that time period I was able also to practice thus to improve my spoken English, German, and French. Around 1991/2 I passed an IELTS done at the British Embassy in Beijing with an overall score of 7.0 – which is considered high as the highest is 10.0 -

and my oral score was even 9.0 and the examiner commented my oral English as "near native".

But in all I have not made major progress in all of these languages, either in depth or in width. I've not tried to learn more languages nor to learn more sophisticated linguistics such as literatures.

And since 2007 I have even added two other languages to my competence list – Greek and Latin. I have superb learning capacity. I have also learned Hebrew a little to prepare for my theological studies.

Simply out of my desire to study ancient Greek, Latin science literatures and Hebrew Scripture, I was very keen to learn these languages, after a year's delay and hesitation, I finally decided to move on with the studies of these three languages. Although language studies are now not among my priority, I still plan to finish the studies in about three years, so that I will be able to understand the basics of these languages after three years. I will also complement my studies with listening practices and literature reading, not just lessons.

Learning languages will become my lifetime activity, although not my academic goal.

Nevertheless English is now my working language, much more oftener used than my mother tongue of Chinese, for almost all scientific literature and works are published in English. My English was nearly at the native level.

So as a result I have to maintain a total of 8 languages in different level of competency:

English at working level German quite OK French so and so Russian simple reading Greek a few sentences Latin mamahuhu Hebrew almost nothing Esperanto a few words but will soon replace English as my working language.

Some time though I consider it absurd to learn a language of another nationality and in the end I shall only use a world language that is most likely Esperanto. There are hundreds of world languages, but I don't want to research which one is the best for me, because Esperanto is the one I learned the earliest and so far the only world language.

#### Multilinguistic

Now language skills are still one of my strong points and will remain to be one of my qualifications for my career and daily life. It's fun to learn a language and a culture.

Multilinguistic has become a special label of mine to differ me from other people. Each time I am introduced to new friends, they always say oh Mr Chen can speak several languages, great! And they wonder how I can manage the four without confusion.

I will continue to read literatures and some of the other cultural relics of the four major languages – English, German, French and Russian to keep my language level not declining too quickly. I am not planning to improve my linguistic competence, but I also don't want say farewell to them because I have spent too much time on them.

### English

I have learned English completely by my own without attending a single class. I began to learn English in 1982 just a year before graduation. It was the fourth foreign language after Russian, German and French. Only half year later I was able to take English entry exam for postgraduate studies, and was able to read and understand English without much difficulty. I have learned it by many ways – reading a lot, listening a lot (at that time mainly the VOA and BBC radios now rarely able to be received via radios), and practiced a lot.

I have passed an IELS test with a score of 7.0 and my oral score was 9.0, a near native level. Thus around the 1990's my oral English was fairly good.

After school English was very much my second language at works, as my first job was dealing with import of US power generation equipment technologies at the Ministry of Machinery Industry in Beijing. And later I was able to show my excellent English levels to many people in the multinational companies where I used to work.

English is now almost my working language, as I mostly read English everyday, much more than my native language of Chinese. I have about 30,000 words in mind and can write English with prior preparation of Chinese. That is to say, I think in English too. Many dreams are made in English as well – I often talk in English with people in my dreams. Many times it's more comfortable to communicate and write English than my native language.

#### German

#### Why German ???

Germany was in the forefront of science, technology and culture in the period of the mid 16th to early 20th century and now it is unfortunately lagging behind the US mainly in the computer, software, space, and biotechnology. German products are declared to be good quality - not so nowadays - and German people are reliable - the same deterioration as their products now.

Nevertheless, with her well-educated population, good natural resources and climate, her cultural, technological and scientific treasures, Germany is still and will be continue to lead the world in somewhere or other.

German is much more difficult to learn, partly because of her complicated grammar. I have still difficulties with her prepositions and the "Nebensatz" in speaking. Very difficult to compose a complicated word when speaking ...

Regardless of the above, German is my most favored foreign language. I began to study foreign language in 1976,

at that time it was Russian. My German studies were started in 1979 when Tongji University has assembled the 200 elite students from all the faculties and fortunately I was one of them (I was considered among the top 50 of the University at that time). These 200 students have been organized into special classes with the only courses of German language and cultures for a year. Many teachers came from Germany such as the Universit?t Ruhr-Bochum, and even after the one-year intensive German lectures, many courses were still taught in German, for example my Physics, Mathematics (Algebra), German history were taught in German, partly at least, or as a supplementary. After the school, I've never stopped learning German wherever I went.

