a Chinese particle physicist’s outreach via blogging

Zhi-zhong Xing
IHEP and UCAS

OUTLINE

♦ Quantum Diaries in 2005
♦ Science Net since 2007
♦ What I’ve done in blogs
♦ Blogging: pros and cons

7th International Conference on New Frontiers in Physics, Crete, 4~12/7/18
One day in the end of 2004, I met Prof. Hesheng Chen, the director of IHEP at the time, on campus. He told me that I was recommended to join the Quantum Diaries blogosphere, which will be established soon at Fermilab to celebrate the forthcoming World Year of Physics 2005, as the only Chinese blogger on behalf of IHEP.

**XING:** Why me? I think it should be better to invite an experimentalist to do this job.

**CHEN:** No, no. You are the right person for it, because experimentalists are always busy.

Three question marks appeared over my head

Doesn’t the director think we theorists are as busy as those experimentalists?

**XING:** Okay, but I really don’t know what to do with this.

**CHEN:** I don’t know either. But you will eventually know.

In this connection I have no regret to be the first person to try tomato
My self-introduction:
An enjoyable life style for me is to travel widely in the sunshine and to experience A. Einstein’s unification of space and time. That feeling does not require the introduction of extra dimensions in my heart.

My first blog was in Chinese and about the Daya Bay experiment, under planning at the time.

中国大亚湾中微子振荡实验

我的第一篇日记介绍一下正在酝酿中的中国大亚湾核反应堆中微子振荡实验，其目的在于测量最小的轻子味混合角$\theta_{13}$. 
What I wrote in Q-diaries

I totally wrote 36 blogs during 2005, in either English or Chinese. The topics that these writings covered include:

- The Daya Bay experiment
- The BEPC / BES experiment
- The strong CP problem
- The other side of Albert Einstein
- News on Sino-CERN cooperation
- A theorist’s gain and loss
- Werner Heisenberg’s life story
- An equation that changed the world
- James Bjorken’s “Data Matters”
- Richard Feynman’s psychology …….

Chinese version of Prof. Fritzsch’s book

The translators:
Zhi-zhong Xing
Xiang-dong Jiang
Yan-hua Huang
Suitable topics for blogging

After one-year blogging, I summarized some topics which are suitable for education and outreach in blogs.

- **Timely hot topics**
  Such as the latest scientific breakthroughs, news on Nobel Prize, etc.

- **Historical events**
  Such as the celebration of an important scientist’s anniversary, etc.

- **Popularizing knowledge**
  Such as basic but important knowledge, new scientific frontiers, etc.

- **Miscellaneous**
  Such as methodology, research fund, student-supervisor relation, ...

**Key question: what is my own taste or style?**

- Try to be humorous and sometimes even unpredictable in my blogs.
- Try NOT to argue with other bloggers or unprofessional passers-by.
- Sometimes focus on EXOTIC topics like scientists’ EQs, wagers, etc.
I was invited to join at the beginning but I hesitated for quite a while. I changed my mind, and joined it \textit{in the fall of 2007}, simply because I wanted to find a place to put away my popular science writings.

It turned out that I became known thanks to my Science Net blogging.
Blogging in Science Net

My first blog in Science Net, 2007-9-24

A story about my participation in ICHEP2006 in Moscow and giving a parallel talk.

Full of brides in the streets of Moscow

I've written ~400 blogs

Scientists’ 3P principles

Perception
Persistence
Power

Protect yourself
Perform at your peak
Promote your life
The ICHEPs and myself

A story about my participation in ICHEP2008 and giving a plenary talk

Theoretical Overview of Neutrino Properties

Zhi-zhong Xing (邢志忠)
IHEP, Beijing

ICHEP2008, Philadelphia, USA, July 29th – August 5th, 2008
On 23 March 2009, Masatoshi Koshiba gave a lecture about neutrino physics at Tsinghua University in Beijing. After the lecture, C.N. Yang invited Koshiba for dinner, and I was lucky to join.

During the dinner C.N. Yang told some funny stories on Erwin Schroedinger’s life-style issues. So I wrote a fast blog for this at that night.

Two questions were addressed in blog
— Where and when did Schroedinger invent his great equation?
— What can one learn from him?

