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2009

MONKEY BUSINESS

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The CalGames
Experience Robotics

By Brandon Liu

The annual CalGames is coming up on October 10th at Woodside High School. CalGames, organized by Western Region Robotics Forum (WRRF), is the biggest robotics event in the first semester, so it is a great opportunity for all new members to immediately experience a robotics competition. The CalGames is a replay of this season's FIRST game, Lunacy. Members will have the opportunity to visit the pit, where our engineers maintain the robot and its software. Members can also see last year's competition close up and our robot, Moonkey, in action! Be sure to join the funky monkeys cheering in the stands to support our team. We encourage new members and parents to attend CalGames to dive right into robotics and have a



A Welcome from your Co-Presidents



Welcome to the Lynbrook Robotics Team!

It might surprise you to find that we serve nearly every interest. Many are familiar with our primary activity, the FIRST Robotics Competition: in just six weeks we design, machine, build, and program a robot from scratch. (Don't be intimidated, because our mentors, many of whom are professional engineers, teach us everything we need.) Yet, this competition is just a tiny part of our activities. We offer the most diverse opportunities of any Lynbrook club. Here are just a few:

- Splice promo videos together with intense action shots.
- Design artwork for T-shirts, banners, flyers, and of course, the robot.
- Design and sew a mascot costume.
- Raise and manage our $20,000/year budget. (Our team tops corporate grants at Lynbrook!)
  - Hone your public speaking at corporate presentations.
- Help make our annual photo journal.
- Direct a stop-motion movie.
- Demonstrate our robot at community events, such as Night on the Quad and Tech Museum
- Learn to program with R/C cars and Robocode.

And we're always open to new ideas! The key to getting the most out of the club is simply to dive in. I'm sure you'll be able to find something that fits you—make the most out of it!

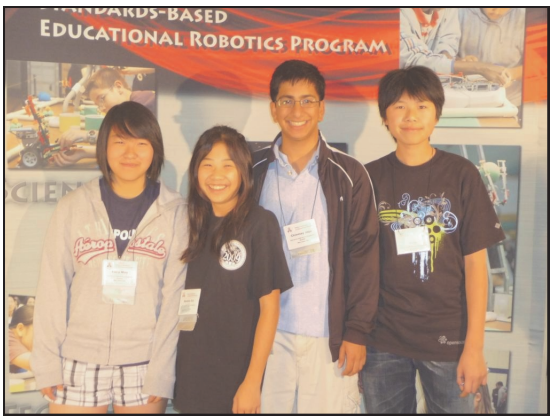
David Liu
Co-President, 2009-2010



Hey everyone!

You have joined the Lynbrook Robotics Team! Whether your interests are in science, engineering, programming, or even literature and art, we welcome you all. Don't worry. If any of you feel even slightly pressured from the word "robotics," rest assured; you'll have other experienced members and mentors to guide you all the way. Learn to be a team player and experience the enjoyment and challenge of robotics. Building robots isn't the only thing we do in this team. We'll be doing various activities including socials (such as barbecues) with other school's robotics teams, and much more. I look forward to working with you guys to make it a successful and wonderful year!

Toshitaka Tachibana
Co-President, 2009-2010



Botball Triumph at Washington D.C. Championships

Lynbrook Robotics lead Oak Grove High School's Botball teams to the championships

By Haochuan Ni

After sweeping the regional's—winning first and second place—the Lynbrook mentored Oak Grove High School Eaglebots went on to have an outstanding performance at the International Botball Competition held during the Global Conference on Educational Robotics (GCER) in Washington D.C., winning fourth place in the double elimination.

Among the 3 Eaglebot teams, 88, 89, and 90, traveling to Washington D.C. from June 30 to July 5 were Lynbrook's Alric Siu, Chinmay Jaju, Karena Cai, and Lucy Mou.

In addition to placing 4th in double elimination, Team 88, led by Alric and Lynbrook's vice president Chinmay, took home fifth place overall out of the 60 teams worldwide. Oak Grove also received two prestigious judge's awards for having the fastest robot and the best helper robot."We were really proud that we got as far as we did," reflected Chinmay "by the semifinals, we had the only offensive robot left,"

This year's Botball game's theme is going green. The competition is held on a tabletop game field with two raised sides, peaks and hills, and a valley in between. Competitors use two different robots to collect objects and place them in their respective hill for points, and the team with highest points at the end of the time limit is the victor.

"The tricky part is getting the robots to do what you want. The competition is completely autonomous and blocking and collisions were common," said Chinmay. "We had to just sit down and think of what we could accomplish because it's really hard to implement all the great ideas we all had."

The exceptional performance of the teams is traced back to the hard work of both Oak Grove and Lynbrook participants, who began collaborating since the beginning of the Botball season in February. "Being a team mentor is entirely different from being a member," recalled Karena, "It was a rare opportunity to become familiar with students from an entirely different neighborhood, and share the experience that we had gained from being members of Lynbrook Robotics."

