











QUALIFICATION OF FIRA ROBOWORLD CUP 2025



MARKHAM, ONTARIO CANADA.

AANIIN COMMUNITY CENTRE & LIBRARY



FIRA CHALLENG

**FIRA SPORTS** 

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## 2nd Canada FIRA RoboWorld Cup

## **Open Competition 2025**

15<sup>th</sup> – 16<sup>th</sup> March 2025, Markham, Ontario, Canada

# Qualification for the World Robotics and Artificial Intelligence Competition FIRA 2025 South Korea

The Federation of International RoboSports Association (FIRA) Canada and Canadian National Robotic Society (CNRS) extend a warm invitation to both seasoned participants and newcomers to join us for the

2nd Canada FIRA RoboWorld Cup Open Competition 2025 in Markham,Ontario. Scheduled to take place from the 15th to the 16th of March 2025. As you join in on the exciting adventure of robotics excellence at the FIRA Cup Canada 2025 in Markham,Ontario this March, get ready to witness teams from Canada and beyond showcasing their skills in robotics, problem-solving, and teamwork.

FIRA stands as the pioneering force in intelligent robot soccer competitions, established by Prof. Jong-Hwan Kim of KAIST, Korea, in 1996. FIRA's mission encompasses three core objectives: (a) providing challenging benchmarks for cutting-edge research in intelligent robotics, (b) equipping senior students with invaluable skills and experiences important for their careers in the modern economy, and (c) introducing junior students to the foundational principles of STEAM subjects (Science, Technology, Engineering, Art, and Math).

Dedicated to nurturing innovation, collaboration, and excellence within the Canadian robotics landscape, CNRS empowers the local robotics community. Our vision is to cultivate a platform for knowledge exchange, skill enhancement, and technological breakthroughs, thereby positioning Canada at the forefront of the global robotics arena.

Envisioning a future where robotics assumes a central role in shaping a sustainable and technologically advanced society, CNRS strives to foster a vibrant community comprising roboticists, researchers, and enthusiasts. Through strategic partnerships and ongoing learning endeavors, CNRS endeavors to propel Canada into a leadership role in the continually evolving field of robotics.

You are invited to join us for this amazing experience, where the latest in technology will be the star. Save the date for March 14th to 16th, 2025, and be part of the exciting celebration of the FIRA Cup Canada, where amazing things happen!

The 1st Canada FIRA RoboWorld Cup Open Competition will include the following leagues:

- <u>FIRA AIR</u>, which includes <u>Autonomous Race</u>, <u>Autonomous Race U19</u>, <u>Emergency Service Outdoor</u>, and <u>Emergency Service Indoor</u>, focuses on the use of autonomous flying vehicles in urban and disaster scenarios.
- <u>FIRA Challenges</u>, which encompass <u>Autonomous Cars</u>, Autonomous Cars Simulation, <u>Innovation and Business</u>, <u>Innovation and Business U19</u>, and <u>Home Simulation U 19</u>\*, focuses on complex challenges in industrial, rescue, and service robot settings.

\*An online-only event with no need for in-person attendance, represents a cutting-edge convergence of robotics and computer programming. It challenges student teams to engineer sophisticated algorithms for



robotic vacuum cleaners, providing a dynamic simulation platform that encourages advanced skills in coding and a deeper understanding of robotic applications in practical environments.

- <u>FIRA Youth</u>, which includes <u>Cliff Hanger</u>, <u>DRC-Explorer</u>, <u>Mission Impossible</u>, and <u>Sports Robots</u>,
   <u>Smart Home</u> comprises competitions for our younger participants, such as the Mission Impossible events.
- FIRA Sports, Please contact us to take part in this league.

Friendly competitions within the 2nd Canada FIRA RoboWorld Cup Open Competition 2024 provide all participants with the opportunity to create new friendships and gain insights from one another.

#### **Important Dates**

Oct 15, 2024	Deadline for submission of qualification material			
Sep 15 st to Oct 15th, 2024	Deadline for early-bird registration			
Oct 16 st to 30th, 2024	Deadline for regular registration			
Dec 1th to 21th, 2024	Deadline for late registration			
March 15th to March 16th ,2025	Online simulation competition			
March 15th to 16st, 2025	2st Canada FIRA RoboWorld Cup Open Competition 2025			

### Qualification

All participating teams for the current year are required to submit a Team Description Paper (TDP). The TDP must not exceed 6 pages and must be submitted in English in PDF format. This document serves to comprehensively outline the scientific aspects of your robot system and your research interests. It should include a summary of previous relevant achievements in research and development, along with publications, and, if available, mention prior performance in FIRA competitions.

Kindly submit your TDP to the designated email address provided below before the specified deadline and **Upload In AVIS Event**.

## infocanada@firaworldcup.org

#### **Awards**

The first, second, and third places in the competition qualify for the World Robotics and Artificial Intelligence Competition FIRA 2025 *South Korea*. Additionally, the best teams will also receive awards.

2nd Canada FIRA RoboWorld Cup Open Competition Venue

Aaniin Community Centre in Markham, Ontario



## **FIRA Canada Frontiers Camp (FCFC)**

## 10<sup>th</sup> – 16<sup>th</sup> March 2025, Markham, Canada

The FIRA Canada Frontiers Camp (FCFC), scheduled to coincide with the FIRA Cup Canada 2025, presents a unique opportunity for participants to acquire foundational knowledge in robotics. The program places emphasis on essential problem-solving techniques, system development, testing, and debugging. This year's FIRA Frontiers curriculum will focus on instructing students in physics, coding, control systems, and software design within the domain of autonomous drones. Moreover, students will gain insight into the application of their robotics skills across various disciplines.

