

# HOT NEWS FROM COLD FUSION

## Immaculata High School's F.I.R.S.T. Robotics Team 1279

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### **And Away We Go!**

There's a lot happening here with the Cold Fusion 1279 team of 2008. ANADIGICS, a pioneer in the wireless revolution, is sponsoring Mr. Bill Tomkins as our team mentor this year. We've just been awarded a prestigious NASA grant. We've picked up recent accolades at a post-season competition known as the Brunswick Eruption, and our upcoming fundraisers are sure to be fun. It appears this will be another promising year. Join us!

### **Professional Support**

We're thrilled to welcome Mr. Bill Tompkins of ANADIGICS, who is inspiring us to improve our pit area and make it cool. In his words: "Just like NASCAR, the pit area makes or breaks the team." Our competition is not only about the robot! The pit will help the team organize and store tools safely and provide a safe work environment for repairing the robot during competitions. Even more important, the pit can showcase our team's talent, past victories and our team spirit and supportive community. The pit area is a forum for impressing judges and recruiting allies from other teams.

Mr. Tompkins emphasizes that our goal for the robot in competition is "zero failure mode". There's a way for everyone to get involved, too, and all (and more!) are needed.

### **Cold Fusion Chosen for Coveted NASA Grant**

The NASA Regional Challenge Grant for the Capitol Regional competition in Washington, D.C. was awarded to only 10 veteran teams from across the Eastern U.S., and Immaculata's Cold Fusion was one of these ten. Along with the prestige of NASA sponsorship, the grant of \$6,000.00 assures we have the funding to compete in two regional competitions in the upcoming 2009 season. The team still needs to complete the grant requirements, including a submission seeking the Chairman's Award, which may result in a team-selected student's receiving \$10,000 in college scholarship funds.



*The robot, cozying up with NASA*

### **Building Up Our Team**

The building of the pit marquee began on October 29. Everyone there had a great time under the coaching of Mr. Tompkins and we got a lot done. He helped us envision a marquee for our future, to use as a platform for

ads, videos, art, maybe fractals... a place to build excitement!

We snapped pictures and video clips for a promotional video. Everyone worked really hard, using proper safety measures. This is important in Robotics, as safety is our top priority.



Busy hands at work

### A Fair for Fusion

It's happening again! Take it from us, books are the best present, so put off all your holiday shopping until **Sunday, December 7** and come to Barnes & Noble in Bridgewater at the Somerville Circle Shopping Center, to support the team on that day. Mention us when you check out and a percentage of your purchase total is donated to the team. Or use your voucher at ANY Barnes & Noble on that day for our benefit. You may download the vouchers from our website.

We'll be at the circle store from 10 a.m.- 4 p.m.; bring your camera for your photo with our robot. We host story time and activities for your youngest shoppers, so Santa has some freedom to shop!



*Fusion of the Best, Driving: left to right, Ryan Ismirlian, Brendan O'Connell and James Del Rossi.*

### North Brunswick Eruption

On November 1, 2008, even while shorthanded as a result of our teammates' devotion to IHS Marching Band, the team qualified for the playoffs and advanced to the semifinals, and was honored when we were selected as an alliance captain team. Brendan O'Connell received the "Hawaiian shirt" as captain, but when our team was the first choice ally of a preeminent competitor, Brendan graciously accepted the honor.



*Evil Sundaes. Thank you, Jules Manalang,, for your sacrifice for the team.*

### Programming Class

An important part of robotics is programming, for obvious reasons. We need to be able to tell the robot what to do and when to do it. True, one needs a remote, but if the machinery does not know the difference between left and right, it is just a hunk of metal. It becomes a robot when a human puts the programming to the hardware.

Robot programming is not exactly one of the three 'r's we learned in grade school. We needed to bring in the professionals. Jim



*Mr. O'Malley & Students at the programming class*

O'Malley is volunteering his time to teach a few different ways to program. Programming classes started on Wednesday, October 10 from 3:45 to 4:45 in Room 241, and are weekly until December 17. He teaches the basics to get the students learning, and hopes a few of us will understand enough to apply it once build season comes around in January. Everyone is invited—there are freshmen through seniors in the class. These are important skills for anyone who wishes to go beyond the normal computer skills level. It will be of great use to each of us in the future, and also for our team in upcoming competitions

### Cold Helping Hands

We couldn't do it all alone! Many thanks to the group of parents who submitted the successful grant application to NASA: Alan Fallone, Linda Fallone, Jo O'Connell, Jim O'Malley and Peter Smith. Parents of our members have also worked very hard to put our first team handbook into circulation. It includes rules and regulations of our team and the parent support organization as well. It also lists the sites of the scheduled competitions and the schedule for the build team. Build team basically designs, builds, programs, crates, and ships our robot. The build season starts January 3 when the rules for this year's competition are released, when we find out what the robot needs to do. Then we have to build something that will be the best at it! The build season lasts until February 17, when it's time to take the robot on the road for competition.

