

**National Science Foundation U.S./China  
International Research Experience for Students Program  
Summer 2009  
Student Report**

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# **National Science Foundation International Research Experience for Students Program**

## **Background**

In the last few decades the Chinese people have embraced technology and modernized more quickly than some western countries have. As such, it is important for people of other countries learn how to engage and cooperate with their Chinese counterparts.

With the sponsorship of the National Science Foundation (NSF) and the guidance of professor Albert Wang of the University of California, Riverside (UCR) campus, the International Research Experience for Students (IRES) program is an annual program that focuses on recruiting students to take part in an international research opportunity in China (2009 was the second of the three years in which UCR has been selected to be in charge of). Each year four students are picked from a pool of applicants and given grants to defray costs of the program.

The connections forged in China by Professor Wang are the basis upon where the students go for the program. The opportunities provided by this program to the students involved include learning how Western and East Asian cultures differ on food, living arrangements, and values.

The students selected for the 2008 IRES program were: Margaret Ukwu, Mike Ballou, Israel Ramirez, and Robert Lu. For the 2009 IRES program the selected students were: Jorge Carrillo, Jacob Leung, and Andrew Juarez. The time frame spanned by the 2009 program in China was from June 22<sup>nd</sup> to July 31<sup>st</sup>, about six weeks. This

year's program was held at Hangzhou Dianzi University (HDU) and Tsinghua University (TU). The students spent a time at each university that spanned roughly three weeks.

## **Program Goals**

- Teach students about proper research in the field of microelectronics.
- Instill the appreciation of foreign cultures, both for U.S. and Chinese students.
- Develop a better understanding of how to solve unexpected problems.
- To create a productive environment for dealing with different methods of completing similar tasks.
- The ability to take in such methods and apply them if they are more effective than methods taught in the students' native environments.
- To create a once-in-a-lifetime opportunity for students to experience the culture of their peers by working along side them.
- To build collaborative efforts with student peers in other countries.

## Pre-Departure

### Technical Orientation

Part of the IRES program takes place at the UCR main campus. This was a pre-departure training course that took place in Professor Wang's laboratory (Laboratory of Integrated Circuits and Systems [LICS]). In the lab we were taught how the instruments for examining microelectronic circuits were used and the vocabulary that went with them. Lin Lin, a graduate student for professor Wang, led most of our technical orientation sessions. The sessions also included some hands on training for use of the instruments. Using such instruments we were able to examine the properties of micro-scale electronic components.

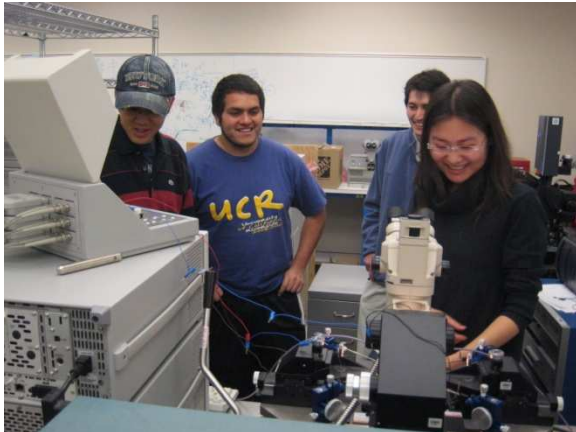


Figure P1: Getting familiar with the equipment used in microelectronics research with Lin.

These orientation sessions were very informative and gave us an understanding of equipment and techniques otherwise not covered in our undergraduate classes. More importantly, we were equipped with prior knowledge of what to expect to be done in China at the host institutions.

### Cultural Orientation

In addition to our technical orientation sessions, we were given a

cultural orientation. Led by Jun Wang, the Bourns College of engineering professional development officer, a person who is very knowledgeable of East Asian modern cultural traditions and customs, the orientation session was very helpful and informative. From this orientation session we were able to learn some very basic, but commonly necessary Chinese words. In addition, we were given informational handouts on traveling outside the U.S. and what to look for in real Chinese money, as we were told that despite government efforts there is a counterfeit money problem in China.



