

My name is Ji Linde, a girl of 15 years old, the leader of VEX EDR team 7806A.

Hearing the phrase 'Girl Powered', what comes to my mind first are some 'usual' opinions, for instance, a girl should like dancing rather than playing basketball, her ideal job should be a model instead of an engineer. Besides, girls are often thought to be lack of talents in some fields, e.g. engineering, mathematics and so on.

I believe that such opinions are just prejudice. My father has told me his experience. When he was a freshman in university, all students were trained shooting by rifle. The examination was shooting with five bullets. During training, almost all boys have confidence in obtaining scores better than girls, since most of them have keen interests in weapons, shooting or military strategy computer games etc. Finally, everyone was shocked by examination results. My father described results with terminology as 'After the same training, all students' scores distribute satisfying same Gaussian distribution model with quite close average value and standard deviation, either for girls or boys'. Later I got understood the meanings of 'Gaussian distribution' and 'standard deviation', and I came to realize that girls have same talents as boys in many fields irrelevant to physical power.

I joined the VEX robot team in our school because I have great interests in Robotics. I enjoy realizing sup-positional functions on an actual robot by designing a mechanical or electronic part and writing corresponding program. I'm quite proud of myself while making our robot smarter and efficient by my work. I also like to share the exciting moments and delightful feeling with my teammates while won a match. I'm very glad to see that there are other girls with same interests in our team. There are four girls altogether among our eight members of team 7806A. One acts as the coach in field, another is the secondary operator and the third one acts as a programmer. My responsibility is to collate the design notebook. Shortly after I joined the robot team, I was voted as the team leader by all team members. During competitions, I'm responsible for organizing the team's daily activities, communicating with members of organizing committee, other teams and referees. In addition, I act as a 'firefighter' of our team, i.e. appear immediately whenever there is an emergency due to the fact that I am quite familiar with the structure of the robot and know it more comprehensively than other members in the course of collating the design notebook.



Fig.1 All members of team 7806A, girl members are Ji Linde(team leader, first from right), Ji Yong'en(coach in field, first from left), Xia Wa(secondary operator, second from left) and Xu Wanqi(programmer, third from left).

Every day, all members of our team are very happy to work together. Robots will never discriminate any part developed by either boys or girls. If there is a bug in a program function, no matter wrote by a boy or a girl, compiler just prompts errors. Since robots act so fairly, there should not be any prejudice obstructs us to act as a team. Boys and girls cooperate very well in our team. Except finishing our own work during the match, all the boys and girls participate in the ordinary development of the robot and training, e.g. mechanical structure design, robot building, programming etc. There are either boy or girl mechanical engineers in our team, same as programmers. When anyone meets a problem, we will ask help from teammates and discuss together till solving the problem. Perhaps the work can only done by boys is cutting metal component by saw.



Fig.2 Maintaining the robot.

My STEM role model is Elon Musk, the chief executive officer and chief technology officer of SpaceX, a space exploration technologies enterprise. Previous to him, scientists and engineers tried many ways to decrease rocket launch cost by lightening rocket, saving fuel etc. His idea is quite dauntless, why don't we reuse the rocket itself? After more than ten years of hard work, SpaceX successfully landed the first stage of its Falcon rocket back at the launch pad. Afterwards, a series of records were created by this company. From his success, I learned that, to realize an innovative dream, two wings are indeed compulsory, one is unlimited imagination, and the other is hard work. When our teammates discuss the expected performance of the robot, innovative imagination is always welcomed, and then we start to investigate carefully how to implement it.



Fig.3 Girl members prepare robot before a match.

In VEX EDR Asia-Pacific Robotics Championship 2017, our team took the third place in the qualifying stage and won a gold award. Our team also won the only one 'Judges Award' based on the design notebook. This is best result of our girl power contributed to the team, I guess.



Fig.4 The team members participate the VEX EDR Asia-Pacific Robotics Championship 2017.

Entrant: Ji Linde

Team number: 7806A

Other girl member of the team: Ji Yong'en (coach in field), Xia Wa (the secondary operator), Xu Wanqi (programmer)

Submission title: The girl power in VEX EDR team 7806A