Jan. 3	Kickoff at Montgomery High School
Feb 25-28	D.C. Regional, 60 teams competing
March 18-21	Philadelphia Regional, 50 teams competing

### The Answer to Life, the Universe, Everything

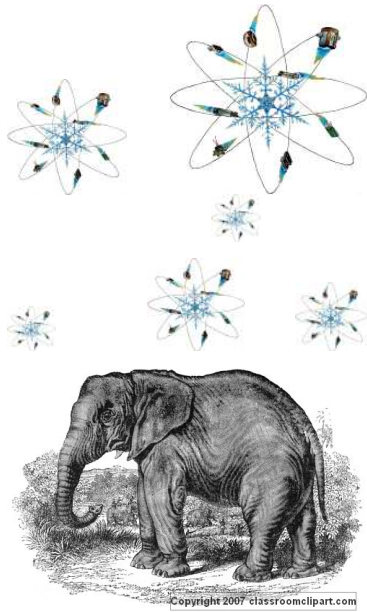
As soon as you hear “touchdown”, your mind automatically jumps to football. But what about “herd” or “catapult!”? Surely they can't be sports terms, right? Wrong. Last year's robotics game required this: a robot that has to be able to go around an oval track, either herding a 40” pilates-type ball across a line, or throwing it over a six and a half foot high overpass. Each team has six weeks to build and program this robot, and then it is off to competitions.

Cold Fusion 1279 and its robot, Forty-Two, (see *Hitchhiker's Guide to the Galaxy*), went to three competitions in the 2007-2008 year: the New Jersey Regional in Trenton, the Bayou Regional in New Orleans, and Nationals in Atlanta. In Trenton, we got to the semi-finals after many rounds of competition. In New Orleans, we reached the quarter-finals. In Atlanta, we performed very well, but unfortunately were not picked for finals.

Robotics is a fun, competitive sport. We plan to go to at least two regionals this year, and we hope to return to Atlanta.



Team interviewed by local TV station at 2008 Bayou Regional Competition in New Orleans.



### **Elephant Extravaganza**

The IHS Holiday Extravaganza is upon us and, as in the past, the team will be selling 'white elephants', those impulse purchases and gifts we all received some time ago and did not know what to do with them. Now you do! They just need a new home! Bring your white elephants this week after school to room 421. Include a suggested sale price if you can.

Don't forget to come shopping Sunday, November 23 at IHS: discover new treasures to take home with you!

### **No, We Don't Sell Ice Cubes**

Hey, guess what everyone? Oh, you know, and count on it: The snack cart is up and running. It's open after school most days (excluding half days) until 3:00 in the main lobby by the buses. So, why buy from those boring machines in the cafeteria when you can support Cold Fusion 1279? Come on and recharge your afternoon with treats from the snack cart!

And we know you want it. So to keep us up and running, come sign up with Mrs. Foreman for a day to help us keep the cold stuff coming daily!

### **Animation Contest**

Robotics is a forum for competition in many arenas besides the robot's performance. Teams are judged based on their comfort with technology overall, on their team spirit, sportsmanship, professionalism. There's even an annual award for best animated film on safety practices. The animation must be 15 to 30 seconds long, use particular Autodesk software, and promote any of these team attributes: gracious professionalism helping teams struggling with safe behavior;

sharing your team's experience and expertise in applying safety tips and techniques; reminding everyone of the importance of safe behavior at all times. Safe behavior requires:

- ❖ Wearing safety glasses even when it's hot and uncomfortable
- ❖ Wearing safety gloves when lifting your robot or working with hand tools
- ❖ Using the team approach to lifting a robot and other heavy tools or equipment
- ❖ Operating tools and equipment so there are no regrets
- ❖ Avoiding horseplay in the work and competition areas

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