



Robot Programming Competitions

2013-14

Jodrey School of
Computer Science

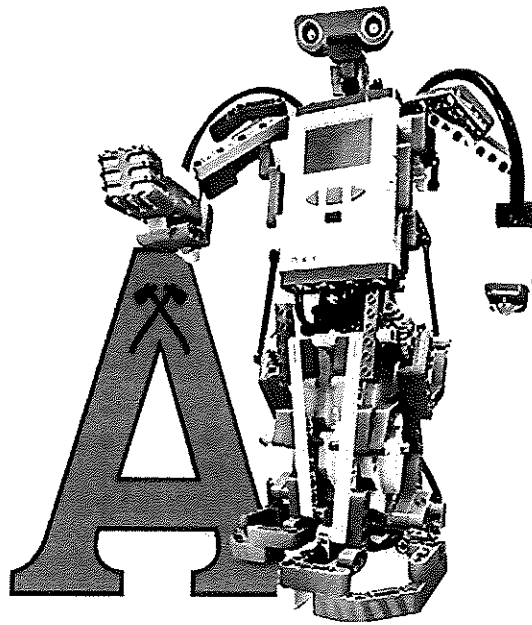


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Event Schedule and Overview

Welcome to the Acadia University 2013/14 Robot Programming Competitions!

In 2013/14, the ROBOFEST High School Robot Programming Competition (HRC) features 14 teams with members from grades 10 to 12, and is part of a competition from Lawrence Technological University. The Middle School competition is part of the international tournament of the FIRST® LEGO® League (FLL). We have 30 teams of youths ages 9-14. Together with their hard-working coaches (and what great coaches they have!) there are over 300 participants from Yarmouth to Cape Breton. To support this lively group, we have over 100 volunteers including Acadia and NSCC faculty, staff, students and alumni, members of supporting companies and other community friends.

These competitions utilize affordable, easy to build and fun to program LEGO® MINDSTORMS® robots and are designed to encourage student interest in science, engineering, technology and math (STEM). Developing project presentations and building robots to complete missions also develops good teamwork and problem solving skills. This year's teams have risen to the challenge; hold on to your seats because you are about to see today's technology fueled by creative minds in action.

On behalf of the Robot Programming Competitions (RPC) Planning Committee - Enjoy the day and have fun!

Gary Walsh, Director, 2013/14 RPC

COMPETITION AND AWARDS

Those volunteers who perform the judging often have a very difficult job to do. They observe a wide range of enthusiastic teams doing many things well. One of the rules by which they abide is that no team may receive more than one award. So, even if a team does well in multiple categories, the judges must decide which of the trophies to award. The one exception to this rule is that one team may hold both a robot performance trophy and one other.

Champion's Award (HRC and FLL)

The Champion's Award is the most prestigious award that a team can win. It measures how the team members inspire and motivate others about the excitement of science and technology, solve problems, and demonstrate respect and Gracious Professionalism™. To be considered for the FLL Champion's Award, teams must perform well in all areas of the competition. The FLL Champion is eligible to move on to a North American Championship, held in Ontario and California. Robofest's Champion's Award is measured by the overall top score of the robot challenge. The top four teams are eligible for a spot in the Championship being held in Southfield, Michigan.

Robot Performance Awards (HRC and FLL)

This award goes to the team whose robot achieves the overall best score on the competition tables during the various rounds. There are several criteria that judges use to determine the winners. HRC teams are eligible for 2nd 3rd and 4th awards in this category.

Robot Design Awards (FLL)

For the FLL competition, there are three categories within Robot Design – Strategy and Innovation, Mechanical Design, and Programming. To assess innovation, the judges watch the robots work and look for things that make them say "Wow!" They interview team members to reveal the less obvious unique and inventive ideas. To assess dependability, the judges interview the teams to learn what solid principles and best practices they used to reduce variability and errors, with preference to robots that best "back it up" throughout the matches.

Core Values Awards (FLL)

There are three areas of Core Values that are assessed for each team – Inspiration, Teamwork and Gracious Professionalism™. Gracious professionalism is a term originating with FIRST that indicates a team has a high combination of the values of respect, integrity and honour.

Project Awards (FLL)

The three categories of project awards are Research, Innovative Solution and Presentation. This year's challenge is Nature's Fury. Teams must identify a challenge faced by communities experiencing potential threatening nature issues, research and propose a solution, and make a presentation about their solution. Only teams that complete all three parts of the project assignment will receive consideration for any of the awards.