There was one time I wanted to exclusively devote to German literature studies, ca around 2007, when my solar, business aviation and all other businesses failed. I also used to have a plan to devote completely to the studies and teaching of German literature, therefore I have learned quite intensively the German literature from Classic to Post-modern.

I have special enthusiasm for German, German literature, science and the German nation. I am reading German daily and particularly those books written by famous German novelists such as Thomas Mann, Günther Grass and of course Goethe and Schiller.

But I also failed to get some assistance or jobs from German institutions such as Goethe Institut, therefore I abandoned the idea shortly after.

#### Francais

I started to learn French in 1992 almost at the same time with my English learning. I did alone too. French seems more difficult than English especially its spelling and pronunciation. Frankly speaking my French level is not good, although I used to be able to speak a little while working at French company (Alstom, 1996-1997), but I have never reached a level compatible with those of English or German. Now I can only read French literature but still difficult to understanding the talking.

#### Esperanto

I have learned Esperanto – one of the man-made universal language – sometime in 1983, just days before graduation. Later on I forgot it and now I have no intention to renew it. Whether or not I will catch it up, I have no idea yet. I will take decision when my studies of Greek, Hebrew and Latin will come to an end. Of course, Japanese, Spanish and Arabic have already come to my mind, but that's years away!

#### Greek

I started learning Greek in 2008 when I was trying to study ancient Greek literature and science books such as those of Euclid's Elements, because I found the English translation very dull. I guess it does not transmit the true meaning of the originals and especially those subtle implicit meanings which are difficult to be translated to other languages. The plan was stopped for half a year, but now I am solid enough to finish my learning in about three years.

#### Hebrew

It was mainly for understanding Hebrew Bible that I started the learning process. Right now I am still unable to write the Hebrew alphabet and it is extremely difficult to learn a language very different from all others. My another motive is to learn Hebrew (Jewish, Israelites) people who I consider as one of the two nations who have contributed to the world civilization in the human history – the another is Greek.?

Upto now I can'f find a book or listening materials on the Internet, although I did borrow a book or two from the library but they seems old. Below are websites with some kinds of Hebrew information and learning materials.

#### Latin

My idea to learn Latin was initiated when I was reading "the Mathematical Principles of Natural Philosophy or Principia" by Isaac Newton. I tried both the English and Chinese translations but both were hard to read. And not only this, but also because I want to read original works of the greatest scientists in the time period of the 16th to mid 19th centuries where most scientific books were written in Latin.

#### Russian

Russian was my first foreign language and I began my Russian study at middle school in 1994.

At that time it was the popular foreign language in China. I did quite well at it, and could get a fairly good score in an entry exam to University four years later in July 1978.

In 1980 my Russian level was at its peak when I was able to read scientific books in Russian. But later I have completely ignored it and suddenly in 2007 I found it impossible to even pronounce the Russian words. It terrified me and I decided to recover my Russian proficiency to a degree of the 1980's, i.e. to read simple scientific literature. Now two years later (2009), after some hesitation – there was time when I did want to maintain my language proficiency other than English – I could catch up with the Russian level a bit. And now I can of course pronounce Russian words and sentences but although can understand simple Russian texts.

### My Linguistic Services

Since long I have been also providing some kinds of linguistic services to the industries, businesses and also my friends with my language skills.

I used to be also an interpreter/translator for my foreign colleagues while working at those companies in addition to my engineering and management functions. The total length of this service amounts to more than 10 years.

Now I am more or less focusing on IT related linguistic services, that is globalization and localization of websites, software, databases, multimedia and other forms of IT related materials. Pure textual translations are now too cheap to undertake, therefore, unless the price is reasonably fixed to compenstae for my talents, I don't involve in pure translations any more. My services include among others, also localizing help documentation, company and product pamphlets etc. Areas of specialities cover energy, power, machinery, semiconductors, engineering, multimedia and web, IT, laws etc.

I am particularly competent in Chinese -> English/German translation, as English has been my working language and I have written more than 8000 pages of English reports of the solar energy and power industries to fortune 500 companies during the 2003-2007 period alone and thus my English is nearly at the native level.

## My IT Background

Since 1998 I have been involving in IT in one way or other. As a result of my self-devotion and hard learning, I am familiar with the majority of IT and Internet skills such as web programming, database management, and some basic creative design. I have designed numerous websites for my business over the last decade, some of them have attracted some views from the relavant industries.