Figure P2: Jorge, Jacob, and Andrew signing paperwork at a cultural orientation led by Mr. Wang

The handout given to us by Mr. Wang containing common Chinese phrases was of particular interest because it allowed us to further practice on our own. However, other useful skills would be hand gestures and pictures. Using these, we were able to point out what we would like to communicate should our verbal communication fail.

The orientation also covered important facets of Chinese culture that were significant to know about. Knowledge of such cultural norms was important because it allowed us to know beforehand what would be disrespectful to say or do. In addition, it was helpful in avoiding embarrassing cultural misunderstandings with people not well versed in the English language.

# Hangzhou

## Beijing Arrival

We arrived at Beijing after a grueling 12-hour flight from Los Angeles International Airport. We were then greeted by medical personnel with hand-held temperature readers that measured each and every one of the passengers to see if anyone was sick in any way. Luckily, no one had a high temperature and we were free to leave the plane. After stepping off the plane, we were relieved to be able to stretch and move around freely again. We were also very amazed and excited to see the massive terminal that was Beijing International Airport. Professor Wang was waiting for us there; he then escorted us to another plane for travel to Hangzhou.



Figure H1 (Left to right): Andrew Juarez, Jacob Leung, Jorge Carrillo, Professor Albert Wang  
In front of the exit for international arrivals

## Hangzhou Arrival

After the two-hour flight, we arrived in Hangzhou where we expressed excitement and relief in that we made it to our destination. We were also relieved that we would not be riding in planes for a while. The moment we stepped outside the terminal, we were shocked at how different the climate was from California. The immense heat and humidity immediately began causing us to sweat profusely. We were met by two of our hosts, Tom Wang and Yu Lee, where they took us to Hangzhou Dianzi University (HDU). They took us to the university's visitor's hotel where we were given separate rooms. The plan was to stay at the hotel for one week due to quarantine for prevention of an H1A1 virus spread; on the chance one of us was infected. After completing our quarantine, we were able to move to the student dorms and experience life as a student in HDU.



Figure H2 (Left to right): Professor Wang, Joyce Wu, Jacob, Andrew, Jorge, Tom  
Group photo with Foreign Affairs Secretary (Joyce Wu) and host student (Tom)

## Student Life at HDU



Figure H3 (Left to right): Andrew, Jacob, Jorge, Nicolas Wu  
In front of the main HDU gate with host student (Nicolas)

Once the quarantine week ended, we received a full tour around HDU. Initially built in 1980 as the Hangzhou Institute of Electronic Engineering, it was renamed to Hangzhou Dianzi University in 2004. The school offers multiple disciplines of engineering, science, economics, management, literature, law, and education. The campus has beautiful scenery and clever organization of buildings, such as the arrangement of the main classrooms in the shape of a U for the first letter of university. It also has a couple parks, several cafeterias, and convenience stores. The dormitories are located in the northern part of the university. There are at least 16 dormitories with about four dormitories only for females. The rooms normally house four students at a time with a bathroom and no air conditioning. We were each given individual foreign student dorm rooms, which had a bathroom, and air conditioning.



Figure H4: Dorm rooms we were given

Some rooms even have their own washing machines, but no dryers. Most of the students have to hand-wash their clothes and hang them to dry.



Figure H5: Nicolas' Dorm room

There are six cafeterias spread out in the dormitory section of the university. The students can choose which cafeteria to go to, with each cafeteria having three floors and contains different entrées on each floor. To order the food, you can walk up to the window and point to what dish you would like. In our case we relied on this skill to order food due to our weak ability to speak Mandarin. After selecting the dish, you slide your dining card through a card reader and the food is yours. The dining card is also your student identification card; cash value

can be added for purchases on the campus at the student services building.

We received our student identification cards upon leaving the hotel. After settling into our dorm rooms, we would be living there for the next week and a half.

