



LAWRENCE TECHNOLOGICAL UNIVERSITY
ROBOFEST

2010

ROBOFEST 2010 ROBOT COMPETITION

INVITATION: ROBOTICS TEAMS

The Local Qualifying Competition

For

Jr. Division: 5th – 8th grade

Sr. Division: 9th – 12th grade / College

Venue: **Ross Norton Recreation Center**
Date: **March 20, 2010 (Saturday)**
Time: 9:00 am – 1:00 pm
Address: 1426 S. Martin Luther King Jr. Ave., Clearwater, FL 33756



Please contact Ms. Emma for more info and how to register.

Host Organizer: Emma Alaba / Computer Learning Center

Ph: (727) 447-3067 • Email: SimplePC4U@aol.com • www.simplepc4u.com

Robofest Coordinator: Lawrence Technological University (www.robofest.net).



1438 Gulf to Bay Blvd. Clearwater, FL 33755 • Phone #: 727.447.3067 • SimplePC4U@aol.com

Re: Invitation Letter for Robofest 2010 Robot Competition

I am Emma Alaba the Organizer of Robofest 2010 Local Qualifying Robot Competition. The Computer Learning Center cordially invites your school to participate in the 2nd Robofest Robot Competition in the Tampa bay area. This competition is for middle and high school students from across the Tampa bay area. Your participation would be highly appreciated.

Robofest is an annual autonomous robotics competition focusing on learning STEM (Science, Engineering, Technology and Math) for students in grades 5 - 12 and college students. Robofest challenges teams of students to design, build, and program robots to compete in the Junior and Senior age divisions.

Robofest 2009 Competition was very successful (15 teams), and the kids totally enjoyed themselves and they are looking forward to 2010. We could not have made it without the help of the coaches, parents, students, friends, sponsors and Lawrence Technology University.

Competition Categories / Divisions	Grades	# of Teams	Require Items	Cost	Comments
Games - Junior	Jr. 5 th – 8 th	10	Team Registration Fee	\$50	LTU
Games - Senior	Sr. 9 th – 12 th	5	Check-in Fee	\$20	Host Organizer
Exhibitions - Junior	Jr. 5 th – 8 th	5	Robot Set NXTG, RCX, VEX, any set	Retail \$250 Edu \$279	Each team
RoboFashion & Dance Shows - Junior	Jr. 4 th – 8 th	5	PC/ Laptop	-	Each team
			Students		3 – 7 /team

Sincerely,

Emma Alaba /Computer Learning Center
 Host Organizer for Local Qualifying Competition
 Office Phone: 727.447.3067

Robofest Workshop and Information Meeting

NXT Programming Workshop January 9, 2010.

Our workshop will help teams better prepare for the upcoming Robofest competitions in March. The focus will be on programming the NXT. No prior robotics or programming experience required. If you have a robotics kit (NXT, RCX, VEX, and etc.) please bring it and a computer with you. Each team needs a kit and a computer for the competition.

These are the dates and times for the workshops:

January 9th	1pm – 4pm
January 23rd	1pm – 4pm
January 30th	1pm – 4pm
February 20th	9am – 12 noon
February 27th	9am – 12 noon
March 6th	9am – 12 noon

Location: St. Pete Main Library 3745 9th Ave. N, St. Pete, FL 33713

All potential students, coaches, parents and volunteers are invited to attend. We will explain what Robofest is, go over the rules, show past competitions, and answer questions. We will also have follow up workshops covering programming on the NXT Robot.

We'll need teams, coaches, volunteers, judges and sponsors. Students from all over the Tampa Bay area (Pinellas, Hillsborough, and surrounding counties) are invited to participate.

Robofest encourages all types of teams; homeschools, private schools, public schools, neighborhood groups, civic groups, clubs, churches, scouts, etc.

For general information about Robofest 2010: www.Robofest.net and click on 'Enter 11th annual Robofest 2010' link.

Please RSVP to simplepc4u@aol.com before, January 9th so we know how many to plan for.

Emma Alaba / Organizer for Robofest 2010
Phone: 727.447.3067

Website: www.simplepc4u.com

About ROBOFEST

Little robots, **Big Missions**

A Competition Motivating Young Minds to Master the Machine

What is Robofest?

Robofest is an annual autonomous robotics competition focusing on learning STEM (Science, Engineering, Technology and Math) for students in grades 5 ~ 12. Robofest is affordable and simple. Robofest challenges teams to design, build, and program robots to compete in the following categories in Junior and Senior age divisions:

- **Game Competition** - A team of students competes to accomplish robotic challenges using autonomous robots.
- **Exhibition** - Since a game competition with fixed rules may limit students' creativity, Robofest offers a stage for exhibitions to demonstrate their creations. Each team has complete freedom to show off any autonomous robotics project they have created.
- **RoboFashion and Dance Show**
- **Mini Urban Challenge with L2Bot** - also for College teams
- **Other (associate) competition categories include:** Robot Sumo, VEX Pentathlon, Warehouse Firefighting, and annual IFI VEX Challenges

Any robotics kits are allowed to construct robots. Junior division teams are recommended to use an icon-based graphical programming language such as NXTG, Lego(TM) RCX code, EZROBO CREATOR, or Robolab(TM). Recommended grades for this division are 5th-8th. The Senior Division recommends the use of a text-based high level programming language such as C, C++, C#, Visual Basic, or Java. The challenge is more difficult than that of the Junior Division. Recommended grades are 9th-12th.