It is important to note that the primary objective of the camp is not to directly enhance participants' prospects of winning subsequent FIRA competitions. In fact, instructors and mentors will minimize their involvement in upcoming FIRA competitions and refrain from offering strategies or hints for future events.

The FIRA Frontiers Camp does not focus on one particular robot kit. Instead, it tries to use open-source software and hardware whenever it can.

### **Important Dates**

Oct 15, 2024	Deadline for submission of qualification material				
Sep 15 st to Oct 15th, 2024	Deadline for early-bird registration				
Oct 16 st to 30th, 2024	Deadline for regular registration				
March 10th to 16st, 2025	FIRA Canada Frontiers Camp (FCFC)				
March 15th to 16st, 2025	Mission Impossible competition in the 2nd Canada FIRA RoboWorld Cup				

## Qualification

All participants must submit their own qualification material in English. Please write a 1–2-page account describing your past experiences. Additionally, include personal information such as your name, school, address, phone number, email address, etc. Submit your material as a PDF file to the designated email address provided below before the specified deadline:

#### infocanada@firaworldcup.org

It is important to note that registering for the FCFC does not require participation in the FIRA Cup Canada 2025. **No specific background is necessary**, as this program is designed to help participants learn the fundamentals of robotics. Additionally, participants in FCFC have the opportunity to take part in the Mission Impossible competition, and there is no additional fee for it.

## **FIRA Canada Frontiers Camp Venue**





## **Venue and Competition Schedule**

• 10th – 15th March 2025 : FIRA Canada Frontier Camp (FCFC)

• 15th – 16th March 2025: Competition (detailed schedule will be announced)

• 16th March 2025: Closing (Victory) Ceremony

#### Travel

Get ready for an exciting opportunity to witness the future of robotics! We are thrilled to announce the 2nd FIRA Canada Robo World Cup Competition, set to take place in the dynamic city of Toronto. Known as Canada's innovation hub, Toronto is the perfect backdrop for this prestigious event, where cutting-edge technology meets global talent.

This year's competition will bring together the brightest minds in robotics from around the world to compete in a series of challenging events. Hosted in a city renowned for its cultural diversity and technological advancements, the FIRA Robo World Cup promises to be an unforgettable experience for participants and spectators alike.

Markham's vibrant atmosphere and state-of-the-art facilities will provide the ideal environment for teams to showcase their skills, creativity, and passion for robotics. Whether you're an industry professional, a tech enthusiast, or simply curious about the future of robotics, this event is not to be missed.

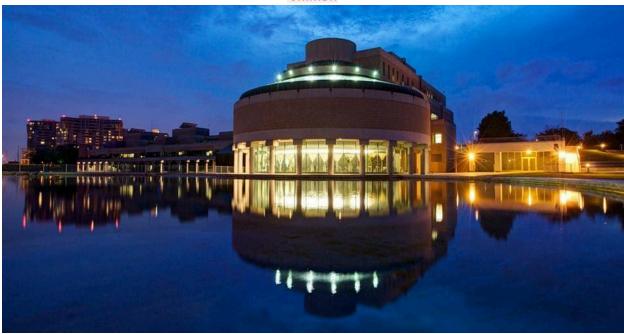
Mark your calendars and prepare to be inspired as Markham welcomes the next generation of innovators to the 2nd FIRA Canada Robo World Cup Competition!

2nd Canadian FIRA Robot Competition Group Block

https://www.hilton.com/en/attend-my-event/yyzaphf-0fira-232b4bab-1e0f-4103-8763-41d2805f199a/







## **Accommodation**

Numerous hotels are conveniently located near the venues for the FIRA Canada Frontiers Camp and FIRA Cup Canada 2024. For assistance in finding a suitable and convenient location for your stay, please contact us at infocanada@firaworldcup.org. We are here to make sure you have a comfortable stay.

## **Registration fee**

Category	Early bird  Sep 15 st to Oct 15th, 2024	Regular Oct 16 st to 30th, 2024	Late Dec 1th to 21th, 2024	Last call Dec 21/ 2024 Jan 11/ 2025	Addition al member	Condition
Challenge/ Air (Student older than 19 years old)	780 CAD	850 CAD	980 CAD	1000 CAD	250 CAD	1 coach/1 to 3 members
Youth coach/Parents	200 CAD	240 CAD	280 CAD	300 CAD	-	Each coach/Parent s
Home Simulation U 19	120 CAD	160 CAD	180 CAD	180 CAD	-	Each member
FIRA Frontiers Camp Participant	6100	6920	7200	<mark>7200</mark>	-	10 Days Camp (No Ticket)



## **More information**

https://canada.firaworldcup.org/

### More information on the FIRA Canada social medias

https://www.instagram.com/cnrs.ngo/

https://www.instagram.com/fira\_canada/

#### Contact

## Please contact us at infocanada@firaworldcup.org

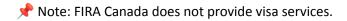
**Attention please (registration process)** 

update: November 19/2024

FIRA Canada Registration Process



- 1 Submit initial registration.
- 2 Complete technical review and final registration (after payment).
- 3 FIRA Canada verifies the team with the active chapter of their country.
- 4 Invitation letter is issued by FIRA Canada and sent to the country's chapter.
- 5 Teams must obtain the invitation letter from their own chapter.



Results are based on live judgments aligned with FIRA Canada standards.