## Seminars

While staying in HDU, we attended a couple seminars that were very helpful in telling us what research topics some graduate students were studying.

The first seminar was an introduction to the university, provided information about the university, and a short history.



Figure H6: Introductory seminar

Another seminar was about microelectronics and the integrated circuit computer-aided design (IC-CAD). The seminar described some device modeling and CAD techniques that are used.



Figure H7: Seminar about microelectronics and IC-CAD

The final seminar was hosted by one of our hosts, Yu Lee. His seminar talked about electrostatic discharge protection for low-voltage applications and devices that could use such protection.



Figure H8 (Left to right): Yu Lee, Professor Sun Yu Lee's seminar

## HDU Labs

For a few straight days, we attended the electronics lab for some experiments and gained experience on what students had to go through when classes are in session. Some experiments included waveform generation using circuits and simulations, FPGA programming, and DC motors using simulations and schematics.



Figure H9: Working on experiments

We got to visit various other labs and talked to students about their stay in HDU. We also had a chance to experience their workstations, lab work, and tests.



Figure 10: Asking questions to freshman students about daily routines in the labs

We also got to visit the graduate labs to see what devices the graduates would get to work on and what their workplace looked like. Some of the labs that the graduates worked in were protected by fingerprint scanners. Inside the labs, they had signs that prohibited any photography to be used in order to prevent information or projects from being revealed to the public. Sometimes, the Chinese government would ask HDU to work on military projects.



Figure H11: Touring a graduate lab

Places we also had a chance to visit were other institutes in the university that included marine engineering, acoustic engineering, signals and systems, and robotic devices. Each institute has a chance to participate in contests that involve their area of expertise. The robotics institute had a contest where they would make small cars that would automatically detect the track and follow it using either cameras or lasers.



Figure H12: Student showing us their robotic car

## Sightseeing

### West Lake

In addition to all the labs and seminars, we had a chance to visit tourist attractions such as West Lake. It is a famous fresh water lake near downtown Hangzhou.



Figure H13: View of West Lake from the center causeway

We arrived at the lake by taxi from HDU. The journey took about 45 to 60 minutes. We walked along the center causeway and had a view of the whole lake. On the causeway, there were a couple of museums that we had a chance to go inside and look around. We also walked around an area where an emperor spent his free time relaxing when he was not busy with his duties. For dinner, we ate at Lo Wai Lo, a special restaurant that is famous for being frequented by Mao Zedong.

### Hupao Spring

Another place we visited was Hupao spring. The mountainous area is famous for the fresh spring water that emanates from it. Locals sometimes come here and drink or collect the water. We just mostly walked around looking at all the old buildings and beautiful scenery. Along the stream, we saw

a few tourist groups collecting the spring water in containers and drinking from a small waterfall.



Figure H14: Group photo in front of tiger statues

### Linyin Temple

An interesting place we visited was the Linyin Temple. It has many Buddha statues and places to pray and bless. Apparently, taking pictures of the Buddha statues inside the sacred buildings is not allowed; it is said to anger the Gods. This area is split into two sections: the first section is a scenic, mountainous area with Buddha statues in and on the mountain. The second section holds the Buddhist temples where monks live and where people pray. They have dormitories for the monks near the top of the mountain. Should people choose to pay for it, the monks would gather in the main temple to host a ceremony where they would sing and chant, while ringing bells and banging gongs. We got lucky and were able to see the monks perform this ceremony.





Figure H15: In front of a temple

## Shanghai

We had a chance to visit Shanghai because it was only an hour away by high-speed train. We spent the entire day there and visited almost the entire city. Most of the city was under a remodeling campaign to prepare for World Expo 2010. We began our sight-seeing on the new Shanghai side and then proceeded across the Huangpu River by ferry to the old Shanghai side. When standing alongside the river, we were able to see many corporate buildings and ships traveling in the water. There are very many tall buildings in Shanghai. We felt so small compared to them.



