



Lawrence
Technological
University

COLLEGE OF
ARTS AND
SCIENCES

24th
Annual

LAWRENCE TECHNOLOGICAL UNIVERSITY
ROBOFEST
2023
World Championship

Lawrence Technological University
21000 West 10 Mile Rd, Southfield, Michigan



Supply Chain Challenge

Saturday, May 13, 2023, 8:30am ~ 4:00pm
Chairperson: Elmer Santos

Supply Chain Challenge Announcements:

Downloading by cable is recommended, but not required (if wireless downloading is the only option, for example)

Robots must be started using the robot, not with wireless

No battery charging in impound area

We will be watching for similar robots. If a team is identified to have a robot too similar to another robot (including robots from the same organization and both Jr and Sr divisions) or clearly not their own, team will be subject to investigation and possible disqualification.

Store location will move for World Championship (be prepared)

Supply Chain Challenge Game Synopsis:

- The supply chain is broken! The port is jammed up, the stores are empty, and there are many obstacles
- Autonomous robots are needed to clear the obstacles, bring order to the port and restock the store
- For Jr. Division, the location of the objects will be unveiled at the start of a 30-minute work time. For Sr. Division, some locations will be unknown until after impound

Game Agenda

8:00am	Gym doors open; Teams may set up team tables. Adults must leave immediately after delivering robots, laptops, etc. Teams must self-check robot size, etc. Team-ID & Team name should be on the robot. Both official & practice fields are open for practice.
8:30am	Judges Meetings – GAME – near scoring table, RoboArts , 1 st floor Lounge, Exhibition , 2 nd Floor Lounge
9:00 am ~ 9:30am	Opening Ceremonies in the Gym. Teams must leave the pit at this time. Teams will be introduced during the opening ceremonies.
9:30 ~ 9:40am	Unveil Unknown Tasks & Factors for Game Round 1
9:40 ~ 10:10am	30-minute Work Time - Game teams work on unknown tasks & factors. Students must remain in pit area.
10:10 ~ 10:20am	Robot Collection (Impound area) – no testing allowed
10:20 ~ 11:15am (Round 1)	Round 1 - Smallest team number will compete first. <ul style="list-style-type: none"> 9 runs for a time of about 55 minutes 6 teams (3 Jr. and 3 Sr. teams) will be timed and judged at the same time Robots are returned to and will remain on impound tables until 12:45pm
11:15 am ~ 12:35pm	Lunch Break /Jr BottleSumo Final Match / Award Ceremony 1 <i>Robots remain on impound tables; Scores to be projected</i> <ul style="list-style-type: none"> 11:45 Jr. BottleSumo Final Match (finalist from Group 1 and Group 2) Award Ceremony 1 (12:00pm ~ 12:35pm)
12:35 ~ 12:45pm	Unveil Unknown Tasks & Factors for Game Round 2
12:45 ~ 1:15pm	30-minute Work Time - 1 person from each team may retrieve the robot from impound Game teams work on unknown tasks & factors. Students must remain in pit area.
1:15 ~ 1:25pm	Robot Collection (Impound area)
1:25 ~ 2:20pm (Round 2)	Round 2 – Smallest team number will compete first. <ul style="list-style-type: none"> Robots are returned to and will remain on impound tables until all runs are completed
2:20 ~ 3:00pm	Scores to be projected. <i>Robots may be picked up at this time.</i> Raffle; Group Photo
3:00 ~ 3:50pm	Closing and Award Ceremony 2

25 Jr. Game Teams

Team ID	Team Name	Organization	Coach	Team City	St/Country
883-8	Wildcat 8	Washtenaw Christian Academy	Betty Recker	Saline	MI
1080-5	Scythe	Bethany Christian School	Brian Kincheloe	Troy	MI
1752-3	Gigabots	Westlake Christian School	Paul Weaver	Palm Harbor	FL
2109-4	Fantastic4	LEGO LEGION	Srinivas Bommidi	Novi	MI
2559-1	Black thunder	R&G Robot	Jong Chae Chung	Seoul	GYD
2559-2	Eagle five	R&G Robot	Jong Chae Chung	Seoul	GYD
2705-1	Shoplifters	SMART Labs	Erik Rosvold	Rochester	MI
3181-1	Techno Ninjas	Community Group	Diane Racette	Bridgewater	NS
3251-1	AI Aimbots	Troy MI	Gerald Jung	Troy	MI
3259-3	Chicken Nuggets	The Cornerstone School	Joe Moseley	Ocala	FL
3259-8	Ocala Rotten Oranges	The Cornerstone School	Joe Moseley	Ocala	FL

