ShanghaiTech is an unknown university, which does not have much influence on getting me a good job. They wished me to go to an established Chinese university. But I still enrolled the interview. Seeing is believing, I decided to go there by person. Subsequently, I encountered my interviewer--Prof. Cui, a visiting professor of ShanghaiTech University, IEEE fellow. He did not introduce me so much about the superior hardware facilities of this university. Instead, he shared the vision and the mission of the School of Information Science and Technology with me. This convinced me entirely. When I went back home, I told my parents my experience in Shanghai. Finally, they understood me and encouraged me to pursue my dream.

After entering ShanghaiTech, I found the course setting keeps tight paces with the international standard, which is quite different from some traditional Chinese universities. I can learn the cutting-edge technology and knowledge here. During my first semester, I chose the convex optimization course, and I became interested in optimization. Coincidentally, Prof Cui recommended me to Prof Boris Houska, another important figure, whose research interests include numerical optimization and optimal control, robust and global optimization as well as fast model predictive control algorithms, which was very aligned with my interest. Later on, after a conversation with Prof. Houska, he surprised me to supervise me, lending me cheeriness and happiness. Given my interest, my supervisor helped me to choose my research direction--Distributed Optimization Algorithm and fast Model Predictive Control.

After one and a half year of learning, I am impressed with my supervisor's academic attainment and personality traits, I feel very honored to be his student. Besides, I have been surrounded by the cares and help of my teachers, roomates and classmates in ShanghaiTech. Everyone in ShanghaiTech is willing to give you a hand when you need help. I consider myself lucky to have creative, competitive, and cooperative fellow students. It is an honour to be a member of ShanghaiTech family.
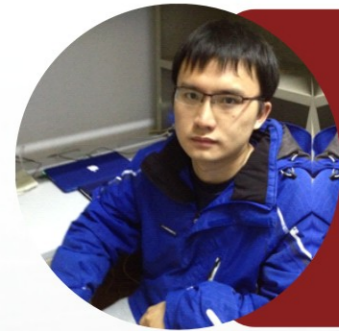
SIST Graduate Student Profile:
Zhang CHEN

(Zhang Chen is a 2014-class graduate student of SIST. His supervisor is Prof. Pingqiang Zhou. He received his bachelor's degree from Shanghai Jiao Tong University in 2014.)

I am currently a second year graduate student at SIST. In the past year and a half at ShanghaiTech, I was much impressed by its effort to offer a first-class academic environment for its students. Especially, the professors here really share the goal to make ShanghaiTech a top place to conduct research. Before I share more of my feelings about this university, I would like to talk a little about myself and how I got to know ShanghaiTech.

My undergraduate life was spent at Joint Institute of Shanghai Jiao Tong University (JI-SJTU), which is a collaborative institute with University of Michigan (UM). During the four years, I experienced a western style of education, majoring in Electrical and Computer Engineering. At first, I was stunned by the accent of some lecturing professors (because many professors are from non-English countries). But later when I got used with the language problem, I began to see the real difference between the education there and that I had before. Unlike high school and prior ones, in college, I found that the amount of learning materials were beyond the learning capability of a person (at least for me). That means, you might easily get lost in the sea of knowledge. Luckily, a good lecturer knows how to pick the most fundamental concepts that could help students comprehend others rather than push in all the information at one time. I benefited a lot from the good teaching quality here and I thought it really had a huge impact on students' motivation. By the end of junior year, I wanted to try something different than going right into work, even though I myself had no clear mind about my career at that time. As a result, I applied for the Exam-Free graduate program of the same institute, which unfortunately failed. But as a Chinese proverb goes, misfortune may prove to be a blessing. It was after this failure that I got to know ShanghaiTech.