Figure H16: In front of the new symbol of Shanghai

## Hangzhou Zoo

A fun place that we visited was the Hangzhou zoo. The zoo contained various land, air, and sea animals. It's just like any other zoo except for some rare animals that are local to China like the panda. We were able to see some interesting animals such as wolves, baboons, bears, and gazelles. There were also ostriches and zebras. They offered opportunities for people to ride on horses and camels, but we were not interested; instead, we fed the seals. It was fun to feed them because they did tricks and played with us.



Figure H17: Jacob Leung feeding seals



Figure H18 (Left to right): Andrew, Jacob, Jorge, Professor Sun Lingling, Professor Wang, Tom, Nicolas, Yu Lee, Joyce  
Group photo for farewell lunch

## Completion of Hangzhou

For our last day in Hangzhou, we had a farewell lunch with the faculty and host students. We received certificates for completing the Hangzhou portion of the IRES program. It was a great feeling for us, but sad at the same time. We're going to miss this entertaining and interesting place. We are also hoping to one day return to such a great place.

# Beijing

## Arrival

### Arriving at Tsinghua University

After the two hour flight from Hangzhou Xiaoshan International Airport to Beijing Capital International, we were greeted by Professor Wang who was waiting for our arrival. We then took a bus to a nearby bus station to Tsinghua University. On the way to the bus station, we caught a glimpse of the famous Olympic National Stadium known as the Bird's Nest.



Figure B1: View of the Bird's Nest from the bus

After we arrived at the bus station, we took a taxi to the dorm building we would be staying at in Tsinghua University. We met our host student Jianhui Lin soon after and he helped us get settled in. Jianhui is a PHD candidate and the chair of the IEEE Electron Device Society (EDS) Tsinghua University student chapter. Jianhui first took us to the foreign student office to complete some final registration applications to obtain our school ID. We then went to housing office to obtain our room keys, followed by the bicycle rental booth to get a rental bike and finally we moved in to our rooms.

After unpacking, Jianhui took us to the nearest campus cafeteria for lunch. There we got to know each other and he gave us a brief outline of what we would be doing during our 3 and a half week stay. Unlike Hangzhou where we only had two host students, Jianhui explained that we would have a different volunteer for each scheduled event. All the volunteers are members of the IEEE EDS student chapter.

### Tsinghua University Tour

The following day Jianhui gave us a tour of Tsinghua University to allow us to get familiarized with the university. Our tour began at our international dorm building and we rode our bicycles in a counterclockwise direction through the campus. We got to see the physics building, chemistry building and many other buildings. Along the way we also got to visit the on-campus zoo and we got to see the art exhibition at the Art building.



Figure B2: The Old Gate

We had the opportunity of going to see the Old Gate, which is the school symbol for Tsinghua University.

The tour did not only show us the campus but it showed us how big it was and why it was necessary to obtain rental bikes. Unfortunately, we did not get the

opportunity to explore the whole campus because one day was not enough.

### **Welcome Dinner**

We had our official welcome dinner the day after the campus tour. The dinner was held at an on-campus hotel and it was an opportunity for us to get to know the volunteers that would be helping us during our stay.



Figure B3: The welcome dinner

The volunteers welcomed us to Tsinghua University and they were happy to be part of the program.

## **Campus Environment**

### **Housing**

We were placed in the Zijing foreign student apartments. Each of us had our own room and each room was supplied with a desk, chair, bed, closet, television, phone, internet port and a restroom. The dorm building has approximately twelve floors and each floor has approximately thirty rooms, one laundry room, two rooms for drying clothes, a meeting room and one kitchen room. The first floor has the receptionist and the bike storage areas.

We separately had to buy an internet account to use the internet and we had to purchase a laundry key to use the laundry

room. Room service was also provided for us and hot water was provided during three time periods a day.

### **Transportation**

Our main source of transportation was our rental bicycles. The size of the campus limited us from simply walking. It would take too long to simply walk from one side of the campus to the other. Using bicycles was a more convenient way to travel.

Bicycle lanes were placed throughout the campus and some areas were closed-off to outside traffic. There were also plenty of repair shops just in case we got a flat tire or a broken chain. There were also many bike rental stations throughout the campus.