3271-14	Robocats Mountain Lion	Bellevue Middle School	Anthony Ness	Bellevue	FL
3718-1	Soul	MIKROBOT ACADEMY	michael wilson	Accra	GH-AA
3718-2	Spirit	MIKROBOT ACADEMY	michael wilson	Accra	GH-AA
4236-2	Cloud 9	Gallimore Robotics	Julien Vanier	Plymouth	MI
4260-1	ARABOTS NEXT GEN	ARABOTS ROBOTICS	LILIANA ELISA RAMIREZ VARGAS	Toluca	MEX
4385-3	Sacred Sharks 3	Sacred Heart School of Halifax	Jeremy MacHattie	Halifax	NS
4391-1	Great Lakes Eagles	Thunderbird Robotics Girls Club	Grace Zhang	Troy	MI
4392-1	Team Ro-Bob	Gallimore Robotics	Jacob Langdon	Canton	MI
4396-1	Fabulous four	Gallimore Robotics	AMANPREET DEOL	Canton	MI
4401-1	B.E.A.N.S.	Gallimore Robotics	Ben Way	Canton	MI
4440-3	THE BUNNY RACERS	CHENG YI SENIOR HIGH SCHOOL	TSAI LI-CHEN	Kaohsiung	Kaohsiung
4465-4	EV-3000s	AccelerateKID	Q Do	Novi	MI
4495-1	Game_MSCPS_HK	Munsang College	Fei Lung Lee	Hong Kong	Hong Kong
4504-1	YDM	AUTROL YDM	LEE SEOK	Yeosu	JMD
4504-2	AUTROL	AUTROL YDM	LEE SEOK	Yeosu	JMD

24 Sr. Game Teams

Team ID	Team Name	Organization	Coach	Team City	St/Country
336-1	WHS Dragons	Welsh Hills School	Karen Lepper	Granville	OH
1080-1	Can Crushers	Bethany Christian School	Brian Kincheloe	Troy	MI
1080-2	Third time the charm!	Bethany Christian School	Brian Kincheloe	Troy	MI
1080-3	How it should have ended.	Bethany Christian School	Brian Kincheloe	Troy	MI
1080-4	Table Turners	Bethany Christian School	Brian Kincheloe	Troy	MI
2109-3	Robo Builder	LEGO LEGION	Srinivas Bommidi	Novi	MI
2383-1	The Wombots	Community Team	Anna Benoit	Wolfville	NS
2383-2	The Robats	Community Team	Anna Benoit	Wolfville	NS
2652-1	RoboWarriors	Troy Robotics	Lei Chen	Troy	MI
2668-1	Royal Robots	Annapolis West Education Centre	Jeff Hafting	Annapolis Royal	NS
2964-6	Phurious Philers	Napoleon Community Schools	Adam Draa	Napoleon	MI
2964-16	Awooga	Napoleon Community Schools	Adam Draa	Napoleon	MI
3155-4	GCSBTS	Grace Christian School	Jordan Ellis	Charlottetown	PE
3385-1	MICLAN	TEC. CAMPUS HIDALGO	SAMUEL RUIZ ORTIZ	Pachuca	HIDALGO
3513-4	Flameboyant	Roeper School	Wendy Mayer	Birmingham	MI
3672-2	T.A.C.O.S.	DIVERTROBOTS ATLACOMULCO	SHALOM ACOSTA HERNANDEZ	Atlacomulco	MEX
3718-4	CYBER-MAC	MIKROBOT ACADEMY	michael wilson	Accra	GH-AA
4165-1	A.I PeIÃfÂ©	Right to Dream Academy	Josephus Christian Taylor	Accra	GH-EP
4219-1	roboMasterminds Remastered	Plymouth Canton High School	Devin Daniels	Canton	MI
4440-1	POWER TO THE MOON	CHENG YI SR HSL	TSAI LI-CHEN	Kaohsiung	Kaohsiung
4440-2	CREATVITY EXPLODE	CHENG YI SR HSL	TSAI LI-CHEN	Kaohsiung	Kaohsiung
4498-1	Space Y	Po Leung Kuk Tang Yuk Tien College	Lok Yan Siu	Hong Kong	Hong Kong
4505-1	FREES	FREES	HUI JAE JEONG	Ansan-si	GYD

4512-2	ARABOTS DRAGONS	ARABOTS ROBOTICS	ANTONIO MONTES DE OCA CASTRO	Meteppec	MEX
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Exhibition

Chairperson: Emma Alaba

Saturday, May 13, 2023, 8:30am ~ 4:00pm

Gym 2nd Floor

Bios of Exhibition Judges can be accessed at: [LINK](#) on the Robofest World Championship Website