Acadia University 2013/14 Robot Programming Competitions

Thank you to all of the 2013/14 Acadia Robot Programming Competitions Volunteers!

Without our many dedicated volunteers, we would not be able to hold the competitions each year. THANK YOU to each person who volunteered their time and talents.

Command Table and Officials

Founder	Dr. Danny Silver	FLL Judge Advisor	Rachel Bood
Awards Ceremony	Scott Roberts	FLL Pit Manager	Sharla Rolfe-Hunter
Play by play (FLL/HRC)	Len Hawley/Jeff Tooker	FLL Head Project Judge	Lois Boudreau
School of Comp. Science	Dr. Darcy Benoit	FLL Head Referee	James Griffin-Allwood
Scorers /Timers	Curtis McCarthy	FLL Head Robot Design Judge	Dennis Langille
	Nick Niemi	FLL Head Core Values Judge	Gus Webb
	Dyllon Moseychuck	FLL Head Field Resetter	Sean Morrow
	Nao Osumi	Robofest Head Coordinator	Rob O'Quinn
		Robofest Head Judge	Rudy Guay
Commentary	Acadia Axe Radio	Robofest Pit Manager	Josh D'Entremont

West Concourse – Access to competition area, Information & Registration, Concessions and Lego Displays

The west concourse is available by bearing right from the main doors of the Arena complex.

Access to Bleachers – If you are cheering on your favorite team, find your bleacher seat through the West concourse doors to the Gym.

Information – If you have a question, check out our information desk before coming in to the bleachers. If they can't answer your question, they'll find someone who can. Also, *this is where the completed survey forms should be dropped off.*

Food – Food may be purchased for cash at the concession stand near the gym entrance. There are fruits, chips, chocolate, hot dogs and other small snacks. There is also an eating area.

Spectators Rest Area – In the East Concourse area is a seating area and quiet area where spectators and family members can bring young children, or just to take a break. There will be Lego on the tables for building. You can reach this area by walking across the top of the bleachers.

ROBOT CAMPS

Acadia University Summer Camp – During the month of July the School of Computer Science holds a Robot Camp for youth. Watch the web site for updates. To reserve your place, contact Sharon Watson at 902-585-1331 or email sharon.watson@acadiau.ca.

Full Day Schedule at a glance

8:00	FLL Team registration Opens in Beveridge Arts Centre
9:00 to 11:00	FLL project, design and core values judging (Beveridge Arts Centre - teams only)
11:00 to 12:30	Lunch for FLL
1:00 to 3:00	FLL Robot Competitions
8:30	HRC Team registration Opens in Athletics Complex - Gym
10:45 to 12:30	HRC Robot Competitions
12:30 to 1:45	Lunch for HRC
2:00 to 3:00	Photos for HRC
3:00	Welcoming Ceremonies
3:15	HRC Robot Sumo Challenge
4:15	FLL and HRC Award Ceremonies

Door Prizes will be announced throughout the day, beginning at 3:15 PM. Prizes will only be awarded to those present at the time of the drawing. To enter the drawing, complete the survey form inserted in your program, and bring it to the information desk on the upper level as you can.

FIRST® LEGO® League (FLL) Teams

Acadia #	FLL #	Team Name	School/Organization
1	5215	TEAM (EPEC)	Eastern Passage Education Centre
2	15404	Armbrae Dragons	Armbrae Academy
3	295	BRICKs of Bedford	Rocky Lake Junior High
4	11391	Flying Manatees	Ross Creek Centre for the Arts
5	11219	Gorsebrook Bears	Gorsebrook Jr. High
6	15347	GP Penguins	Ecole Gertrude Parker
7	4279	Lego Roboto	Pictou Landing First Nation Elementary
8	13	Nature's Angels	Colby GGC (2nd Willowdale Guides)
9	15602	Nerd Herd	1st Micmac Pathfinders
10	14469	Les Cougars	Ecole secondaire du Sommet
11	17473	Les Jeunes Cougars	Ecole secondaire du Sommet
12	15607	Red NKEC's	Northeast Kings Education Centre
13	15374	Robo Lobo Wired	Wolfville School
14	16274	Salami Slices	Dwight Ross & MRHS
15	18647	SpiritBots	Sacred Heart Elementary School
16	11221	Shelburne Rebels	Shelburne Regional High
17	5212	Spoon In The Apple	Eastern Passage Education Centre
18	5151	Seahawks	Bluenose Academy
19	5139	TMS Legettes	Trenton Middle School
20	920	Panther Robots	New Glasgow Jr. High
21	5149	TL Spartrons	Dr. TL Sullivan Junior High
22	15858	Top Robots	Truro Junior High
23	10717	Trurobotics	Independent
24	15196	ROBOMasters	Independent
25	5081	TMS Legomaniacs	Trenton Middle School
26	12690	Tornado Squad	Ecole Acadienne de Truro
27	6827	Royal Robots	Annapolis Royal Regional Academy
28	1594	Les Viperes	Centre scolaire de la Rive-sud
29	17474	Disaster Proof	Community (New Minas)
30	18646	Rockin' Robotics	Nova Scotia Community Access Program