Figure B4: Bike rental station

We were able to exchange our bikes at these stations at anytime if we encountered any problems with the bikes we were using.

Taxis were also found throughout campus. We only used taxis when we traveled outside of campus and our destinations were far outside the campus that using a bicycle was impractical.

## Recreation

There are several basketball courts, tennis courts, volleyball courts located throughout campus and three sports fields that are equipped with soccer fields and tracks. The campus also has two swimming pools, a Sports center, a gymnasium and a ping-pong gym.



Figure B5: The bowling alley at the recreational center

Finally there is a recreation center that has bowling alleys and pool tables. Most of these are located near the dorms and our apartment.

## Food

There are three student dining halls in Tsinghua University. In order to get food we needed to obtain a meal card and deposit money into the account. We inserted this meal card into a card machine that would deduct the price of the meal from our remaining balance on the card. Each building had a card center where we could add additional funds if the balance on our cards was low.



Figure B6: Taoliyuan Dining Hall

The Taoliyuan dining hall is where we spent the most time in because it was the closest dining hall to our apartments. This dining hall has three floors including a basement and with each floor serving their own unique foods. The basement was more like a restaurant where you choose your food from a menu and it's the floor where the Qingqing pizzeria is located. The other floors had different stations and each station served a particular style of food. Each floor also had their fruit station, bread station and drink station. It was only a matter of telling the chef at the station what food we wanted. The first floor offered more western types of food along with Chinese food and the second floor mainly offered Chinese food. We would go to the first floor for breakfast, the second floor for lunch and we would have dinner outside of campus. The third floor consisted of a decent restaurant that students would go to if they did not like the cafeteria setting.

There are four food establishments that deliver food on campus. We did not get the chance to use this service but it was good to know that we could use it.

Besides the dining halls, there are three supermarkets. The only supermarket we went to was the located on the basement first floor of Guanchouyuan and this supermarket has a wide selection of food,

snacks, fruit, drinks electronics, clothing and bathroom items. This supermarket was very convenient for us because it was open all day unlike the dining halls which were only open at specific times of the day.

## Sightseeing

### The Forbidden City

The Forbidden City was one of the first places we went to see. Our volunteer Bing Yan took us there. We rode our bikes from our dorm building to the subway station and took the subway to The Forbidden City.



Figure B7: Inside the Forbidden City

The Forbidden City was one of the most difficult places to enter because of the large number of people entering through a narrow entrance. This was truly a magnificent place; there were several dragon statues along with mini museums located throughout the place which displaced many ancient artifacts. But the most impressive feature of the city was its size. It did not

become apparent to us until we reached the middle of the city while believing that the exit was close at hand. We were shocked when our volunteer Bing Yan told us that it was only the half way point.

We were unfortunately unable to explore the whole city. We missed breakfast that day and by the time we finished exploring the center and left parts of the city we were too tired and hungry to go on.

### Bird's Nest

Our volunteer Lei Guo took us to the Bird's Nest. We also rode our bikes from our dorm building to the subway station and took the subway to the Olympic National Stadium.



Figure B8: Inside the Bird's Nest

We were astonished by the size of the stadium and the large number of people attending. We saw people from all over the world and had friendly conversations with a few of them. We took a moment to take a seat and enjoy the view. It took us a while to locate the torch once we were inside because it was in its lowered position. We circled the stadium a couple of times from the inside before exiting the stadium to locate the torch from the outside.

## The Great Wall

We saved the best for last. Unlike the other places we visited the Great Wall was not accessible by subway. We had to take a taxi to a bus station that was specifically dedicated to taking people to the Great Wall. Our volunteer Xin Liu led the way and we rested on the two hour bus drive.



Figure B9: The Great Wall

Reaching the Great Wall was difficult. Due to the large amount of traffic heading to the entrance of the wall, we had to get off the bus three kilometers away from the entrance. We had to get off because the traffic flow was so slow that walking was much faster.

