

Talent for robotics

Dreams and determination are what drives three young robotics enthusiasts, writes **Aneeta Sundararaj**

WHEN I ask Rebecca Shi Tong Qin, 42, to stand next to her 14-year-old son, Joshua Liew Cha Yue, for a photo, she reaches for his hand. Looking visibly embarrassed, he stops her and signals that he isn't about to reciprocate.

Joshua is simply too shy for any show of affection from his mother who is proud of his success.

Joshua is part of a team of three students from SMK USJ 4, Selangor who won the recent National Robotics Competition in the Junior High School Open Category. He and his classmates, Jaimishran C. Chandrasekhar (Jai) and Ruhanesh Suthan, will represent the country at the World Robotics Olympiad from Nov 21-23 in Sochi, Russia.

Apart from their parents, they will also have Chaman Singh Balwinder Singh and Ng Ka Fai, both 26, and the team at EDU360 Academy cheering them on.

"We started EDU360 Academy in 2009 and specialise in conducting Lego Mindstorms Robotics and Toon Boom Animation classes," says Chaman. He and his team used these products to create their own syllabi to help motivate and teach children.

All three boys are members of their school Robotics Club. "Of 100 members, maybe 10 attend classes," says Jai. Quickly, and with obvious pride, his father, Chandrasekhar Chakravarthy, 47, adds: "And out of those 10, these three are the top."

It was Kanchana Murugesu, Ruhanes' 43-year-old mother, who first contacted Chaman early this year. "I wanted a trainer who could help the boys with robotics. I liked EDU360's track record and that it has its own syllabus. It doesn't spoon-feed the children and our boys have to come up with their own ideas. As a parent, I wanted to take the team as far as possible."

WIN NOT GUARANTEED

Chaman, a network engineer by training, is certain of one thing though: "When I first met the parents, I didn't know what to expect. I remember that the one question she asked me was if I could guarantee a win for the boys. That's the one thing I refused to guarantee. What I guaranteed was that they boys would learn."

Once it was decided that Chaman and his team would become part of



Ruhanesh Suthan (left), Liew Chan Yue (centre) and Jaimishran Chandrasekhar will represent Malaysia at the World Robotics Olympiad in Russia.

PICTURES BY AZIAH AZMEE

"Through this struggle, my son will understand the value of the goal and what he achieves."

Chandrasekhar Chakravarthy



Chaman Singh (far left) and Ng Ka Fai (far right) will accompany the three to Russia.

those supporting these boys, training began in earnest. The boys were taught all aspects of the winning project from ideology, fabrication and design, and creation to programming, innovation and improvisation, and presentation.

Chaman says: "I could've hired engineers to get these things done for the boys. They could have won this way. But winning or losing was immaterial. What was more important was that they learnt. For instance, in one lesson, I made them watch a man playing golf. Then, they had to create a program that simulated the golfer's movements."

Every week the boys met at Kanchana's home in Subang Jaya. "During the holidays," she recalls, "it was every day. They practised their presentation and at one point, they even gave us a demonstration."

MARSMISSION

The boys' project was called Apollo 2020, in line with the theme of the competition, Space. Jai explains that their idea was to create a system which allowed a manned mission to land on Mars. At present, this could not

be achieved because of the inherent dangers on Mars such as rocky terrain and unpredictable weather.

The system comprises three intelligent and interactive robots: Kronos, Zeus and Ares which will prepare the landing areas on Mars and simultaneously collect useful data.

Kronos will provide a geographical scan of the terrain to pinpoint a suitable landing location. Ares will build a platform to solve the problem of astronauts having a "rough landing". Zeus functions as a probe for weather data collection. A mobile satellite, Orion, will send coordinates of the landing platform to the shuttle and warn Kronos of weather threats.

The teaching wasn't just one way, though and Chaman and his team learnt from the boys as well. "These boys introduced me to something called Microsoft Kinect. With that, they could produce 3D models of the terrain using an infrared camera," says Chaman.

What do the champions have to say about their success? In spite of their reluctance for any outward show of affection, it is obvious that the boys are delighted that their parents take an



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interest in their work. It gives them the impetus and determination to work together to achieve success. Jai, who is the designated designer, speaks for them when he says: "Without them, we wouldn't have had the funding we needed to buy things for our project."

EARLY FASCINATION

In the script for the presentation they made during the competition, the boys wrote: "Our project is the key to our lifelong dream of successfully planning a manned mission to Mars."

It seems strange to use the word "lifelong" for children so young. Yet, it makes sense when each parent reveals that these boys spent almost every moment of their lives building and creating something.

Rebecca says: "When Joshua was

a little boy, all his trousers had holes in the knees because he spent all his time crawling to find Lego sets."

Chandrasekhar shows a picture of Jai's room, filled with miniature models of things he had built. "From the time he was small, I noticed that he was always fascinated with the toys. When anything broke, he would fix it. So I know this is where his interests lie and I will do all I can to support him."

These parents didn't invest in this activity merely because they recognised their children's talents. In fact, Kanchana insists that robotics is the way of the future. Still, there is frustration in their voices when the parents admit that they have received lacklustre support in some cases.

"We're grateful to Siemens Malaysia and Apex Communication for their sponsorship," says Kanchana. They felt that sponsorship and support would've been more forthcoming for a private school. In spite of these challenges, the parents insist they would not enrol their children in a private school.

"Joshua is Malaysian," says Rebecca, who is from China. "He must know Bahasa Malaysia. It's very important for him to know the language of his country."

Chandrasekhar sums up the emotions of the day: "True, in a private school, everything is provided for and here we struggle. But through this struggle, my son will understand the value of the goal and what he achieves."

The sisters who make robots fun. In tomorrow's Life & Times

