ShanghaiTech Faculty Search

ShanghaiTech University invites highly qualified candidates to fill multiple tenure-track/tenured faculty positions as its core team in the School of Information Science and Technology (SIST). Candidates should have exceptional academic records by international standards or demonstrate strong potential in cutting-edge research areas of information science and technology. English fluency is required and overseas academic experience is highly desired.

ShanghaiTech aims to become a world-class research university for training future scientists, entrepreneurs, and technological leaders. Located in Zhangjiang High-Tech Park in the cosmopolitan Shanghai, we shall trail-blaze a new education system in China. Besides establishing and maintaining a world-class research profile, faculty candidates must also contribute substantially to graduate and undergraduate education.

Academic Disciplines:
We welcome candidates in all cutting edge areas of information science and technology. Our recruitment focus includes, but is not limited to: computer architecture and software, cloud and high performance computing, computational foundations, data mining and analysis, visualization, computer vision, machine learning, data sciences and statistics, IC designs, solid-state electronics, high speed and RF circuits, embedded systems, intelligent and signal processing systems, smart energy/power devices and systems, next-generation networking, control systems, robotics, sensor networks as well as inter-disciplinary areas involving information science and technology.

Compensation and Benefits:
Salary and startup funds are highly competitive, commensurate with experience and academic accomplishment. We also offer a comprehensive benefit package to employees and eligible dependents, including housing benefits. All regular faculty members will join our new tenure-track system commensurate with international practice for tenure evaluation and promotions.

Qualifications:
- A well articulated research plan and demonstrated record/potentials;
- Ph.D. (Electrical Engineering, Computer Engineering, Computer Science, Statistics, or related field);
- A minimum relevant research experience of 4 years.

Applications:
Submit (in English, PDF) a cover letter, a 2-page research plan, a CV plus copies of 3 most significant publications, and names of three referees to: sist@shanghaitech.edu.cn by October 31st, 2014 (or until positions are filled). More information is at http://www.shanghaitech.edu.cn.

ShanghaiTech University
SIST NEWSLETTER

School of Information Science and Technology

New SIST Professors

| Hao Chen | Xiaojun Yuan | Yanlin Geng | Shenghua Gao | Xiliang Luo | Sören Schwertfeger | Haoyu Wang |

Since this April, SIST has welcomed seven new professors on board:
Prof. Hao Chen (Ph.D., Berkeley'2004)
Prof. Xiaojun Yuan (Ph.D., City U'2008)
Prof. Yanlin Geng (Ph.D., CUHK'2012)
Prof. Shenghua Gao (Ph.D., NTU'2013)
Prof. Xiliang Luo (Ph.D., Minnesota'2006)
Prof. Haoyu Wang (Ph.D., Maryland'2014)

Prof. Sören Schwertfeger (Ph.D., Jacobs University Bremen'2012)

SIST now boasts 15 full-time faculty members including 4 professors, 1 associate professor, and 10 assistant professors in this fall, ready to welcome our 2nd class of graduate students and the 1st class of undergraduate students at ShanghaiTech.

SIST Welcomes New Students

This fall, SIST will be joined by 87 new graduate students, and the first batch of 95 undergraduate students.
These freshmen and first-year graduates will bring much excitement and new energy to ShanghaiTech. SIST has been preparing to welcome and educate the new-incoming students.

SIST Hosts Summer Camp During Summer Semester

In July, 23 undergraduates from various campuses across China took part in the Summer Camp hosted by SIST during ShanghaiTech's Summer Semester. The Summer Camp lasted 20 days, during which the students participated in 13 research projects sponsored by SIST faculties. Under the guidance of SIST professors, the students worked with exciting team projects, including Wearable Medical Devices, Application of Computer Image Recognition, and Background Exchangeable Video Communication System, and made steady progress. At the end of the Summer Camp, each team presented their findings. To quote Yifan Gu, the lab of SIST's Summer Camp is quite "OPEN". "We did research in the lab every morning, and professors will discuss the details with us and encourage us to assume a problem bravely."