Our goal once we reached the entrance to the Great Wall was to climb to the highest point. It was very challenging experience to reach the highest point. The obstacles we faced were crowded areas, steep inclines and uneven steps. We took several breaks along the way and we even saw a roller coaster on the side of the Great Wall. It was something that we never thought we would see there.



Figure B10: The cable cars located at the Great Wall

We finally reached the highest point after a lot of hard work and we were very satisfied that we accomplished our goal. We decided not to climb down the wall but to instead take a cable car that was located nearby due to time constraints.

## Institute of Microelectronics

### Gate Optimization for Space Applications Seminar

We were invited to attend a seminar held by alumni professor Guofu Niu from Auburn University in Alabama. Professor Niu's main focus was on optimizing Silicon (Si) and silicon-germanium (SiGe) gates for space applications. One of his approaches was to use cryogenics. The result of using this method is that the gates can handle large temperature changes but current gain declines substantially. To improve it, he suggests using a smaller bandgap, but that puts a limit on how much SiGe can be used because it could cause more defects.

He says that for unoptimized gates, low or mid-temperatures are good but high temperatures are bad. The problem is that a heterojunction barrier forms and it becomes thermally sensitive, both are bad. He suggests one possible solution is to add more germanium (Ge) but a new problem

arises from that. Adding too much Ge causes instability.

He then states that the barrier effect is not the problem and goes on to speak about a transit time hump. He suggested again to add more Ge to eliminate the hump. To do this, he made a new gate profile and made a new shape. This worked to get rid of the hump and it highly extended the failure temperature ( $F_T$ ) range. On the other hand, he lost some peak performance but increased the performance range overall.

He then goes on to speak about compact modeling to make the circuit perform over a wide range of temperatures. He said that compact modeling causes the Shockley theory to break. So he used technology computer-aided design (TCAD) to make a new model but it didn't work. So he used the Phillips model but it also didn't work. He then decided to use an approximate model but the test failed. So he decided to Google search for every formula and found the Altermatt model. This model also didn't work, but it was closer than the other ones. He then experimented with the configurations and managed to produce decent working results.

### Clean Room

We had an opportunity to visit their clean room on campus and it was our first time entering one. We took several precautions before entering the laboratory. We had to remove our shoes and place them in a small storage area. We were then given sandals, feet covers, and full body suits that covered our entire body from head to toe. The suit even had a hood to cover our heads. Our faces and hands were the only body parts not covered by the suit. Finally, we individually stepped into a chamber that air blasted us for about thirty seconds in order

to remove particles that could potentially contaminate the lab.



Figure B11: Inside the clean room

There are several rooms in the laboratory and each room is specialized for specific tasks. One particular room we visited was the chemical room. This room housed various types of chemicals. Lab workers use this room to clean tools and equipment, and to test the effects of foreign solutions on test samples.



Figure B12: The chemical room

We needed to take great care when entering this room because it had a greater risk than all other rooms. The room housed some hazardous chemicals that could cause serious injury to someone. Luckily we did not encounter any problems.

Another room in the laboratory had special lighting conditions. This room is



used to test samples that are sensitive to normal lighting conditions. Normal light could potentially damage the devices, change the chemical properties, and affect the data collected from them.



Figure B13: The special light room

From figure B13, it can be seen that the lighting used in the room is very different from the normal lighting used in other rooms. The only negative aspect about this room that we found is that it took our eyes some time to adjust after we exited the room. We were also momentarily disorientated as we exited the room but we spoke to people who have been working in the room and they said that it doesn't take long to get used to it.

The other rooms have specialized equipment such as mass spectrometers and electron microscopes.

We got the opportunity to examine wafers using the equipment in the lab.



Figure B14: Picture showing wafers

With the help of a probe station, we were able to clearly see the architecture and the several layers on the wafers. We got to see the skill that is required to place the probes on the wafer to provide power. It took one of the lab workers several attempts to properly place the probes. After successfully providing power, we got to observe the response on a multi-meter.



