

AI for the Win, Round 2:

The Indian National RoboCup Junior Competition

Pune, Maharashtra | February 4th and 5th, 2023

Day 1



With just a fortnight post the Regional RoboCup Junior Competition held on January 15th and 16th, 2023, S.B. Patil Public School was once again the proud host of the Indian National RoboCup Junior Competition on February 4th and 5th, 2023. The event saw 60 teams and over 220 students participating from schools from the North, South and West Zones.

On the morning of Saturday, February 4th, the students arrived and assembled in S.B. Patil Public School's multipurpose hall and auditorium. Teams were accompanied by their respective school's faculties, and some of them even by their parents.



The main event commenced in the auditorium at 01:30pm with a welcome speech given by S.B. Patil Public School's vice principal, Ms. Padmavati Banda. This was followed by an introduction of all the chief guests-cum-judges. For Day 1, the judges were: Dr. Arunkumar Bongale, a PhD in the field of Engineering and a faculty in Symbiosis Institute of Technology in the Department of Robotics and Automation; Ms. Nilima Kulkarni, who is associated with ShreeSTEM Academy; and Mr. Saurabh Jagtap, a highly motivated IT professional having more than 10+ years of experience in Project Lifecycle Management, Operation Management and Project Management.

Also present as our esteemed judges were: Mr. Nishant Dekate, a Master in Computer Management with 15 years of work experience in the IT industry, and who is currently working as the Data Center IT Project Manager with Wipro Technologies; Mr. Ranajit Patil, a mechanical engineer with four years of experience who currently works at Mechatron Robotics; Ms. Shubhangi Tribhuvan, a BE in Electronics and Communication with two-and-a-half years of experience in software testing and a year in robotics teaching; and finally, Mr. and Mrs. David Prakash, Director, LSCL, Bangalore.

In addition to the prior day's judges, Day 2 saw Dr. Sushil Bedre, a PhD in Cognitive Science and the Principal Architect with Siemens Industry Softwares in the Research Areas - BCI, AI and Vision Technologies; and Ms. Priya Jadhav, who is a professor in the Department of Robotics and Automation at Symbiosis Institute of Technology, Pune.

Following their introduction, the guests proceeded to the lamp-lighting and prayer ceremony. Ms. Sulochana Pawar, the school's music teacher led students in a hymn to the Goddess Saraswati. Mr. David Prakash, Director, LSCL, then welcomed the student and faculty, wishing them the best.





With teams for the RoboCup Rescue Line moving to the multipurpose hall, the other teams commenced partaking in the Rescue Maze, On-stage and Soccer categories.

Both the auditorium and MPH were filled with the lively and animated hustle and bustle of students as they worked upon their robots, strenuously toiled on the programming, resorted to aid from the robotics faculty, all of this as the judges oversaw the performances.

With Day 1 concluding with Round 1 of 3, some teams ended the day spirited after winning, whilst others filled with hope to try harder and succeed in Round 2 and 3 which would then be conducted on Sunday, February 5th, 2023.

Day 2

Day Two of the competition began early on Sunday, February 5th, 2023 by 08:30am. The school's auditorium and multipurpose hall were filled with students and their respective faculties who arrived early to prep for the event.



Round 2 and 3 involved the same performances as done in Round 1. The best of all three would be taken to arrive at the winning teams for each category. Being the last day, participants were more stressed taking all they learned the day prior and in the RoboCup Regionals.

The day proved to be far more competitive than prior participations since qualifying teams for the International Round would head to France in July 2023; and that is something every participant who had toiled so hard for this competition was looking forward to.



Post lunch, which was served for students, accompanying faculties and parents, and judges. Round 3 commenced. By 03:00pm, the competitions all ended, and judges went to assess the results. Meantime, all students gathered in the auditorium wherein they all watched the final round of the Soccer category which was projected for all to see.



Finally, the time arrived for the results to be announced. With participation certificates distributed to the team leaders, Ms. Swaleha Mujawar, the school's CCA in-charge made the final announcements. She invited Mr. David Prakash, Director, LSCL to take the stage. Mr. Prakash gave the Vote of Thanks, sharing his gratitude with each and every person who made the competition a success. Faculty, parents, judges and students were all called to share their experiences of the event with the judges being thanked by and given a token of our appreciation by principal, Dr. Saini, vice principal, Ms. Padmavati Banda and Mr. David Prakash.

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The time for announcing the winners, at last, came to pass. Principal, Dr. Bindu Saini; vice principal, Ms. Padmavati Banda; and all the judges were called forward to felicitate the winning teams.