NEW FACULTY PROFILE:
Prof. Yi Ma

We try to establish a tradition here at the School of Information Sciences and Technology (SIST) of ShanghaiTech that every new faculty member onboard, a.k.a. a new "SISTor", would write a self-introduction about himself/herself, and his/her romance with ShanghaiTech. Normally, this should have not been so difficult for me since we all know what professors are good at: talking and writing. Well, at least that was the case until I read the previous self-introduction by my dear colleague Shuguang Cui. I recommend everyone read it first whether or not you have done so before. Because first, it is such a genuinely passionate article that touches your heart in many ways. Second, bad news for me, it said almost exactly what I want to say about Chinese higher education and research scene, and articulated all the good reasons to join ShanghaiTech, better than I could ever write. What on earth am I supposed to do with my article then?

Well, I must admit that me joining Shanghai was a big surprise (or even shock) to many people close to me. I won't tell you how many times I have answered the question "why do you go to ShanghaiTech?" in the past few months. What I can tell you is this: after about a hundred times, you start to develop dreams about it. To many people, this was a much bigger shock than giving up my tenure after 11 wonderful years on the faculty of Illinois ECE and joining Microsoft Research Asia for good. You may wonder who was the most surprised by my move to ShanghaiTech? My parents? My wife? My boss at Microsoft? Actually, none of the above. The person who was the most surprised is ME. Yes, I surprised myself, totally.

I have always shared the same passion and vision about China's need of reform for higher education and research as Shuguang has eloquently put in his article. They were enough to persuade me to come all the way from Illinois back to Microsoft Research Asia (MSRA) in Beijing five years ago, but no step further since then. During the five years I worked at MSRA, I had done everything in my capacity to help mentor Chinese students and young faculty members from all over the country on how to do research. Most of my colleagues at MSRA like to work with students and young faculty members from the "Ivy Leagues" of China, for good reasons probably. I am much less picky, for a good reason too. Almost each year, I have hosted a couple of visitors from universities that MSRA top brass would deem as "second tier", "third tier", or even "no tier". Well, guess what, every single one of them has turned out to be great! They all were able to catch up very quickly with the latest research developments in my research fields within the short span of their stay and in the end publish quite a few high-quality articles in top-tier conferences and journals. Many of them continue to maintain good collaboration with me to this day. This is one of the proudest things I have ever done in my life.

What is the moral of this story? The good part is that China has a great pool of young talent for research. The bad part is that much of that talent seems severely suppressed. This actually had played a significant part in my decision to stay with MSRA when my sabbatical leave expired with Illinois: I was convinced that I could find good talents to work with if I stayed in China; and there seemed to be something I could do to help them, even though what I could do is inherently limited at MSRA – I used to joke that MSRA is like a philanthropist to Chinese academia: In the beginning your help is very much appreciated, but after a while, you are taken for granted or your intention is second-guessed. That was no reason for me to leave MSRA and plunge into the "system" though – after all, Microsoft was voted No.1 as "the best company to retire" in America last year! Besides, I was doing the best work of my life at MSRA: my research field grew explosively and my work started to see tremendous impact in both academia and industry worldwide. Although I was extended welcoming hands from the Ivy Leagues of both the United States and China, I was not going anywhere. But deeply inside, I was torn between industry and academia, between China and the world.

Now back to the question why I surprised myself the most with the move to ShanghaiTech? Out of all people, I should be immune to the idea of getting involved in a new university in China. To understand that you need to know a little fact: I am far from the first one in my academic family to venture education reform in China. History of Chinese education reform would remember one name: Shankar Sastry, my PhD advisor, current dean of UC Berkeley the College of Engineering. You see, well before me, two of his former PhD students, my academic brothers, had got involved in new universities in China that aimed to reform. Professor John Koo, my classmate/roommate/officemate at Berkeley, who left his tenure at Vanderbilt University to help Santou University (endowed by the Hong Kong real estate businessman, Li Ka-shing) seven or eight years ago, now settled back at Hong Kong University (3,000 words omitted here about the reasons…); Professor Zexiang Li of HKUST, who had wholeheartedly helped establishing the South University of Science and Technology of China several years ago, before long ended up with coauthoring the now famous open letter which publicly renounced HKUST's partnership (curious about why? Google that article.) As far as I am concerned, those were my two serious doses of vaccines.