Figure B15: A wafer on a microscope

### Tire Pressure Circuit Sensor

We were invited to a demonstration of a tire pressure circuit sensor. The students working on the circuit said that this was their fourth year working on it and that several versions of the sensor have been created. The latest version of the sensor itself is 2mm x 2mm and the chip on it is 1mm x 1mm.

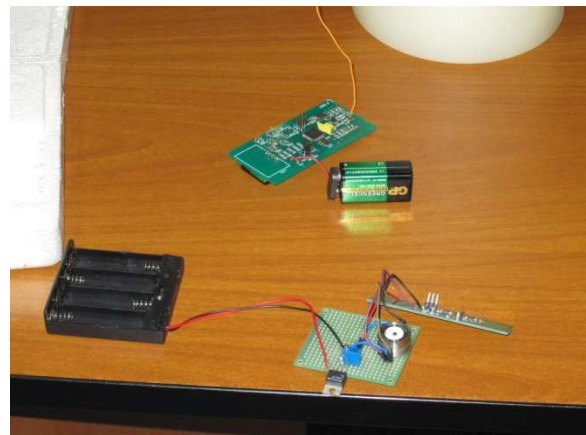


Figure B16: Pressure sensor(bottom) and pressure display circuit(top)

For the demonstration, the sensor was placed in a vacuum container and securely sealed. A pump was then used to change the pressure inside the container. The pressure sensor wirelessly transmitted the pressure information to a circuit that displayed the pressure inside the container.



Figure B17: Comparing pressure readings

We then compared the pressure readings on the display to the pressure readings on the vacuum container. The readings on the display closely matched the readings on the container.



Figure B18: Preparing the pressure sensor setup

One of the major problems with the latest version of the pressure sensor is the power supply. Not enough power is stored in a single battery to power the device. For this experiment, four AA batteries are used to power the pressure sensor and a 9-volt

battery is used to power the display circuit. The reason that these power supplies are not ideal is because they are bulkier than the pressure sensor and doesn't last long enough to be practical. Test results show that the latest version has a two year life span before a battery change is needed but the ideal life span for the power supply is seven years. Currently, the students are working on a solution to try to solve these problems.



Figure B19: Attending the sensor demonstration

The students believe that in the future, these types of sensors will monitor the pressure of the tires and they will alert the driver if any problems arise.

## Departure

### Goodbye Dinner

Our student host Jianhui and the volunteers held a goodbye dinner to wish us a safe trip home. The dinner was held at a beautiful restaurant located at the top floor of a local shopping mall. The dinner was also an opportunity for us to show our thanks to them for helping us. We had a wonderful time talking with our hosts about our experience in Beijing and possible future encounters we may have.



Figure B20: The IRES team and volunteers at the goodbye dinner

## Conclusion

The program for our group spans from February 26<sup>th</sup> to when the team selected for the next year takes over. Our program is currently still in progress, the culmination will be in a presentation at the Southern California Conference for Undergraduate Research (SCCUR) later this year, the National Conference for Undergraduate Research (NCUR), and a seminar collaborating with the campus chapter of IEEE. The IRES program has given us a very unique experience to experience and to learn in depth about the way of life in East Asia. Through this program we were able to find from our experience that students attending Chinese universities today have access to a great deal of useful resources, just as American college students do. This is very good in the fact that it will make future exchanges with our Chinese counterparts in the career world outside academia much easier, as both sides will have a common ground.

In the trip, as part of the program, we were able to experience both success and challenging obstacles. Our initial meeting with our host students was somewhat difficult because, despite their understanding of English, we had to adjust to a learning

level of simplified English so that it was easier to communicate. We were able to mostly adjust to the local weather, which is very different from that of Riverside, California. Despite the adjustments that had to be made to facilitate our stay, we enjoyed China so much that we expect to visit again in the future, possibly to visit our newfound Chinese friends. The IRES program has expanded our understanding and appreciation of Chinese culture with an enormous impact that will surely influence decisions in the future.

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