**Prof. Bingsheng He**

**Research Areas:**
- Splitting methods for sturctured convex optimization
  - Many applications in Image Processing and Machine Learning
- Finding new applications in the area of Image of medicine (incl. Bio-technology)
- In October 2014, Professor He won the "Operations Research Award", a highly selective award issued by the Operations Research Society of China

**According to you, how good are our models and possibilities to describe the world? How well do they describe our actual problems and changes?**

I'm a mathematician. In my opinion, most problems in the world could be described in the language of mathematics. Nowadays, there are many advanced modeling techniques and possibilities applications, all developed based on roots in mathematical theories.  I think the fundamentals of mathematics are already well developed by many great mathematicians from the past hundred years. The opportunity is on the side of application - how to decipher actual problems and changes in the world into the framework of models and possibilities; meanwhile, also avoid model over-fitting when facing the challenge of new emerging problems.

**Which more knowledge can we acquire due to your research? Which offers do you have to describe our problems?**

My main research interest is in numerical solution methods for optimization problems, mainly in splitting methods for structured convex optimization. As a mathematician, I like to propose general algorithms for typical optimization problems. Such methods have many applications in Image Processing, Machine Learning. Fortunately, my research works are cited by some well-known professors in Europe, and the professors from Princeton, UCLA, Stanford, UC Berkeley in USA. I am interested in finding some new applications in the area of Image of medicine (including bio-technology).

**Which specific requirements does your country pose to your research and how do you deal with them?**

My country China does not have specific requirements for my research work.  I am a member of the Operations Research Society in China. There are a lot of high level academic research activities in this society network. I'm honored to win the Operations Research Award in 2014.