The teams who won the various places and positions in the competition are as follows:

For the Rescue Line Category:

1. **Team:** Robolectro Voyagers from Robolectro Steam Studio
Team Members: Aarrav Anil, Agastya Bali, Prathik Srinivasaraghavan and Aryan Bhatia
2. **Team:** Quadrex from Shiv Nadar School, Noida
Team Members: Ayaan Suri, Manasvi Akula, Shaurya Mahajan and Vedang Darbari
3. **Team:** Metal Gears from Shiv Nadar School, Gurgaon
Team Members: Navya Goenka and Aarav Kharbanda

For the Rescue Maze Category:

1. **Team:** NASA from S.B. Patil Public School, Pune
Team Members: Aryan Mahajan, Soham Kukarni, Neel Gurav and Aadwik
2. **Team:** Mach X 9 from S.B. Patil Public School, Pune
Team Members: Sarvesh Gurav, Shiv Jadhav, Tejal Rakshe and Vedant Mali
3. **Team:** Greenwood High 1 from Greenwood High International School, Sarjapur
Team Members: Neel Bansal, Rohan Joshi, Akshara Bhat, Lalitha Rao

For the On-stage Category:

1. **Team:** Freeware Friends from Greenwood High International School, Sarjapur
Team Members: Shresht Bhowmick, Prajwal Madhusudhana Reddy, Vishal Iyer, Aarush Mohan
2. **Team:** Varaha from BGS World School, Chickballapur
Team Members: Srinandan Reddy, Niranjana S.L., Suraj Athreya P.S., and Chinmayi S.
3. **Team:** Robo Flamers from BGS World School, Nagarur
Team Members: Udith U., Suvarna, Kushal K.M., Janya R., Thushara B. and Yashas S.

For the Soccer Category:

1. **Team:** Tech Turtle from Shiv Nadar School, Faridabad
Team Members: Mehul Kothari, Avi Saraf, and Yash Bhole
2. **Team:** Squadron from Shiv Nadar School, Faridabad
Team Members: Saver Madra, Mukul Yadav, and Parth Sharma
3. **Team:** Omnipresent from Shiv Nadar School, Gurgaon
Team Members: Pranet Khetan and Gaurvica Gupta

Further, special awards were given in each category. They are as follows:

For the Rescue Line Category:

- 1. Award:** Best Rescue Robot
Team: Tech Angel
Team Members: Nihar Sreetm, Aashi Ketu, Sunay P Mittal and Vipran Vasan
- 2. Award:** Best Team Work
Team: Survivor Trojans
Team Members: Robin Bijo, Sharan J., Madhav S. and Guhan S.
- 3. Award:** Best Technical Skill
Team: Apex
Team Members: Prathamesh Devshatwar, Athrav Patil, Pushkar Nikam and Devanshu Tiwari
- 4. Award:** Best Overall Performance
Team: Robolectro Voyagers
Team Members: Aarrav Anil, Agastya Bali, Prathik Srinivasaraghavan, and Aryan Bhatia

For the Rescue Maze Category:

- 1. Award:** Best Programming Skill
Team: Robo Dimensional Falcons
Team Members: Aditya Sahu, Gautham Nair and Anvi Kholay
- 2. Award:** Best Creativity and Innovation
Team: Robo Flyers
Team Members: Poornachandra V., Chhandas B., Aryan Gowda M.D. and Harshavardhan S.
- 3. Award:** Best Robo Design
Team: Cyber Knights
Team Members: Aayushi Arora, Pradyun Senthil, Saadhika Santosh and Samarth Srivathsa Karnam
- 4. Award:** Best Overall Performance
Team: NASA
Team Members: Soham Kulkarni, Aryan Mahajan, Aditya Yerunkar and Neel Gurav

For the On-stage Category:

Award: Best Choreography
Team: Birdies
Team Members: Saundarya Patil, Roshani Shimpi, Aditi Naik and Vaidehi Verma

Award: Best Team Work
Team: TOS-1
Team Members: Akash Maurya and Mandar Kadao

Award: Best Programming Skill
Team: Ocean Warriors

Team Members: Hemanth C., Roshan P., Darshan K., and Gowtham K.

Award: Best Overall Performance

Team: Freeware Friends

Team Members: Shresht Bhowmick, Prajwal Reddy, Vishal Iyer and Aarush Mohan

For the Soccer Category:

Award: Best Design

Team: Squadron

Team Members: Saver Madra, Mukul Yadav, Parth Sharma

Award: Best Programming

Team: Omnipresent

Team Members: Pranet Khetan, Gaurvika Gupta



We congratulate all the winners, and give a special round of applause to all the participants who worked so hard for this meritorious competition. We wish all the winners the very best as they proceed to the international round in France.