The *FIRST* LEGO® League theme changes each year and this year it is NATURE'S FURY™- the challenge this season is to solve a problem faced when intense natural events meet the places people live, work and play. Over 200,000 children ages 9 to 14 from over 70 countries will explore the awe-inspiring storms, quakes, waves and more that we call natural disasters.

FIRST (For Inspiration and Recognition of Science and Technology) was founded in 1989 by inventor Dean Kamen to inspire young people's interest and participation in science and technology. Based in Manchester, NH, *FIRST* is a not-for-profit public charity. *FIRST* is supported by a strong network of sponsors and volunteers.

FIRST provides the *FIRST* Robotics Competition for high-school students and the *FIRST* LEGO League for 9 to 14 year-olds. *FIRST* also offers the Junior *FIRST* LEGO League for 6 to 9 year-olds and the *FIRST* Tech Challenge, a mid-level robotics competition that offers high-school students a more affordable and accessible opportunity to participate in *FIRST*. For more information, visit <http://www.usfirst.org>.

ROBOFEST High School Competition Teams (HRC)

Acadia #	Robofest #	Team Name	School/Organization
1	1920	Shelburne Rebels	Shelburne Regional High School
2	1921	Sullivan Spartrons	Dr. TL Sullivan
3	1922	Cheetas	CPA High School
4	2013	Vipere 2	Centre scolaire de la Rive Sud
5	1924	Flying Wombats	LSK Indian Brook School
6	1979	NKEC Titans	Northeast Kings
7	1925-1	Warriors 1	Halifax West High
8	1925-2	Warriors 2	Halifax West High
9	1942	DRHS Robotics	Digby Regional High
10	1938-1	Sacred Sharks	Fountain Academy
11	2014-1	Mutant Mechs	Horton High
12	2014-2	Horton 3.0	Horton High
13	1938-2	Firebirds	Sacred Heart School of Halifax
14	2017	NRHS Robotics	Northumberland Regional High

Robofest is a variety of competitions and events with autonomous robots – programmed to act independently and not remote-controlled – that encourages students to have fun while learning principles of physical science, computer science, technology, engineering, and math (STEM), Computer Science, and Information and Communication Technologies (ICT). Students design, construct, and program the robots. Adult coaches are not allowed to assist during the events.

Since 2000, over 14,000 students have competed in Robofest, including teams from 13 US States, England, Canada, China, France, India, Brazil, South Korea, Mexico, and Singapore.

Teams compete in the junior (grades 4-8), senior (grades 9-12), and college divisions. Student teams, composed of up to seven members each, can participate in a variety of events. The two you will see here today are:

Senior Game - A team of students competes to accomplish robotics missions using fully autonomous robots. Robofest game especially *puts math skills to the test*.

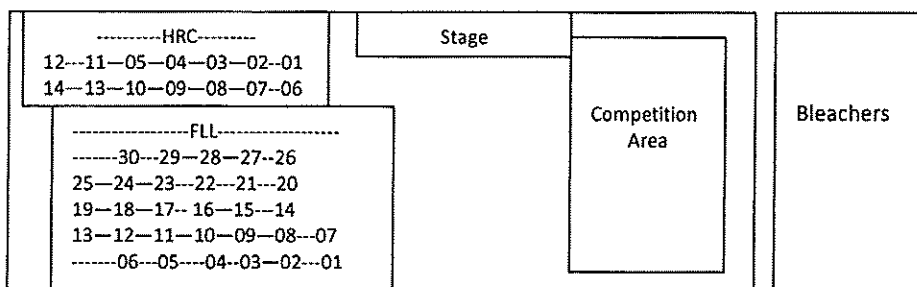
BottleSumo - Be the first robot to push intentionally a bottle off the table OR be the last robot remaining on the table.

