

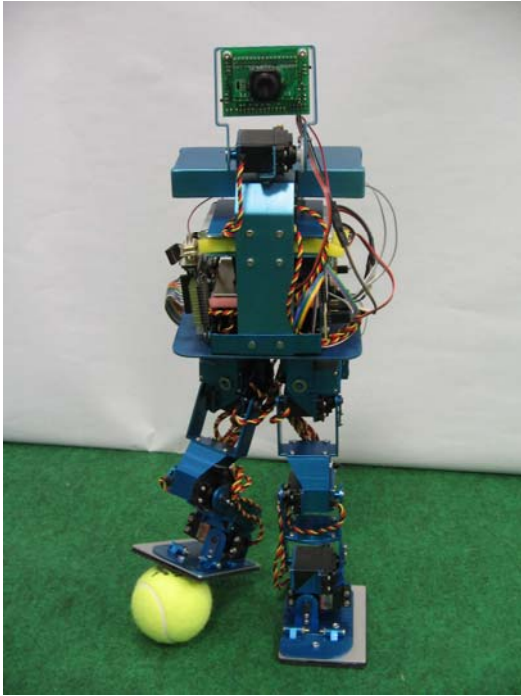
11th FIRA RoboWorld Cup Germany 2006 – Humanoid Category Overall Champion



The 11th FIRA (Federation of International Robot-soccer Association) RoboWorld Cup Germany 2006 was held in Dortmund, Westfalenhallen, July 2006. There was a particular hype about the competition this year because it was held during the FIFA World Cup Finals 2006 and at the location where the semi-finals of World Cup was played. The competition venue was buzzing with spectators, mostly football fans who were staying around the stadium. Reporters from all over Europe swarmed the event and the competition was highly publicized in many major European Newspapers.

As the defending champions from FIRA 2005, the NUS team, Manus, which was represented by Tan Li Yu, a recent graduate from the Bachelor of Electrical Engineering program in ECE Dept, was under pressure to repeat the winning feats of the year before. There was no longer home ground advantage this year for Li Yu as compared to the previous year when the event was held in Singapore. All other participating universities consisted of teams of 3 to 8 post-graduate (Masters and P.H.D) students leaving our NUS team as the smallest contingent (1 student) and with the least educational knowledge (Bachelors). This made the task of winning the competition all the more challenging.

The competition this year consisted of 4 events: Robot Dash, Penalty Kicks, Obstacle Course and Walking Over Uneven Terrain. Each of these events was held 3 times and the best 2 results for each event were added to the final result.



Robot Dash:

The humanoid is expected to walk forward for 1.2 metres then autonomously stop and switch to walking backwards for another 1.2 metres. Our humanoid was the hot favourite for this event as the world record holder completing the course in a total time of 42 seconds (17 seconds forward and 25 seconds backward) during the event last year. This year, our humanoid won all 3 Robot Dash events while smashing its own world record during on the second day of the competition. Our humanoid set a new world record of 38 seconds (13 seconds forward and 25 seconds backward).

Penalty Kicks and Goalkeeping:

The humanoid is expected to shoot a ball past an opponent humanoid goalkeeper into the goal for this event. The ball is placed in a random position in the penalty box, making the task even more difficult. Again, our humanoid was the hot favourite having scored 22 goals in 28 attempts the year before. The performance on the first day was abysmal due to some technical error and our humanoid only scored 2 goals in 6 attempts. However, after remedying the technical error, our humanoid stormed back on the 2nd and 3rd day scoring goals in every single attempt it made. This left our humanoid with 12 goals in 16 attempts this year, a scoring rate comparable to the year before.

Obstacle Course:

The humanoid is expected to move past a field of 1.2 metres in length and filled with obstacles placed in its path. Once again, having been the only team the year before who cleared the course, NUS was the favourite. A strong showing on all 3 days meant our humanoid cleared the obstacle course 11 times out of 15 attempts. This was the highest number of times the course had been cleared ever before.

Walking Over Uneven Terrain:

The humanoid is expected to move over a field with uneven terrain as well as carry batteries with a basket attached to it. This event was a brand new one and it proved to be a tough challenge for all the competitors. Our humanoid came closest to completing the course on the first day, running out of time with only inches left to the finishing line. None of the small sized robots managed to make it past the course all 3 days as the uneven terrain proved to be too tough for everyone. Despite failing in this event this year, the NUS team will work hard to conquer this event next year.

Final Result:

With the excellent results over the course of the tournament, our NUS team managed to secure the overall champion title once again and for the first time in FIRA history, became the first team to win the Humanoid Competition 2 years running!