I've devoted almost 4 years (end 1998 to early 2003) to the studies and practices of computer software and Internet applications, beginning with web page designs, which is related to almost all sorts of IT skills, such as programming

in Java, VB, VC, PHP, python, golang, node.js, perl, databases of all kinds, graphic design and multimedia on the web, as well as online communications technologies such as instant messaging and chatting. At that time I was oriented myself as a web developer.

At the first, I wanted to implement an online procurement system when I was working at Deutsche Babcock in Beijing as its purchasing manager, but this was not agreed by the management, and then I've decided to go ahead with my plan to enter the IT business "solo". Soon afterwards I started to learn the basics of writing and composing and uploading a web page and site using simple tools provided by Netscape. Then I have studied HTML language, then VBScript, JavaScript and several other scripture languages. To edit images, I have also learned the editing tools of pictures such as PhotoShop and FireWorks that is used by me now. To enable a dynamic website I have also learned a lots of other programming languages (Java, C, C++, VB, Python, PHP, Perl etc) and databases of all sorts (Oracle, SQL Server, MySQL, LotusNotes, mSQL etc). And I found also the website is full of multimedia information and tools – Windows Media, Real Player, 3D, virtual reality (VRML) etc, I will also not miss them too. Internet communications was one of my core studies in the mid 2002 with instant messaging, online chating, Internet fax and telephony, video phone etc as the interesting areas of studies.

I wanted to devote my entire late life to IT, particularly the website design business and at that time I planned to build a company who will become the largest website designer of the world and I consider website design similar to housing development with the only difference – one is on the ground and the other in the virtual world on the Internet. The dream was broken …

Over that long period of time I have designed and developed hundreds of websites and web applications for commercial corporations, my own businesses, my scientific researches and my private life on the web. 20 years can make everything possible, especially to a man who can learn several times faster than many others. In one word, I can develop any web applications you want.

Some time around 2008-2009 my key concern was my online privacy because when I was online I was completely exposed to hackers and malicious people. When one is enclosed in an isolated wall like the Great Firewall Of China, one has to be careful that the government is following one as soon as one wants to surf the outside world. To make my online life more private and safe, I have to know various technologies, tools and strategies. People in China live like in a prison and must be very tactic in order not to be killed by the government. At the moment my IT skills are limited to some C/C++ coding, assembly language and cracking etc.

## **IC Technologies**

My IC career started about in 2009 with researches on IC related math, epecially graph theory for IC layout. I have spent quite some time on doing some researches on graph theory involved in quantum circuits, especially the socalled graph embedding and Chimera graph.

Since 2012 I entered into the VLSI industry at some of the leading semiconductor corporations and design firms and have designed numerous chips in various industry fields for a number of clients.

I have also investigated a vast number of recently researched next generations of IC technologies after the silicon based ICs are coming to a standstill, among them also quantum chips and quantum computer. Others include spintronic bases, graphene, superconducting computer, single electron, resonant tunneling, DNA, biocomputing, neural computing etc.

As a result I am familiar with the entire design process and methodologies, particularly the back end layout design - partitioning, floorplanning, placement and routing. I am well acquainted with major placement and routing algorithms and I am also experienced with the mainstream CAD/EDA tools such as those from Cadence, Mentor, Synopsys, SPICE etc. I am also in good command of Verilog/ VHDL and I am familiar with major DRC/LVS/LPE tools.

I am now an experienced chip designer with more than 7 years of design career. I am particularly specialized in FPGA, ASIC and SOC design and I am also skilled at designing mixed analog and digital circuits.

And now I am exclusively focusing on modem IC design for satellite broadband Internet.

### Jobs and Career

Before doing my own businesses under several names, and now HeliosLab, I have worked in a number of multinationals as well as domestic companies, institutions, government bodies and others in my 18 years of career. My activities range from government coordination for China's power equipment technologies importation and planning in the early 80's at the Ministry of Machinery Industry; my involvement of design of the first 300 MW coal-fired power plant in Guangdong province in the late 80's at the Guangdong Electric Power Design & Research Institute; my pioneering quality assurance in China's first large, mostly France imported nuclear power station at Daya Bay Nuclear Power Station, and my quality supervision and certification in two German companies in China in the early 90's (TüV Rheinland Shanghai and Siemens Heimann Shenzhen).