Robofest is located in Lawrence Technological University, Southfield, Michigan, USA. For more information visit www.robofest.net.

The Gym Layout

Identified by a distinctively coloured tournament t-shirts, each team is assigned a “pit area” table by HRC or FLL team number listed above using their Acadia Team number. HRC teams occupy the east side of the gym (right from the bleachers); FLL teams the west side (left from the bleachers).

Competition volunteers are identified by a royal blue t-shirt marked with “VOLUNTEER”. If you have any questions, don’t hesitate to ask a volunteer. If they can’t answer, they’ll help you find someone who can.



Acadia University 2013/14 Robot Programming Competitions

FIRST LEGO LEAGUE (FLL) - Afternoon Schedule

		Round 1		Round 2		Round 3	
		Run Time	Table	Run Time	Table	Run Time	Table
1	TEAM (Eastern Passage Ed. Ctr.)	1:00 PM	1A	1:40 PM	3B	2:20 PM	5B
2	Armbræe Dragons (Armbræe Academy)	1:00 PM	1B	1:40 PM	4A	2:20 PM	3A
3	BRICKs of Bedford (Rocky Lake Jr. High)	1:00 PM	2A	1:40 PM	4B	2:20 PM	5A
4	Flying Manatees (Ross Creek Arts Ctr.)	1:00 PM	2B	1:40 PM	5A	2:20 PM	2B
5	Gorsebrook Bears (Gorsebrook Jr. High)	1:00 PM	3A	1:40 PM	5B	2:20 PM	4A
6	GP Penguins (Gertrude Parker)	1:00 PM	3B	1:40 PM	1A	2:20 PM	2A
7	Lego Roboto (Pictou Landing First Nations)	1:00 PM	4A	1:40 PM	1B	2:20 PM	4B
8	Nature's Angels (Colby Girl Guides)	1:00 PM	4B	1:40 PM	2A	2:20 PM	1B
9	Nerd Herd (1st Micmac Pathfinders)	1:00 PM	5A	1:40 PM	2B	2:20 PM	3B
10	Les Cougars (secondaire du Sommet)	1:00 PM	5B	1:40 PM	3A	2:20 PM	1A
11	Les Jeunes Cougars (secondaire du Sommet)	1:10 PM	1A	1:50 PM	3B	2:30 PM	5B
12	Red NKEC's (Northeast Kings Ed. Ctr.)	1:10 PM	1B	1:50 PM	4A	2:30 PM	3A
13	Robo Lobo Wired (Wolfville School)	1:10 PM	2A	1:50 PM	4B	2:30 PM	5A
14	Salami Slices (Dwight Ross & MRHS)	1:10 PM	2B	1:50 PM	5A	2:30 PM	2B
15	SpiritBots (Sacred Heart Elementary)	1:10 PM	3A	1:50 PM	5B	2:30 PM	4A
16	Shelburne Rebels (Shelburne Regional)	1:10 PM	3B	1:50 PM	1A	2:30 PM	2A
17	Spoon In The Apple (Eastern Passage Ed. Ctr.)	1:10 PM	4A	1:50 PM	1B	2:30 PM	4B
18	The Seahawks (Bluenose Academy)	1:10 PM	4B	1:50 PM	2A	2:30 PM	1B
19	TMS Legettes (Trenton Middle School)	1:10 PM	5A	1:50 PM	2B	2:30 PM	3B
20	Panther Robots (New Glasgow Jr. High)	1:10 PM	5B	1:50 PM	3A	2:30 PM	1A
21	TL Spartrons (Dr. TL Sullivan Jr. High)	1:20 PM	1A	2:00 PM	3B	2:40 PM	5B
22	Top Robots (Truro Jr. High)	1:20 PM	1B	2:00 PM	4A	2:40 PM	3A
23	Trurobotics (Truro Community)	1:20 PM	2A	2:00 PM	4B	2:40 PM	5A
24	ROBOMasters (Bedford Community)	1:20 PM	2B	2:00 PM	5A	2:40 PM	2B
25	TMS Legomaniacs (Trenton Middle School)	1:20 PM	3A	2:00 PM	5B	2:40 PM	4A
26	Tornado Squad (Acadienne de Truro)	1:20 PM	3B	2:00 PM	1A	2:40 PM	2A
27	Royal Robots (Annapolis Royal Academy)	1:20 PM	4A	2:00 PM	1B	2:40 PM	4B
28	Les Viperes (scolaire de la Rive-sud)	1:20 PM	4B	2:00 PM	2A	2:40 PM	1B
29	Disaster Proof (New Minas Community)	1:20 PM	5A	2:00 PM	2B	2:40 PM	3B
30	Rockin' Robotics (NS Community Access Prog.)	1:20 PM	5B	2:00 PM	3A	2:40 PM	1A