The first time I came to ShanghaiTech, I was surprised that the university was still located in a office building without campus. But after an interview with Prof. Pingqiang Zhou, who was later my supervisor, I changed my mind about this university. What motivated me to come here were not external elements but simply people, because I believed that it was people that made things work. I knew the professors here were all equipped with solid academic background, and more importantly, they came here with passion. There was little hesitation before I decided to go here. In the first semester as a graduate student, I took courses such as matrix analysis, algorithm design, operating system, convex optimization. These courses really kept in pace with their counterparts in other top universities overseas and prepared me for my academic research. Frankly speaking, the teaching quality of these courses was even better than the education I received at JI-SJTU. Starting from the second semester, my supervisor, Prof. Zhou helped me choose my first research topic – hardware security in placement of VLSI, which was a collaborative research with Prof. Tsung-Yi Ho at National Chiao Tung University. Besides courses and research, ShanghaiTech also offered many opportunities to get in touch with the outside world, including frequent seminars and visits to companies and institutions. But the best thing here is its people, professors and peer students. They are full of kind hearts and build an atmosphere that everyone enjoys.

Faculty positions in School of Information Science and Technology

The School of Information Science and Technology (SIST) in the newly founded ShanghaiTech University invites highly qualified candidates to fill multiple tenure-track as well as tenured positions as founding faculty members of the school. Candidates should have an exceptional academic record or demonstrate strong potential in frontier research areas of information science and technology or closely related fields.

ShanghaiTech's mission is to become a world-class research university for training future generations of scientists, entrepreneurs, and technological leaders in China. With a state-of-the-art new campus in Zhangjiang High-Tech Park in the cosmopolitan Shanghai, ShanghaiTech is committed to education reform in China by building an open and free academic institution. We offer both undergraduate and graduate degree programs. In addition to establishing and maintaining a world-class research profile, successful candidates are also expected to contribute substantially to the educational missions of undergraduate and graduate programs within SIST. All faculty members in ShanghaiTech will be part of its new tenure-track system commensurate with international practice, evaluation, and standards.

Academic Disciplines:

We seek first-class faculty candidates in all cutting edge areas of Information Science and Technology. Our recruitment focus includes, but is not limited to, the following special research areas: applied mathematics, advanced computer architecture and technologies, nano-scale and solid state electronics, semi-conductor devices, ultra-high speed and low power circuits, intelligent information and signal processing systems, next-generation computer systems and architectures, operating systems, computational foundations, big data analytics, cloud computing, data mining, artificial intelligence and machine learning, computer vision and graphics, robotics and control, bio-computing, smart energy/power devices and systems, information theory and communications, highly-scalable and multi-service heterogeneous networking, statistics, as well as various inter-disciplinary areas involving the foundation and applications of information science and technology. Candidates in the areas of electronics and optics, integrated circuits, computer systems and architectures, operating systems, software engineering, and robotics will be considered with higher priority.

Qualifications: - Ph.D. (Electrical Engineering, Computer Engineering, Computer Science, Statistics, Applied Mathematics, or closely related field);

Candidates must demonstrate

- strong track record, strength, and potential in establishing a distinguished academic career in foundamental research.

- strong interest in undergraduate and graduate education.

Applications:

Qualified applicants are invited to submit (all in English) a cover letter (Firstname_Lastname_Cover Letter.pdf), a research and teaching plan (Firstname_Lastname_Research Plan.pdf) up to five pages, the latest curriculum vitae (Firstname_Lastname_CV.pdf), up to three copies of most significant publications (Firstname_Lastname_Paper1-3.pdf), and the names of at least three referees to: sist@shanghaitech.edu.cn.

Mailing Address: School of Information Science and Technology, ShanghaiTech University, Building 8, 319 Yueyang Road, Shanghai 200031, China

Deadline: Until positions are filled.

Compensation and Benefits:

Salary and startup fund are highly competitive, commensurate with experience and academic accomplishment.

ShanghaiTech also offers a comprehensive benefit package to employees and their eligible dependents, including full housing benefits.

For more information, please visit http://www.shanghaitech.edu.cn.

Disciplines: Computer Science, Electrical Engineering, Statistics and Optimization, Information Technology, Bioinformatics.