I've started my career at the age of 20 when I entered into employment at the Ministry of Machinery of China in 1983 in Beijing. This was a very important assignment at that time and was possibly among the best jobs of my classmates after graduation. Afterwards my career has taken me to China's other major metropolises such as Shanghai, Guangzhou, Shenzhen and Hangzhou, working at some of the most known corporations and organizations. All these posts were related to the most important development projects of the economy of the country at that time and thus I have always been in the frontier of the social development of the nation during that period. I've changed my roles comfortably and acquired the reputation among my colleges and partners.

Afterwards I have also served a number of leading multinationals in the power industry such as Siemens, Alstom and Deutsche Babcock (bankrupt in 2003) as well as several local companies with various functions (design, engineering, management, quality assurance and certification, marketing, purchasing etc). I was also qualified as quality assurance engineer and lead auditor for the nuclear power plant. My career brought my multilingual skills and industry expertise to people of many races and nations and I was considered at that time period one of the brightest persons of my circles.

I have long been in the power industry. I've served as Marketing Director of ALSTOM's east China region, the global procurement officer of Babcock Borsig China, the joint EDF/Bechtel/CLP/CNPIC company GNPJVC as a quality engineer, an engineer at the Ministry of Machinery Industry - part power equipment in Beijing in the early 80's. I was once also a quality manager at Siemens Shenzhen, and ISO certification engineer at TüV Rheinland China.

My career has taken me to China's other major metropolises such as Shanghai, Guangzhou, Shenzhen and now Hangzhou, working at some of the most known corporations and organizations. All these posts were related to the most important development projects of the economy of the country at that time and thus I have always been in the frontier of the social development of the nation during that period and helped boost the technology exchange, business development, investment and the improvement of the management of the Chinese industry. I've changed my roles comfortably and acquired the reputation among my colleges and partners.

I have pioneered ISO certification business for TüV Rheinland in China; maintained and upgraded Siemens's optoelectronic manufactory in Shenzhen, Guangdong; supervised the installation, testing and commissioning of the 2x1000MW nuclear power plants at Daya Bay, Guangdong as a quality engineer with my major finding of a defect of the generator stator during installation and maintenance; started up the CAD design of the first 300MW coalfired power plant in Shajiao, Guangdong at the Guangdong Electric Power Design Institute, and in the mid 80's, coordinated for the national power equipment manufacturing, technology import and planning and proposed reform to the government system at the Ministry of Machines.

I used to be among the key personnel of some of the leading multinational corporations in China in the nuclear power, conventional power, hydropower and renewable energy industry with varying roles such as marketing, procurement, design and quality assurance as well as management and administration.

As a long-time experienced consultant, engineer and senior manager, I have acquired rich knowledge and expertise in a variety of areas: senior management, procurement, marketing, quality management, design and engineering, trading, public administration etc, in multinational corporations, in engineering firms, in design institute, and in government authorities of China, ranging from the conventional power, hydropower, nuclear power, solar and other renewable energies, electronics industry, certification and quality accreditation, IT, and several others.

With my comprehensive professional background and many skills particularly my work experiences at multinational corporations, I know what the corporate executives, the marketing people, the R&D members, the manufacturing personnel, the logistic teams, the warehouse keepers, and all the people at all levels in various organizations shall know about the market in China, and with an English language very English indeed.

Here below are my previous jobs and their roles:

Marketing Director of ALSTOM's east China region, Global procurement officer of Babcock Borsig or Deutsche Babcock China, Quality engineer at the joint EDF/Bechtel/CLP/CNPIC company GNPJVC, Engineer at the Ministry of Machinery Industry - part power equipment in Beijing in the early 80's Quality manager at Siemens Shenzhen, and ISO certification engineer at TüV Rheinland China. Designer at Guangdong Electric Power Design Institute, Guangdong Nuclear Power Joint Venture Co. China Greatwall Industries

### **Business**

I have started several businesses which provided information, consultancy, reporting, trading of the power, energy, and business aviation industries – particularly the solar energy sector to foreign companies. Prior to that, I was engaged in the IT industry by developing several industry portals for Korean companies and private persons in Shanghai.I have developed a website about Chinese solar industry – also in English (for a very short period even with 4 languages – EN, DE, FR, and CN), which was referred by the best names in the international solar communities – such as NREL/DOE, ISES and lots of others. Earlier I have sold reports about the Chinese energy and power industries particularly the solar industries – all in English - to Fortune 500 corporations such as Bayer, Mannesmann, Saint Gobaint and Wacker.