Started at Lawrence Tech in 2000, Robofest has grown multiple venues in the United States and several other countries.

Goals of Robofest

- Spark and motivate young students' interest in STEM (Science, Technology, Engineering and Math)
- Challenge the STEM skills of students
- Maximize students' learning by integrating STEM subjects through autonomous Robotics
- Promote students' creative and innovative thinking
- Recognize students' achievements in STEM through robotics
- Build the work force of the future
- Promote good teamwork and work ethics

FAQ

- **What is the ideal team size?** In general, in order to maximize students' learning, we recommend 2 ~ 3 students per robot.
- **How often and for how long do teams typically meet in preparation for the competition?** They can practice anywhere even at home, because the playing field is portable and modular. If they have some experience, then one two hour meeting per week in Jan and Feb. Two meetings per week in March till the qualifying competition.
- **Is it comparable to preparation for the FIRST Lego League season?** Since Robofest does not have extra tasks like a research presentation, it will be about 2/3 of FLL efforts. Robofest is a great opportunity to learn more about computer programming part.
- **Is there a single season-end competition (apart from the World Championship), or are there multiple events in which teams can participate?** A team can participate in only one qualifying competition. If they qualify, they will be invited to compete at the World Robofest Championships in early May.
- **I see the age divisions are 5th ~ 8th and 9th ~ 12th grades. Is this merely a recommendation? Is there a clearly defined age cut-off date? Can younger, advanced kids participate?** Our general rule is that playing up is fine. But playing down requires the submission of age division waiver form and Lawrence Tech Robofest organizer's permission.
- **What types of materials can we use on our robot?** You may use any type of robot platform you would like. You can use any type of material, including glue, tape, paints, stickers, etc. We encourage your creativity.
- **What is the Robofest Exhibition?** The Exhibition is an opportunity for students to demonstrate any type of robotics project. Robots can dance, play the piano, make hamburgers, play soccer, etc. We encourage full creativity.
- **How does the "unveiled unknown mission/problem in Games work?"** A portion of the Game Competition mission is unveiled on the day of the competition during the opening ceremonies. Students must program their robots without adult assistance after the unveiled mission is announced. Thus, adults are not allowed in the team pit area after the unveiling of the unknown mission.
- **I am a coach who has competed before and I am interested in taking my team to a higher programming level. I am not familiar with any of the higher levels, (C or Java). Can you help me with a source of training or instruction that will aid me?** Lawrence Technological University will schedule a series of workshops starting in January to help students and coaches. Also, join the [eNews list](#) to hear about our Webinars. Also visit the following link: <http://www.robofest.net/resources.htm>
- **I would like to start a neighborhood team to compete in Robofest. Does a team have to be from a school?** Robofest encourages all types of teams; home schools, charter schools, private schools, public schools, neighborhood groups, civic groups, clubs, churches, scouts, etc.
- **Can a team enter more than one category?** No. A team can choose only one category at one site.
- **Can a team member join more than one team?** It may be possible if the coach thinks the student can handle multiple tasks. It is not recommended.

Unique Features of Robofest

- Robots must be fully autonomous, which means that learning computer science and programming and sensor technologies is highly emphasized in Robofest.
- It is one of the world's first autonomous robot contests for grade students in which the dimension of the playing field is unknown. A part of the competition problem is unknown until competition day. And some conditions of the playing field may be decided/changed, after the robot is started.
- Robofest is fair and educational, since no direct adult help is allowed. The entire robot should be constructed and programmed by students.
- Robofest game competition games promote cooperation between team members, because they require distributed solutions using two independent robots working together, if the game requires more than one robot. (This feature does not apply in 2009 game)
- Students have the freedom of using technologies: they may use any robot controller (kits) such as Handy Boards, Handy Crickets, Basic Stamps, Boe-Bots, IntelliBrains, VEX, I-ROBOs, NXTs, or Lego® RCX bricks. They may use any actuators and sensors to solve the competition problems.
- Students have the freedom of choosing programming languages. Junior teams may use any icon-based graphical programming languages. Text-based high level programming languages are recommended for senior teams.
- Students may use tapes, glues, bolts and nuts, etc. to construct robots.
- The Robofest website, www.robofest.net, provides necessary technical information for the contest. Free workshops including Webinars have been provided at Lawrence Tech for teachers, coaches, parents, and all participants of Robofest teams since 2000.
- Robofest is affordable. You may reuse old kits. It is simple, easy, modular and inexpensive to set up playing fields of which materials can be reused every year. The registration fee is also affordable compared to other robotics competitions. It is \$50 per team in 2009.
- Everyone is a winner at Robofest. Every registered participant will receive a personalized certificate and an individual medal (or trophy). Giant trophies are awarded to winning teams in various categories based on the performance results and/or judging scores.
- World first vision-centered challenge for advanced high school students
- Since science and technology teachers have gained a lot of experience for the future of education, Lawrence Tech is planning the Robotics in Technology Education Conference (RoboTEC) in the near future.

2010 Season Schedule

- Dec. 10, 2009: **Kick-off**; team registration begins.
- Jan ~ Feb: **Technical Workshops**
- Feb. 2010: **Warm-up competition** in Michigan.
- Feb ~ early April 2010: **Qualifying Competitions**
- Mid April 2010: **Regional Championships**
- **May 8, 2010: World Robofest 2010 Championship**
- **June**: IGVC Invitational at Oakland University