Researcher positions in School of Information Science and Technology

Research Fellow Positions at School of Information Science and Technology (SIST), ShanghaiTech University

The School of Information Science and Technology (SIST) in the newly founded ShanghaiTech University invites highly motivated individuals with a Ph.D. degree to work with us in the following exciting research areas: computer vision, computer graphics, applied mathematics, advanced computer architecture and technologies, nano-scale and solid state electronics, semi-conductor devices, ultra-high speed and low power circuits, intelligent information and signal processing systems, next-generation computer systems, computational foundations, bigdata analytics, data mining, robotics and control, bio-computing, smart energy/power devices and systems, information theory and communications, highly-scalable and multi-service heterogeneous networking, statistics, as well as various inter-disciplinary areas involving the foundation and applications of information science and technology. Please check our PIs' profiles at: http://sist.shanghaitech.edu.cn.

Qualifications:
(1)PhD degree in electrical engineering, computer science, applied mathematics or related areas.
(2)Strong publication records.
(3)Strong mathematical skills and system simulation and implementation experience.
(4)Good communication skills and capable of coaching graduate students.
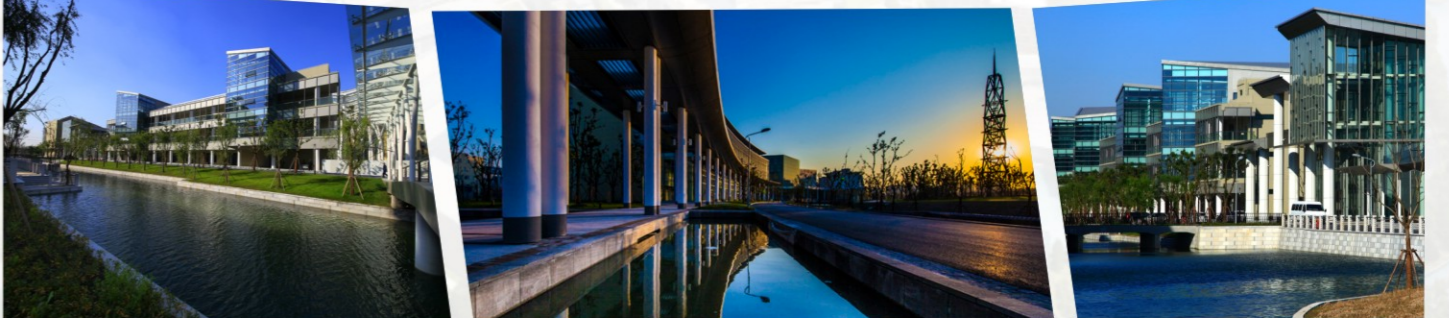(5)Fluent in English and technical writing.

Applications:

Qualified applicants are invited to submit (all in English) a cover letter (Firstname_Lastname_Cover_Letter.pdf), a latest curriculum vitae (Firstname_Lastname_CV.pdf), copies of up to two representative publications, and two references to: hr-sist@shanghaitech.edu.cn (cc to professors whom you are interested in working with). We provide very competitive salary and benefits for such positions.

Deadline: until the positions are filled.

Discipline: Computer Science, Electrical Engineering, Informatics, Information Technology, Mathematics, Nanotechnology, Postdoctoral, Renewable Energy, Signal Tr.

ShanghaiTech University
SIST NEWSLETTER

School of Information Science and Technology

Scenery of ShanghaiTech

The new campus of ShanghaiTech University is almost ready, and will be opened this fall. The new dining halls, gym, table tennis court and badminton court are already in use.

ARRIVALS OF NEW FACULTY MEMBERS

Three new assistant professors joined SIST!

Hao WANG:
Ph. D. 2015,
Lehigh University, USA

Baile CHEN:
Ph. D. 2013, University of Virginia, Charlottesville, USA;
RF product development engineer in Qorvo Inc in Oregon.

Xufeng KOU:
Ph. D. 2015,
University of California, Los Angeles (UCLA), USA.

ShanghaiTech University

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March 2016 / ISSUE No.9

ShanghaiTech University

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ShanghaiTech University

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ShanghaiTech in Their Eyes
2016–Class Graduate Student of SIST

Ruiyang LIU
Creating is better than following.Thinking that ShanghaiTech is the best place to create my own future. Don't want to be botherd by those old conventions.