Exhibition Agenda

8:00 am	Doors open; Teams may set up team Exhibition tables & floors
8:30am	Exhibition & RoboArts Judges' meeting – 2 nd floor Judges' room
9:00 ~ 9:30am	Opening Ceremonies in the Gym. Teams must come down to the first floor, since they will be introduced during the opening ceremonies.
9:30am	People's Choice Award (PCA) Judge registration begins
9:30 ~ 11:15am (During Game Round 1)	Official presentation including robot demo of 5 Sr Exhibition teams and 4 Jr Exhibition teams. Max. 4 minutes for each team are given. Judges will ask questions for max. 2 minutes. (8 min x 9 teams = 72 minutes) Sr teams with smallest team number will go first, then Jr teams with the smallest team number. <i>Judges, Secret Judges, PCA Judges and spectators will visit team tables any time during this Round 1. Teams must be ready for demos.</i>
11:15 am ~ 12:35pm	Lunch Break / Jr BottleSumo Final Match / Award Ceremony 1 <ul style="list-style-type: none"> 11:45 Jr. BottleSumo Final Match (finalist from Group 1 and Group 2) Award Ceremony 1 (12:00pm ~ 12:35pm)
12:00pm	PCA Judge registration ends
12:35 – 2:20pm (During Game Round 2)	Official presentation including robot demo of the remaining 4 Jr Exhibition teams. Max. 4 minutes for each team are given. Judges will ask questions for max. 2 minutes. (8 min x 4 teams = 32 min) <i>Judges, Secret Judges, PCA Judges and spectators will visit team tables any time during this Round 2. Teams must be ready for demos.</i>
1:30pm	PCA Judging forms are due
2:20 ~ 3:00pm	Raffle; Group Photo
3:00 ~ 3:50pm	Closing and Award Ceremony 2

8 Jr. Exhibition Teams

Team ID	Team Name	Organization	Coach	City	St/Country
26-4	GameBoard	Cranbrook Schools	Katie Bis	Bloomfield Hills	MI
1587-4	Dudes of Valor	Plymouth Christian Academy	Jasmine Paul	Canton	MI
1822-3	Vibots	Rodgers Middle School	Michael Wilson	Riverview	FL
3271-3	Robocat Tigers	Bellevue Middle School	Anthony Ness	Bellevue	FL

3271-8	Robcats Pumas	Bellevue Middle School	Anthony Ness	Bellevue	FL
3271-9	Robocat Tiny Tigers	Bellevue Middle School	Anthony Ness	Bellevue	FL
4484-1	M.A.D.E.	Brocrastination Nation	Elyse Flores	Huron Valley	MI
4487-2	TPOMPS-C.A.T	Tai Po Old Market Public School	CHUN MAN CHAN	Hong Kong	Hong Kong

5 Sr. Exhibition Teams

Team ID	Team Name	Organization	Coach	City	St/Country
883-1	The Loose Screw	Washtenaw Christian Academy	Betty Recker	Saline	MI
2900-2	MET	ETRONIC	ANGELICA JANET GONZALEZ CHAVARIN	Pachuca	HIDALGO
4273-1	inno centenarian	Po Leung Kuk Centenary Li Shiu Chung Memorial College	Kin Pong Wong	Hong Kong	Hong Kong
4510-2	TESATL MIMINALI	PREPARATORIA # 3 UAEH	RICARDO SERRANO CHAVEZ	Pachuca	HIDALGO
4516-1	FCS	Islamic educational college	Ashraf Abukhait	Amman	Jordan

Robofest Pledge:

As a Robofest team member, I understand that the focus of Robofest is about learning through competition.

My team and I will show integrity by doing our own work and by following all the rules.

My team and I will display courtesy by sharing practice tables and space.

I promise to do my best to uphold the Robofest Spirit.



Chairperson: Dave Carbery

Saturday, May 13, 2023, 8:30am ~ 4:00pm

Gym 2nd Floor

Bios of RoboArts Judges can be accessed at: [LINK](#) on the Robofest World Championship Website

RoboArts Agenda

8:00 am	Doors open; Teams may setup team projects
8:30am	Exhibition & RoboArts Judges' meeting – 2 nd floor Judges' room
9:00 am ~ 9:30am	Opening Ceremonies in the Gym. Teams must come down to the first floor, since they will be introduced during the opening ceremonies.
9:30am	People's Choice Awards (PCA) Judge registration begins
9:40 am ~ 11:15 am (During Game Round 1)	<p>Official presentation including robot demo of 3 Sr RoboArts Exhibition teams and 3 Jr RoboArts teams. Max. 4 minutes for each team are given. Judges will ask questions for max. 2 minutes. (8 min x 6 teams =48 minutes) Sr teams with smallest team number will go first, then Jr teams with the smallest team number.</p> <p><i>Judges, Secret Judges, PCA Judges and spectators will visit team tables any time during this Round 1. Teams must be ready for demos.</i></p>
11:15 am ~ 12:35pm	<p>Lunch Break /Jr BottleSumo Final Match / Award Ceremony 1</p> <ul style="list-style-type: none"> 11:45 Jr. BottleSumo Final Match (finalist from Group 1 and Group 2) Award Ceremony 1 (12:00pm ~ 12:35pm)
12:00pm	PCA Judge registration ends
12:35 – 2:20pm (During Game Round 2)	<p>Official presentation including robot demo of the remaining 3 Jr RoboArts teams. Max. 4 minutes for each team are given. Judges will ask questions for max. 2 minutes. (8 min x 3 teams =24 minutes)</p> <p><i>Judges, Secret Judges, PCA Judges and spectators will visit team tables any time during this Round 2. Teams must be ready for demos.</i></p>
1:30pm	PCA Judging forms are due
2:20 ~ 3:00pm	Raffle; Group Photo
3:00 ~ 3:50pm	Closing and Award Ceremony 2