I debuted my business with IT expertise, in early 2000. I have designed a number of commercial websites including my own, configured an online communication system for a local cable manufacturer, worked out an ASP system for online quality documentation and calibration etc.

Later in 2002, my business focus switched to international businesses in the power sector incl renewable energies (solar and windpower). And my website attracted attention from major multinationals. Various business activities have been conducted with solar industries throughout the world:

As the localization and retail partners for software with such as PVChart, Solar etc; As local distributors for solar products, ranging from modules to solar tiles; As sourcing agent for international buyers

Then from January 2004 on, I decided to exclusively work on the energy and power industry by providing information, reports and studies to the international solar communities that want to get involved in China, to help international energy and power communities to understand the development trends in China, and to assist them in making their China strategy indirectly.

In fact, I could also be fairly successful in business with my solar consulting in the 2004-2006 period when the solar industry has witnessed a sudden booming in China. At one time I have received many millions of EURO of orders from German and other guyes. And my previous website of www.solaires.com was highly quoted and valued at US\$ 15 mio. At that time I thought it higher therefore I did not sell it to a Britain. And I also want to keep a low profile, was reluctant to engage in too heavy business and wanted only to keep me invisible from the outside world, therefore I was reluctant to make big business.

Since 2007, businesses have been unstable, and business modes have been changed a number of times – from the business aviation to luxury yachts, from thermal technologies to fluid technology, from nano science to healthcare services.

During this period I've sold tens of thousands of pages of reports in English about the Chinese energy and power industries (particularly the solar industry) to Fortune 500 corporations such as Bayer, Mannesmann, Saint Gobaint, Wacker, BP Solar, JP Morgan and others. I've developed a website about Chinese solar industry – also in English (for a very short period even with 4 languages – EN, DE, FR, and CN), which was referred by the best names in the international solar communities – such as NREL/DOE, ISES and lots of others.

Later on I've also involved in purchasing and procurement worth hundreds of millions of US Dollars in multinational companies as well as my own business. Commodities include utilities boiler systems and components, solar products, windpower products, other renewable energy products as well as other fossil power equipments and systems. My procurement work ranges from sourcing of suppliers, identification of candidate suppliers, factory visits, inquiries, evaluation of offers and negotiations down to final expediation.

And now, I am a consultant for the international industries, businesses and commerce as well as media. My interests remain to be the researches, reporting, consultation and services with the coverage of the Chinese industry, and economy, with special focus on solar photovoltaics and power, solar powered aviation and aerospace, business aviation & aerospace, power and IT, but can be easily be extended into other industries such as healthcare, real estates and housing, transportation, electric and electronics etc.

### List of Services over the Past and at the Moment

Here below are the areas and services types which I have been trying for success:

- -- IC design, particularly modem IP core,
- -- Fintech consulting
- -- web data mining(scraping),
- -- cyber security & privacy consulting
- -- software development and reverse engineering etc,
- -- mathematics / operations research + combinatorial optimization + graph theory,
- -- real estate consulting, particularly the high class properties such as castles, palaces and villas
- -- thermal technology / thermodynamic optimization
- -- fluid technologies
- -- electric power industry / design of electric power plants / nuclear energy / solar energy,
- -- business aviation,
- -- yacht industry,
- -- quality certification and management,
- -- supplier management and procurement,
- -- languages services
- -- sales, marketing
- -- trade
- -- consulting

If you would like to know more about my past businesses, please you may also view the following sites:

China business consulting http://neotech.atspace.cc/

Power industry https://sites.google.com/site/advancedpowerchina/ http://power001.atwebpages.com/ http://powerchina.mypressonline.com/

Business aviation http://aviation.myartsonline.com http://aerochina.getenjoyment.net/

Web security and privacy http://secuweb.atwebpages.com/

Real estates http://castles.myartsonline.com/ http://castlesland.tekcities.com/ http://realestates.mywebcommunity.org/ http://real.sportsontheweb.net/

Solar energy http://solar1.myartsonline.com/ http://solar07.myartsonline.com/ http://solarchina.onlinewebshop.net/ http://solarchina.sportsontheweb.net

Thermal technologies http://thermal.atwebpages.com/

Yachts http://yachtchina.myartsonline.com/ http://yachts.scienceontheweb.net