So when Shankar and others from Berkeley and Stanford first encouraged me to help ShanghaiTech back in late 2012, you can imagine my first reaction. Yes, we were all kids once and heard about the story "The Boy Who Cried Wolf" – you see, by that time, I had heard the wolf cry twice already through my direct academic family. Almost purely out of

professional courtesy, but deeply suspicious, I had agreed to serve on the advisory board for the school and to help with the early recruiting effort. After all, it is a noble cause and it is a short trip from Beijing to Shanghai. This was how my romance with ShanghaiTech had started.

Then I flew to Shanghai and participated in the first few rounds of faculty candidate interviews. For the first time, I met with SIST Dean Cher Wang and professor Zhi Ding in person and worked with them through the interview and decision process. Immediately, I felt something different, something I had never felt before working with other universities in China. The whole experience reminds me of my experience on the faculty Search Committee of the ECE department at Illinois. For the first time, I realize that ShanghaiTech is darn serious about implementing the kind of successful mechanisms that have been time-tested for all world-class research universities, starting with the critical step of faculty recruiting.

Why this is so important, and dear to my heart? For people who do not have first-hand experience working in research universities overseas, you need to know that the faculty recruiting (or promotion) process best embodies how to exercise the very basic tenet in academia for measuring a scholar's success: objective peer evaluation by your international research community, nobody else. In a way, it is this very tenet that protects and nourishes academic freedom and integrity, worldwide, past and present. At Microsoft, people managers in training are often warned of "what you get is what you reward." That means the evaluation (recruiting and promotion) system you install determines the outcome of your team. Maybe the main problem with current Chinese research system is that, as Shuguang has articulated in his article, it has created its own domestic "metrics" for measuring "success" that has little to do with the internationally recognized ones. There is a much bigger world out there, where most scholars measure their success based on how much respect they earn from people they respect, not based on how many envies they have emulated from people they used to envy.

One does not need many reasons to make a big decision. One good reason is more than enough. In the real-estate market, the three most important factors for a good property are "location, location, and location". Then in the competitive world of academia, the most important factors for a good research institute are "people, people, and people" – more specifically, they represent student, faculty, and leadership. We often half joke that your family happiness depends on who your neighbors are, whereas your professional happiness depends on whom you work with. "All top talents are free agents". Intellectuals are only attracted to places where people around them share the same values, recognize and respect their intellectual depth and

NEW FACULTY PROFILE:
Prof. Kewei Tu

How time flies and it has already been half a year since I joined SIST, ShanghaiTech in February. Life here is busy and you always have an endless list of tasks: doing research, talking to students, preparing for teaching, helping with student and faculty recruitments, and so on. However, it is also exciting and fulfilling, and I feel that my childhood dream of being a scientist is materializing.

I have had a strong interest in science and technology since childhood, which was probably nurtured by the Chinese society at that time (1980s) that truly admired scientists and respected knowledge. I fondly recall one of my childhood favorite book series One Hundred Thousand Whys, which introduced interesting basics of various science disciplines. My interest in science persisted during my middle-school years. In a time when Internet was still unheard of, my friends and I frequented the local library to read popular science books in fields like physics and astronomy. Upon graduation from high school, I faced one of the most important decisions in my life: my college major. Should I follow my interest to study science, or should I be realistic and choose a major that is highly popular in the job market? My final decision was computer science. Well, I said to myself, I should be able to find a decent job in an IT company after graduation, but if everything goes well, perhaps I would be able to study artificial intelligence (AI) and become a researcher devoted to solving one of the biggest mysteries in the universe: intelligence. Of course, at that time I had little idea of what AI really is, and without much resource to consult, my decision was more like a gamble. Fortunately, this is a decision that I have never regretted.

My college experience at Shanghai Jiao Tong University (SJTU) was fun. Apart from courseworks, we had opportunities to practice skills learned in classrooms and carry out interesting projects. While some of the projects were course assignments, the others were just for fun. My friends and I once each wrote a Gomoku program and competed against each other. Such hands-on experience proved to be very helpful in my research later. Meanwhile, I kept reading in general science, technology and even

philosophy beyond my own major. My favorite books at that time included "The Emperor's New Mind" and "Complexity: The Emerging Science at the Edge of Order and Chaos". Some of the readings, although not directly related to my research today, still helped me a lot, especially in the ways of thinking.