Andrew ZHANG
Here I could see the future of the world while in another university I could only see the future of China.

Rui WANG
I prefer to be a initiator rather than a follower, and ShanghaiTech University is a place where the innovations and challenges exist side by side

Xuming SONG
Talented professors and good learning environment attract me the most. I also find it a place full of love.

Cheng LI
For me, shanghaitech university is a more open and international platform. also,i think i can meet with people who are adventurous and of kindred spirit.

Gao YIN
First, I am attracted by its creative education program as I long to achieve overall development. Second, there are many talented young professors here, which makes me passionate and confident about my graduate life.

Joshua CAO
Newly built in 2013, ShanghaiTech University attracts a great many outstanding Chinese professors overseas. It offers enough equipments and education resources for every students coming to ShanghaiTech.

Zeyong SHAN
She is a NEW university. Nothing can be more exciting for a passionate person to grow with such a university.

Jia ZHENG
Open and free academic environment to fulfill my potential and ambition to the best.

ShanghaiTech in Their Eyes
Parent of SIST Student

Zhiping DU
1. Supported by Chinese Academy of Sciences and the government of Shanghai, with abundent resources, strong faculty and huge potential 2. Collaborated with famous universities from overseas 3. Its campus is top-level regarding both environment and accomodation facilities 4. Students are taken good care of

Ping GE
ShanghaiTech University is a school that aims for academic innovation and business startups, giving students a kind of education that is different from other Chinese universities.
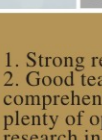
Dongxue HU
ShanghaiTech is suitable for my child because he loves reasoning and having discussions with others. He also likes to put into practice rather than just learn from books, and would like to be around motivated people. The educational ideas of ShanghaiTech can give him the space for progress, so I recommend him to choose ShanghaiTech.

Ling LI
Advanced educational concept, strong faculty, responsible professors, internationalized platform and good location.

Jing SHI
My son graduated from High School Affiliated to Fudan University. At first, he thought ShanghaiTech is below his expectation and wanted to go to Joint Institute of Shanghai Jiao Tong University or Tongji University. But after the opening day of ShanghaiTech, he changed his mind and thought ShanghaiTech is a place where he can achieve more, which my husband and I strongly agreed with. I am glad we attended the opening day because most parents still only focus on 211 project and 985 project universities. Those universities may not the best choice for all students.

Haiying LV
It is an innovative university, which is suitable for my child. I believe he can achieve the best of him in this university.

Min HU
ShanghaiTech University combines the advantages from both eastern and western education, and fits with the development of China. It cherishes the idea of pushing the nation forward through education. Furthermore, it recruites excellent professors from all over the world and has access to Shanghai high-tech resources. With all these reasons, I suggest my child to apply for ShanghaiTech rather than 985 project universities. I believe what he lears here will be solid foundation for his future.

Ying HE
1. Strong research capability with leading educational ideas 2. Good teaching management, small number of students and comprehensive tutorial system 3. Good learning atmosphere, plenty of opportunities to interact with leading professors and research in the world

Lei HUANG
It has novel educational concept and internationalized teaching method. My child can really learn something in this university and be ready to go abroad for further studying.
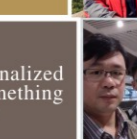
Yuefa MAO
The university has novel educational ideas and poses huge potential.

Ling ZHANG
1. Leading educational ideas and power to realize them 2. Combining the information from different sources, I believe ShanghaiTech can bring up graduates with independent thinking and overall development.
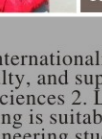
Xiangdong TAN
1. Internationalized education ideas, strong faculty, and supported by Chinese Academy of Sciences 2. Located at Shanghai 3. Major setting is suitable for science and engineering students
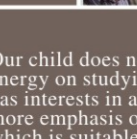
Bing LING
Our child does not favor the idea that if one puts all energy on studying, the rest will follow. Rather, our child has interests in a variety of things. ShanghaiTech puts more emphasis on comprehensive capability than GPA, which is suitable for the development of our child.
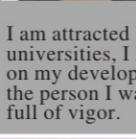
ShanghaiTech in Their Eyes
Freshman and Sophmore of SIST

Xiaoye MO
It has top hardware facilities and strong faculty among domestic universities. Its curriculum setting fits with its education purpose and serves its stutents. It provides many opportunities for its stutents to go abroad.