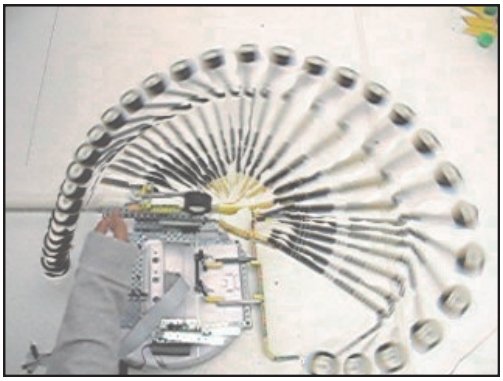
The build season was riddled with challenges for the teams. "A big technical challenge associated with Botball was the limited amount of parts that we were allowed to use for building the robots," said Alric, a member of Team 88, "We needed to be very creative and resourceful during our design and construction of the machines."

"it was an opportunity to become familiar with students from an entirely different neighborhood…"

The competition was intense and competitive, but the Oak Grove teams held their own against difficult adversaries. The rapid pace of competitions drove the teams frantically. "The competition was stressful for all the members," said Lucy, one of the leaders of Team 90, "We constantly tested with our robots to make sure everything worked and that our robots would perform at their best during the [competition] rounds."

Despite the constant testing and excellent performance, Team 90, the Eaglettes, an all girls team, was narrowly defeated due to collisions with other robots.

When they weren't competing, the Eaglebots toured the nation's capital. Highlights of the trip included exploring downtown Washington D.C. and watching the Fourth of July fireworks from the Washington Memorial. Chinmay reminisces about the trip, "Winning was fun but traveling with the team was even more amazing!"



Team 90's Roomba robot demonstrates its tension driven swinging arm, devised by Lynbrook members Johnathan Chai, Lucy Mou, and Karena Cai to capture a game piece known as Botguy. The effective usage of the arm was one of many challenges that Botball teams had to overcome.



Team Raises Huge Success at International Car Show

By Haochuan Ni

The road rumbled as antique luxury automobiles cruised down 17-Mile Drive to Pebble Beach for the annual Concours d'Elegance car show, where the Lynbrook held a large fundraiser, raising an unprecedented $1262 in commission and tips.

The members sold concessions such as pretzels and ice cream to spectators. Customers also donated tips to show their support for our team.

The event was intensive but enjoyable; volunteers and parents had to leave for Pebble Beach early in the morning and stay there for most of the day. In addition to selling concessions, members also had the opportunity to view classic and ultra-high tech cars. Our work resulted in a total sale of $7930, making it the most successful Concours d'Elegance fundraiser we've ever conducted.

A large contributor of this success was the parents who volunteered to transport members and supervise the concession stands. The effort paid off, and generous tipping contributed to our unprecedented success.

A "Thank You" to our Sponsors

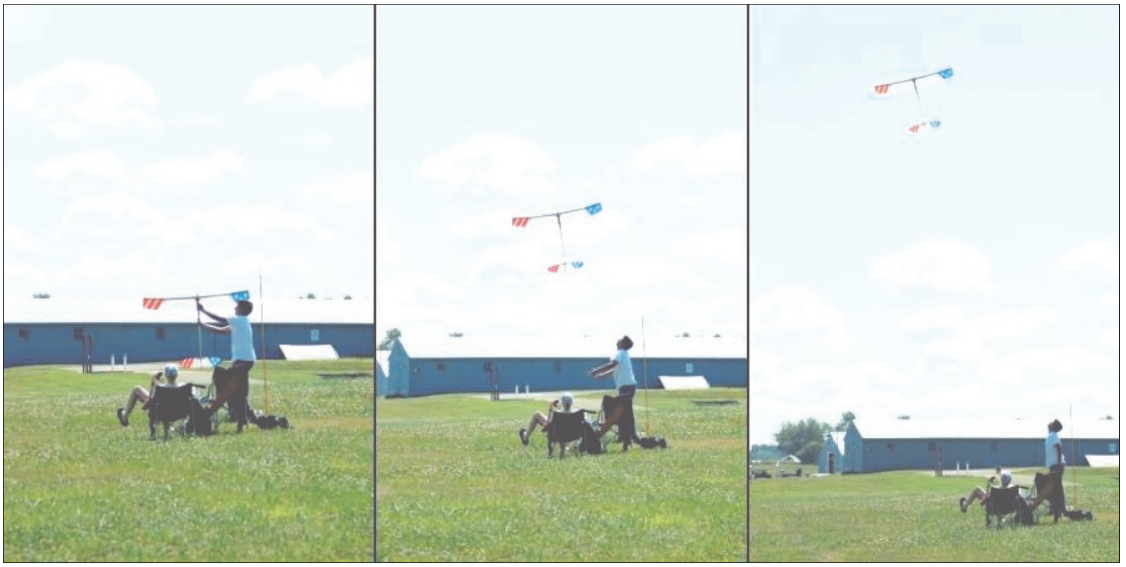
By Yusuke Sato

Three Fremont Union High School District robotics teams, Lynbrook, Monta Vista, and Cupertino, gave a joint presentation to Symantec Corporation for a district wide grant on August 21.