We thank everyone whose contribution, big or small, helped to make this event a grand success: Principal of S.B. Patil Public School, Dr. Bindu Saini; vice principal, Ms. Padmavati Banda; primary coordinator, Ms. Shubhangi Kulkarni; the section coordinators: Ms. Nirupama Kale, Ms. Vandana Sangle and Ms. Archana Prabhune; and the administrative officer, Mr. Manish Dhekale: all of whom acted as mentor and guide to not just the students but the teachers as well.

We also wholesomely thank the robotics teachers, Ms. Varsha Gawali, Ms. Aakansha Agrawal and the entire robotics faculty; Ms. Richa Arora, computer teacher and automation and digitisation in-charge; the administrative faculty; and the IT faculty: Mr. Abhijeet Gaikwad and Mr. Aman Yadav.



We also lend our heartiest gratitude to Mr. David Prakash, Director of LSCL, Bangalore who is also the Indian Representative for all the international RoboCup competitions and events; Ms. Meena Prakash for her devout contribution; and to Mr. Renya Kikuchi, CEO, SCCIP, Japan for his guidance and support.



Our thanks also goes out to all the parents and faculties of all the students who participated. They acted as mentors and pillars of support, especially bringing them all the way to Pune from across the country and being with them throughout the competition. We also thank the support staff of our school who tended to the need of the faculties and students; and of course we thank the Prowiz Team for helping us publish the certificates, ID cards and flexes.

Last but not the least, a standing ovation to the PCET management and Board of Trustees: Mr. Dnyaneshwar P. Landge, Chairman; Ms. Padma M. Bhonsle, Vice Chairperson; Mr. Vitthal S. Kalbhor, Secretary; Mr. Shantaram D. Garade, Treasurer; Mr. Harshwardhan S. Patil, Trustee; and Dr. Girish M. Desai, Executive Director. This event would not at all have been possible had it not been for their efforts, support and guidance.

To conclude, we would like to have in print, testimonials from those who partook in the event:

"I recently had the privilege of participating in a tech-based competition called the Indian National RoboCup Junior competition, where schools from all over the country gathered to showcase their sophisticated robots and the acts they could perform. We can proudly say that the event was organised flawlessly by S.B. Patil Public School.



The main attractions of the competition were the various categories that were offered. These included Rescue Line, Rescue Maze, Soccer, and On-Stage. Another major highlight was the delicious lunch that was provided at the venue.

The first day began with a practice round, where students were given time to hone their skills in their respective categories. After the practice round, all students were invited to the canteen where they enjoyed a mouth-watering meal of Indian traditional food.

Then the main event began. Students from all categories started performing with their robots. The passion and technical skill displayed by all participants was truly remarkable, as every robot was unique and different.



In the Rescue Line category, teams had to build robots that followed a given black line, avoided obstacles, and rescued victims. In the Rescue Maze category, robots had to explore a maze, deploy kits when they encountered victims, and avoid specific areas. In the On-Stage category, robots were given the freedom to perform and spread a message. And last but not least, there was the Soccer category, which was probably the most exciting of all, with robots

playing soccer. The robots were incredibly aggressive in trying to score a goal, leaving everyone who watched in awe.

Everyone was busy working on their robots, but no one missed the chance to interact with like-minded students. They shared ideas and discussed ways to make their robots more efficient, useful, and easy to work with. This helped all students get to know each other and gain valuable information. The second day went similarly, with students' enthusiasm undiminished.



The end of the third round was followed by the prize distribution, where awards were given out by the judges. Teams that did not receive awards were still gracious in defeat and focused on what they could learn from the event and from their fellow students. All teams took photographs to preserve their unforgettable experience.

I learned a lot from this event, but the main lesson was that we should never give up. My team personally did not create the best robot as compared to other but nonetheless, we kept trying and by the end of the third round, we were able to make a simple, functioning model. Had we given up earlier, we would have lost. But since we persevered, we were able to build a robot and run it. And since we gave it our all, we had no regrets when we lost. This was my biggest takeaway. We often hear quotes like this, but experiencing it first-hand is a completely different experience."

- Darshil Mali (IX-A)

"The RoboCup Junior Nationals held on 4th and 5th February, 2023 gave each one of us an amazing opportunity to present our technical skills including coding, model building, presentation, etc.

We got an extraordinary experience, which actually gave us a feel of participating in a national-level competition. There was a friendly competitive environment all around. We even came across many problems, but we learned to face them sportily. There were many teams from all over the country and everyone had different experiences, which made the event even more interesting.

Everyone was so excited and eager to practice and run their model in the field and the excitement doubled and tripled up at the time of prize distribution. However, getting the recognition or not is secondary, but the experience that was gained by each one of us will be cherished forever. The sportsman spirit within us was even more awakened after this event.

The most important part was that we interacted with many new people starting from the judges to fellow participants. It was a fascinating experience participating in Indian National RoboCup Junior Competition.

- Dhawala Patil (IX-B)