Yining GAO
The university puts importance on every stutent, the average amount of education resources on every stutent is more than that in Zhejiang University or Fudan University. I can learn those that interest me in an excellent atmosphere.

I am attracted by its novel educational concept. In traditional domestic universities, I have to take some old-fashion courses, which provides little help on my development. But in ShanghaiTech, every course can help me to become the person I want to be. In short, this university has brand new vision and is full of vigor.

Xingya ZHANG

Chen SUN
The academic environment in this university is pure, suffering from no external intervention. This university can represent and even lead the technological advancement of China, giving us a good platform and many opportunities.

Gao LING
I get to know this university from media and at first think it only cultivates researchers for scientific research institutes. Later, I realize that this university provides lots of benefits for students pursuing other careers, from going abroad for further education to starting one's own bussiness. This makes me confident of my future here.
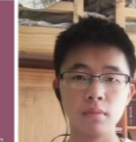
Zili WEI
1. Want to be a student of Prof. Chen Hao #2. The eloquence of Prof. Yang Yang #3. Top accomodation environment

Jiachen WANG
Because it is a brand new school where I can receive more resources and create history with the school.
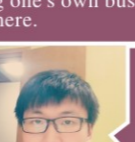
Yutong WEI
The number of enrolled undergraduate students is small but the faculty power is strong, which enables small class size and undergraduate tutorial system. Every student is valued. Besides, first-class facilities provides complete support for academic reseach.
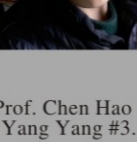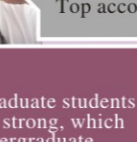
Liangliang HU
Suitable, novel, ambitious, worth trying

Hang HU
There are more opportunities in a new university. With less students, every student enjoys more opportunities. Also, there are many famous professors here.
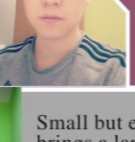
Small but exquisite. Every major set up here can be fully developed. It brings a large amount of professors as well as leading educational ideas from overseas, looking forward to forming a good academic atmosphere which many first-class universities in China are in lack of. I have went to some of these universities and experienced the above shortcome. Many domestic universities are influenced too much by social factors, losing their original educational purpose. Courses and subjects often do not take students' future development into account. The educational concept in ShanghaiTech is what I strongly agree with, so I will go nowhere except ShanghaiTech University.

Yang ZHOU

Tianyi YANG
Abundant opportunities to go aborad to top universities as exchange student

Zean ZHOU
In the Opening Day, the university does not judge stutents by their scores. Many famous professors and experts will come to hold seminars and lectures.

It has different educational concecpt and method than many 985 project universities. It has access to the resources from Chinese Academy of Sciences and has a contained capacity of stutents to ensure teaching quality.

Shaohui YU

The university is novel with much potential. The teaching method fits with international practice and gets rid of the disadvantages in domestic traditional education. The hardware facilities is very good.

Jingxian HUANG
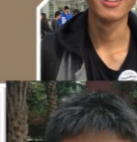
The university is novel, adopting college system and tutorial system in undergraduate education. Its educational concept and method are different from other domestic universities. It belongs to Chinese Academy of Sciences and has strong faculty. Students here enjoy abundant learning resources and can achieve the best of them.

Shuo NI
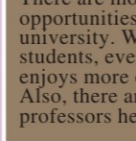
High-level, supported by the country, fits with my own level, promising, located in Zhangjiang high-tech zones.

Jindong ZHOU
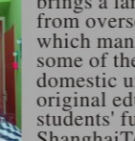
There are many friends here cherishing the same ideals as me. It is an innovative university that goes an international path, and there are many chances to interact with professors.