Each team's representatives spoke directly to the company's public relations officials, including Jaime Barclay, one of Symantec's Philanthropy Operations Specialist. The intensive preparation preceding the presentation consisted of multiple meetings with discussion between members of the three teams. This effort resulted in a seamless presentation, which gave an astounding impression to the company officials.

Company presentations also benefit the members themselves. Such events provide opportunities for inexperienced members to practice their public speaking skills, allowing them to effectively communicate their ideas of science and technology to the public. For the veterans, these demonstrations allow them to reflect on their own past achievements.

Of course, our team has more than one sponsor, and future company presentations are planned; members who are interested in presenting still have the opportunity to do so.



Vice president Chinmay Jaju launches his airplane from the flight line. The plane is involved in the Free Flight event, with its operation entirely dependent on its aerodynamics.

Flying High and Scoring Big

Robotics VP Soars in National Competition

By Haochuan Ni

MUNCIE, Indiana — Lynbrook Robotics vice president Chinmay Jaju competed in the Airplane National Competition at Indiana this July where he placed first in his event, thus securing a spot on the United States world team. He also became the second highest scoring senior competitor in a combination of all the events.

Chinmay reflected on the performance of his machine. "The conditions were tricky that day, and I was proud of the fact that I was able to remain consistent throughout. My airplane probably got either highest or second highest; [it was] hard to tell when they're specks."

An annual competition, the Airplane National Competition is one of the biggest model airplane competitions in the world, spanning more than a month and consisting of hundreds of different events. Each has its own distinct challenges and guidelines.

Chinmay was involved in the Free Flight events. This event is challenging because the airplanes are completely autonomous once they leave the fliers hand, relying on aerodynamic characteristics alone to guide its flight. The specific event Chinmay was flying requires that the gasoline engine run for seven seconds to propel the plane skywards. The objective is to have the aircraft remain airborne for at least three minutes. The airplanes accelerate quickly and in optimal cases, some models can attain altitudes of several hundred feet in seconds.

Chinmay's aircraft was the refinement of a design that he created two years ago and has been working on since then. It was first designed on the computer and then extensively tested with wooden prototypes. Once the design was completed, he ordered custom built wings made of high-strength carbon fiber material. Chinmay maintains another identical working model for backup.

Unlike many other competitors who bought their models, Chinmay's plane was made by himself.

Chinmay's performance was also aided by his mentor, Bill Vanderbeek. During other competitions, Vanderbeek gave Chinmay enormous support and helped him prepare for the competitions.

"Mr. Vanderbeek was really an unsung factor to my success. He was crucial to my ability to do well in model airplanes.

"I did win," he said, "but that doesn't mean my airplane was necessarily the best, it just means I flew well that day. I think mine had a really nice glide for the weather"

For his excellent records in the Airplane Nationals, Chinmay will be traveling to the international competition in Romania in the summer of 2010.

"In hindsight, that day went really well," Chinmay noted, "but I need even more practice if I want to do well at the world champs."

Upcoming Events

A Night on the Quad
— September 25
Welcome-Back Barbeque
— October 3
CalGames
— October 10 - 11
Fleet Week Fundraiser
— October 10 - 11

Reaching Out to our Community

Spreading robotics to the world



Co-president David Liu presents the robot, Moonkey, to Western Digital CEO John F. Coyne

By Haochuan Ni

The Funky Monkeys take care to spread the inspiration of science and technology to as wide an audience as they can. Lynbrook Robotics is commonly involved in both individual and joint demonstrations of robotics at various venues.

On June 1 and 2, Lynbrook attended the annual JavaOne Conference in San Francisco to demonstrate our robot with a few local teams, such as that of Monta Vista, Leland, and Mountain View. Our exhibit at the conference gained widespread popularity, and many amazed by-standers were invited to drive the robot. In addition, many of the engineers at the conference were impressed with the sophisticated robots FIRST teams could build in six weeks. Certain spectators were impressed enough to be willing to donate to our team.

The Lynbrook and Prospect High School's Gearheads gave a joint robot performance at the San Jose Tech Museum of Innovation on June 13. This demonstration attracted the attention of many young children who were interested in our robot and eager to drive it. The demo was aimed to encourage young children to participate in robotics.

On June 18, the Lynbrook and Leland robotics teams, both sponsored by Western Digital, held another robot demo on the company's Engineering Day. Our members engaged in active conversation with the executives, including company CEO John F. Coyne, giving detailed explanations of our robot and allowing them to operate it. Many employees displayed enthusiastic interest in our team's activities and accomplishments.



Lynbrook Robotics

1280 Johnson Ave.
San Jose, CA 95129
info@lynbrookrobotics.com
www.lynbrookrobotics.com