The other side of a great physicist
Charged-particle multiplicities in pp interactions at $\sqrt{s} = 900$ GeV measured with the ATLAS detector at the LHC

ATLAS Collaboration

ABSTRACT

The first measurements from proton-proton collisions recorded with the ATLAS detector at the LHC are presented. Data were collected in December 2009 using a minimum-bias trigger during collisions at a centre-of-mass energy of 900 GeV. The charged-particle multiplicity, its dependence on transverse momentum and pseudorapidity, and the relationship between mean transverse momentum and charged-particle multiplicity are measured for events with at least one charged particle in the kinematic range $|\eta| < 2.5$ and $p_T > 500$ MeV. The measurements are compared to Monte Carlo models of proton–proton collisions and to results from other experiments at the same centre-of-mass energy. The charged-particle multiplicity per event and unit of pseudorapidity at $\eta = 0$ is measured to be $1.333 \pm 0.003$ (stat.) $\pm 0.040$ (syst.), which is 5–15% higher than the Monte Carlo models predict.

2010 Published by Elsevier B.V.
Research: how can you sleep at the zero hour?

Even if we worked the whole night long, we had no way to be No. one.
Higgs won!

I am here! Can’t you see me?

Who’s first?

Englert
Brout
Higgs
Higgs
Guralni
Hagen
Kibble

What can we learn from Peter Higgs?

His success is not repeatable!
S. Hawking: I would like this simple formula to be on my tombstone.

Example in 2013

S. Hawking: I would like this simple formula to be on my tombstone.

Example in 2013

S. Hawking: I would like this simple formula to be on my tombstone.
I was luckily voted in as the **Best Lecturer** in this school.

**Why I’m the fastest lecturer?**
On 8 July 2009, Garrett Lisi made a bet with Frank Wilczek that the LHC wouldn’t be able to discover supersymmetry within six years.

The gambling money: 1000 USD
The intercessor: Max Tegmark (MIT)

Upon 8 July 2015, it turned out that Wilczek regrettably lost the game.
Let’s judge in his way (we are certainly serious in making a joke)

♦️ A is always true!

♦️ If B were true, A and C would be false —— in conflict with the fact that A must be true.

♦️ B should be false. Then C must be true, otherwise B and C would both be false, implying that B is actually true.

♦️ So we have proved C without doing any $0\nu 2\beta$ experiment!
Humorous acknowledgments in papers or books

Mihailo Backovic (Catholic University of Louvain)

I would like to thank the SNCB Belgian Railways for providing a comfortable environment on the trains where most of this work was conducted as well as for frequent delays in the train system which provided the much needed additional time to complete the project...

Example 2: N=2 Supersymmetric Dynamics for Pedestrians (book)
Yuji Tachikawa (University of Tokyo)

The author also thanks the right amount of duties associated to his position, with which he cannot concentrate any longer on cutting-edge researches but still has some time to summarize what he already knows. In particular, he thanks various stupid faculty meetings he needs to participate, during which time he drew most of the figures on his laptop. The readers should therefore thank the overly bureaucratic system prevalent in University of Tokyo, which made this lecture note materialize.
Jun Cao: IHEP professor, co-spokesman of the Daya Bay Collaboration

His blogs on neutrino physics are very timely, informative, influential.
A blogger’s main motivation:
- Publicize science and scientists
- make himself or herself happy

Science bloggers’ self-perceived communication roles

Paige Brown Jarreau (Louisiana State University, 2014)
Blogging: pros and cons

You can benefit quite a lot from blogging:
- your group becomes better known;
- yourself becomes better known;
- you make interdisciplinary friends;
- publishers invite you for writing books;
- media may interview you;
- students want you as their supervisor;
- you are invited to give public lectures;
- your alumnus and alumna may find you and want to date you...

Of course, blogging is not always a good thing. For instance,
- sometimes you cannot help to blog during working time;
- sometimes you pay too much attention to it and become emotional;
- sometimes you have to face some negative and impolite comments;
- sometimes you might become nervous in such a virtual web space;
- sometimes your privacy might be more or less released to others....

Never forget that you have been paid to be a scientist, NOT a blogger!
Sometimes it’s embarrassing

I became known for blogging in Science Net. One of my PhD students, Shu Luo (SL), once told me a true story.

After graduation she got a postdoctoral position in Xiamen University. Upon her arrival, she had a dialogue with somebody (SB) over there:

**SB:** Hi, who is your PhD supervisor at IHEP?

**SL:** Prof. Zhi-zhong Xing.

**SB:** No idea.

**SL:** He might be the MOST famous neutrino theorist in China.

**SB:** No idea.

**SL:** He is a .... funny blogger in Science Net.

**SB:** Oh, I know who he is. I love his blogs...

What could I say? It’s always hard to know which cloud has rain in your life.
Summary: dispersion of life

BLOGS: a kind of prism in my research and life

I am pleasant / excited

Blogging and lecturing for physics education and outreach