Yiming MAO

NEW FACULTY PROFILE:
Prof. Yanlin GENG

(In July 2014, SIST welcomed Dr. Yanlin Geng (Ph.D. 2012, the Chinese University of Hong Kong) on its faculty. Let's listen to his sharing about himself and joining ShanghaiTech.)

I am glad to join the SIST family at ShanghaiTech University and keep working on problems related to information theory. Here I would like to share some stories that I experienced in the past.

When I was a student I took an optimization course. There was an exercise on analyzing the estimation error of a particular algorithm. By following a standard procedure from the lecture notes, I failed to solve the problem. In this case, my standard way was to list all the possible directions that I could imagine, and tried them one by one. Fortunately, one method worked through. It turned out that the method was rather different from the standard one, yet captured the key properties of the problem. After solving this problem, I did obtain better understanding of the algorithm. However I would not have got into this detail, if I gave up or did not get my hands dirty. In some sense, this is what the saying "no pain, no gain" means. Or in Chinese "纸上得来终觉浅，绝知此事要躬行".

In the past few years, I have been working on a math model on a communication scenario.

One of the fundamental problems is to find a particular region. To figure out this region, people usually try from both the inside and outside directions. Thus there are inner bounds and outer bounds to this region, and people want to close the gap. My co-workers and I thought that the best inner bound we have at hand coincides with the region. One day after a long time of discussion, we thought we had solved this problem. We were so glad and should have a great sleep. The next day we sat together and went through the details. It turned out that we made a small but crucial mistake on a boundary case. But we did not give up, and shifted to understanding the special part of that boundary case. Then we realized that we saw a similar case in analyzing the best outer bound. With more efforts, we were able to prove that the alleged best outer bound is not optimal and proposed another outer bound. The story is interesting in the part that we wished to prove a result along one direction and at the end of the day got another result in the reverse direction. But we could not make this without trying and seeking

restlessly.

The last story is on proving the optimality of Gaussian distributions in a particular setting. At that time, a typical method we have in mind is the Central Limit Theorem in probability. We were able to design a particular construction and use the theorem to finish the proof. However, we were using some basic probabilistic tools several times, which reduced the readability greatly. We were not experts on probability, and we thought that we had proved some known results. Thus we started to look into the literature of probability, and found a theorem that simplified our proof a lot. One year later, we even learned that our construction to tackle the problem could be found in the literature of functional analysis. The interesting thing is that, we are seeing more and more examples where people try and rediscover similar things. Apparently one advice I could suggest is to read old and classical papers, learn knowledge from other fields, and talk with more SIST members to discover similar stories.
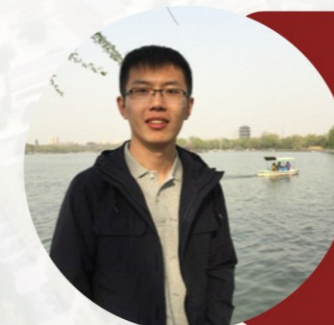
SIST Graduate Student Profile:
Yuning JIANG

(Yuning Jiang is a 2014-class graduate student of SIST. His supervisor is Prof. Boris Houska. He received his bachelor's degree from Shandong University in 2014.)

I am a second-year graduate student in ShanghaiTech University. I grew up in a small town of Shandong Province, China. In my childhood, I dreamed to be a scientist. In the elementary school, I started to develop a strong interest in Math. Later on, after I learned physics, physics and math became my two favorite courses. For this reason, when I chose my undergraduate major, I selected Electrical Engineering which is the best choice combining physics and math in

Shandong University. During my time at Shandong University, I found that I prefer academia over industry. So I decided to take the graduate admission test and secured a satisfying result. But then, the moment came that I needed to make an important decision about my next station.

When I was searching for a university, someone recommended ShanghaiTech University to me. At first glance, I was attracted by the 'Tech', which means the

university pays more emphasis on doing research. After reading more / informing myself more about this university, I found that it tries to keep track with the elite universities like UC Berkeley. Equipped with bunches of formidable professors, advanced research facilities, and favorable geographical location, it is really an amazing place to do research. I thought that this should be my choice. However, I got the opposition from my parents. In their opinion,