The 2013/14 *FIRST* LEGO® League Tournament (FLL) teams are composed of 4 to 10 team members (ages 9 to 14) plus one or two coaches. The FLL teams must successfully complete as many tabletop missions as possible in 2.5 minutes. The more missions completed while staying within the constraints (not knocking over barriers) the more points the team receives. Each team has three chances to make the most points possible. For more information, visit <http://www.usfirst.org>.

About the LEGO Group

The LEGO Group, a privately-held, family-owned company based in Billund, Denmark, is one of the world's leading manufacturers of high quality, creatively educational play materials for children. The company is committed to the development of children's creative and imaginative abilities, and its employees are guided by the motto adopted in the 1930s by founder Ole Kirk Christiansen: "Only the best is good enough." For more information, visit www.LEGO.com. LEGO, MINDSTORMS and their respective logos are trademarks of The LEGO Group.

Registration for the next FLL and Robofest challenges opens May 2014. Contact rpc.director@acadiau.ca for more information about registering a team.

Acadia University 2013/14 Robot Programming Competitions

ROBOFEST (HRC) SR. GAME COMPETITION SCHEDULE

		Round 1		Round 2	
		Run Time	Table	Run Time	Table
1	Shelburne Rebels (Shelburne Regional High)	10:45	1	12:00	2
2	Sullivan Spartrons (Dr. TL Sullivan)	10:45	2	12:00	3
3	Cheetas (Charles P. Allan)	10:45	3	12:00	4
4	Vipere 2 (Rive Sud)	10:45	4	12:00	5
5	Flying Wombats (LSK Indian Brook)	10:45	5	12:00	1
6	Titans (Northeast Kings)	10:53	1	12:08	2
7	Warriors 1 (Halifax West)	10:53	2	12:08	3
8	Warriors 2 (Halifax West)	10:53	3	12:08	4
9	DRHS Robotics (Digby Regional)	10:53	4	12:08	5
10	Sacred Sharks (Fountain Academy)	10:53	5	12:08	1
11	Mutant Mechs (Horton High)	11:01	1	12:16	2
12	Horton 3.0 (Horton High)	11:01	2	12:16	3
13	Firebirds (Sacred Heart)	11:01	3	12:16	4
14	NRHS Robotics (Northumberland Regional)	11:01	4	12:16	5

A nuclear power plant is in trouble. An autonomous nuclear responder robot detected the problem and instantly delivers up to 3 water balls (tennis balls) and a special ball (hardboiled egg) into the plant (box) without human help in 2 minutes. The robot can carry only one ball at a time. Two concrete blocks (AA size batteries) near the plant need to be removed off the table. Each team is given 2 rounds, 2 minutes per round. For each Jr. & Sr. age division round, the playing field configuration including box size may be different for each round. Each team can have up to 7 team members.

Teams will be given 30 minutes after the unknown factors (see Tables 1 & 2) are unveiled. All teams must submit their robot with a visible team ID tag to the restricted impound area when the 30 minutes have expired.

A special thanks goes to all the local supporters who have contributed to this wonderful event in so many ways!

WinSETT (The Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT Centre)
 Nicom IT Solutions
 Home Depot – New Minas
 Home Hardware – Wolfville and Annapolis
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 Darwin Event Group
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Thanks to all the Acadia personnel that have helped behind the scenes to make this day a success!

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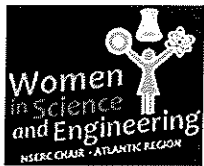
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