I continued my study as a master student in Prof. Yong Yu's lab at SJTU, working on semantic web and knowledge engineering, a sub-field of AI. During that time (early 2000s), researchers in China began to connect with the international communities and publications written by mainland Chinese began to frequently appear in international conferences and journals. My labmates and I participated in this transformation and published several papers in international conferences. It was during that time did I start to understand what research is. One important lesson that I learned is that ideas are cheap while making ideas work is priceless: many people (me included) had come up with research ideas that sounded great and exciting, but more often than not the ideas did not work in their original form and it took great effort in trial-and-error and systematic analysis to eventually make them work (or, in some cases one has to give them up with lessons learned).

To further improve myself, I decided to pursue a PhD degree in US and went to Iowa State University in Ames, Iowa. I was grateful that my PhD adviser, Dr. Vasant Honavar, gave full freedom to me in choosing my research topics. After almost two years of exploring (did I mention that I even took psychology and philosophy classes during that time?), I decided to study stochastic grammars, which I found have the potential to extend to a general approach in modeling multiple aspects of intelligence and thus fit my ideal of studying general-purpose AI. However, the freedom in choosing research topics came at the price that I had to carry out my research mostly on my own while my adviser could provide only high-level suggestions that may or may not be useful. Nevertheless, I fully experienced the fun of research in those years: the joy of coming across a brilliant

idea (I once got one when I started to sleep at midnight and couldn't help but jump out of the bed to work on it), the alternation between excitement and disappointment during the course of research, and the satisfaction when writing up the eventual achievement. By the time that I graduated, I managed to produce a few interesting results (including a state-of-the-art system) in learning natural language grammars.

The next step in my journey was almost obvious: to approach my ideal of studying general-purpose AI, I need to extend my achievements in stochastic grammars to domains other than languages. So I went to University of California, Los Angeles and became a postdoc under Dr. Song-Chun Zhu, who is a leading scholar in the research of grammatical approaches to computer vision. During my two years stay at UCLA, the interaction and collaboration with researchers outside of my previous research area proved to be very revealing and fruitful. My knowledge and research experience also became more mature and systematic.

After spending eight years studying and working abroad, I finally felt ready to become an independent researcher and started searching for an academic job. Upon learning about ShanghaiTech, I was immediately attracted by its innovative system and endless potential, particular for a young scholar familiar and comfortable with the US system. Luckily enough, I received a call from SIST for an onsite interview and eventually an offer from ShanghaiTech as one of the founding members of SIST. In mid-February 2014, I jumped off the plane in Pudong and officially started as an assistant professor here.

So, that is my journey in scientific research thus far. I can perhaps summarize my experience as follows: let your interest guide and motivate you, but keep an open mind; research is fun, and solid background knowledge/skills, perseverance and collaboration is important. Now there is a new journey before me: to become a successful researcher and teacher. It will not be an easy journey, but I am certain that I will keep learning from and growing with ShanghaiTech and all its faculty and students.

breadth. That is pretty much everything there is to build and maintain a successful world-class research institute.

But that is much easier said than done! Now looking back, there was one thing that really bugs me at MSRA: Almost all my top interns have eventually gone out to graduate schools in the top five EE or CS departments in the united states – I am guilty for that since I wrote their recommendation letters and even recruited one of them to Illinois as my own. Deeply inside, such obvious bleeding of talents breaks my heart as a Chinese! Only if we could keep in China, even in MSRA, a couple (out of ten) of those top students and nurture them well, I can assure you that

within ten years, China would have a place in the world in some new research areas. These students are just so much more gifted than we were around the same age. Hope that one day China will have places to attract them back!

In the past many years, Chinese government and universities seem to be more interested in developing real estate than real talents. Why? Because real estate is so much easier to manage than people with true intellect and with free will! With national resources and cheap labors exhausted to a breaking point, China has got to find alternative engines to sustain future economic growth. What

resource do we have left? One does not have to look elsewhere. It is the same invaluable resource that is the most sought after by all developed countries: top human talents – a resource that China produces plenty but owns and profits little. Harry Shum, the executive vice president of Microsoft, a long-term mentor of mine, was the first person I had consulted with for the possibility of joining ShanghaiTech. His first reaction was that it is highly risky but worth trying (he knows the people on the team well). But that was not enough for me to make up my mind. Then he added: China's higher education probably cannot afford to lose another opportunity like this. That struck a chord with me and tipped the balance.