6 Jr. RoboArts Teams

Team ID	Team Name	Organization	Coach	Team City	St/Country
2601-1	Encanto	Robot Institute of Hong Kong	Cheung Chun To	Hong Kong	HK

4487-1	RoboDragon	Tai Po Old Market Public School	CHUN MAN CHAN	Hong Kong	Hong Kong
4492-1	The Hoklo Intangible Cultural Ambassador	Tin Shui Wai Methodist Primary School	HING LING CHOI	Hong Kong	Hong Kong
4514-1	TERPSICORE & EUTHERPE	ACADEMIA MADDOX	JOSE ANTONIO ROMERO PLIEGO	Ciudad Satelite	MEX
4517-1	ProStem Team	Creative Orphan Association	Mariam Omar	Amman	Marka
4527-1	Power Savers	Children World International School	Heba Ismail	Jeddah	Makkah

3 Sr. RoboArts Teams

Team ID	Team Name	Organization	Coach	Team City	St/Country
2606-2	AI Orchestra Robot	Chiu Chow Association Secondary School	LEUNG KAI FAN	Hong Kong	Hong Kong
3004-13	The Watchers	University Prep Science and Math HS	Pam Sparks	Detroit	MI
4528-4	S.W.A.T group	Samarqand viloyat	Doston Ishanov	S.w.a.t Group	Samarqand

Wanted: PCA (People's Choice Award) Judges

Registered Robofest spectators will decide People's Choice Award (PCA) for **RoboParade, Exhibition, and RoboArts** categories. PCA Judges may win raffle prizes shown below. Drawing will be held on Sat, May 13, around 3:20pm in the gym floor. A PCA Judge should be age 10 or older. You must be present to win the following raffle prizes.

PCA Voter Raffle Prizes



JBL Bluetooth Headphones



JBL Bluetooth Speaker



Robofest Tumbler



Robofest Fleece



Robofest Umbrella



Robofest Cap



Robofest Water Bottle



Robofest Beach Towel

Opening Ceremonies

9:00am ~ 9:30am, LTU Field House - Gym

Emcee: Dr. Christopher Cartwright, Robofest Director

- Flag presentation Canada, Colombia, Egypt, Ghana, Hong Kong, India, Jordan, Macau, Mexico, Saudi Arabia, South Africa, South Korea, Taiwan, Uzbekistan, UAE, and USA (16 countries)
- National Anthem: Cadence Weaver, Napoleon High School
- Opening Remarks by Dr. Sibrina Collins, STEM Education Coordinator LTU
- Introduction of Game, Exhibition, and RoboArts teams
- Introduction of Judges, proctors, and volunteers
- Explanation of key rules and announcements
- Contestant Pledge

Jr BottleSumo Finals and Award Ceremony 1

11:15am ~ 12:35pm, LTU Field House - Gym

Emcee: Shannan Palonis, Robofest Coordinator

- Jr BottleSumo Final Match (Finalists from Group 1 and Group 2)
- Award of trophies:
 - USA Video qualifier winners
 - International Video qualifier winners
 - RoboParade winners
 - UMC (Unknown Mission Challenge) winners
 - Jr and Sr BottleSumo winners
- Recognition of Site Hosts and International Directors

Closing and Award Ceremony 2

2:20pm ~ 4:00pm, LTU Field House - Gym

Emcee: Prof. Bauer, Associate Dean of College of Arts and Sciences, LTU

- Raffle for PCA voters. (Voters must present to win)
- Recognition of Coaches & Team Members
- Group photo of all students and coaches (all the categories)
- VIP seating: Sponsors
- Closing Remarks
 - Special Awards: Emma Alaba, Don Dubois, David Reeves, Hsao-Ping Moore
 - Award of Appreciation: Sponsors Loretta Yakima, MCWT, Sharan Kalwani IEEE Southeast Michigan Section, John Arnold, IBM
 - Recognition of Judges, Volunteers, and Staff
- Presentation of trophies to winning Game, Exhibition and RoboArts: Judges will line up for high-fives.