

Inspiring technology literacy and creativity in youth through hands-on, mentor-based programs across New England in collaboration with the world's leading youth-serving nonprofit advancing STEM Education, FIRST®

High School Students Throughout New England Compete in a Music-Inspired Robotics Competition at the Eastern States Exposition

April 1, 2024

WEST SPRINGFIELD, MASS. – Hundreds of students in grades 9-12 from Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont will compete at the NE *FIRST* District Championship, a *FIRST*[©] Robotics Competition regional championship, the weekend of April 4–6, 2024, at the Eastern States Exposition (The Big E). The event is free and open to the public.

FIRST Robotics Competition (FRC) combines the excitement of sport with the rigors of science and technology. With strict rules and limited resources, each team of high-school students is challenged to raise funds, hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. This year, the challenge is CRESCENDOSM presented by Haas, a music-themed game played by two alliances of three robots each.

CRESCENDO presented by Haas is part of the 2024 *FIRST* IN SHOWSM presented by Qualcomm season. In CRESCENDO, *FIRST* Robotics Competition teams use their STEM skills and creative power to turn up the volume as they design, build, and program their robots for action-packed game play. This season, we're shining a spotlight on the role STEM plays in the arts and empowering young people to design and build a world of endless possibilities. "The future is a place you will create."

New England FRC teams each earned ranking points by competing at any two out of eleven local district events, with the hopes of qualifying to participate in the New England District Championship. Following all eleven of these qualifying events (hosted in Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island throughout March 2024), 96 out of 185 New England District FRC teams have earned a spot at the NE *FIRST* District Championship and will compete for 30 spots at the international and cross-program *FIRST* Championship event in Houston, Texas, the weekend of April 17–20.

Contacts

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For more information, visit <u>nefirst.org/nedcmp</u>



ingenuityNE dba NE FIRST is a 501(c)(3) not-for-profit public charity incorporated in the State of Connecticut. P.O. Box 940, Bloomfield, CT 06002 • 68 Myles View Drive, Duxbury, MA 02332 • EIN 45-5482105

Event Agenda

THURSDAY, APRIL 4

- Kickoff: 1 p.m.Qualification
- matches: 1–6:30 p.m.
- Event closes: 7 p.m.

FRIDAY, APRIL 5

- Event opens: 8 a.m.
- Opening ceremonies: 9 a.m.
- Qualification matches:
 9:30 a.m.–6:30 p.m. (each division takes a one hour lunch break)
- Event closes: 8:30 p.m.

SATURDAY, APRIL 6

- Event opens: 7 a.m.
- Opening ceremonies: 8 a.m.
- Teams form playoff alliances: 8:30 a.m.
- Divisional playoff matches and awards: 10 a.m.–1:30 p.m.
- Finale ceremonies, playoffs, and awards: 2:30–4:30 p.m.
- Event closes: 5 p.m.

FIRST Robotics Competition Team List: New England District Championship:

https://frc-events.firstinspires.org/2024/NECMP Officially available on April 3, 2024

The 96 registered teams will compete in two divisions of 48 teams each throughout April 4–6. These divisions have been named RICHARDSON and GANSON in honor of New England artists in the technical space.

Julie Henion Richardson is an alumna of the FIRST LEGO League and FIRST Robotics Competition programs. She is a mechanical engineer developing large-scale aerospace products, as well as a musical theater composer, orchestrator, music director and sound designer. Her educational background includes degrees in Mechanical Engineering and in Music from MIT. She is currently a Senior Mechanical Engineer at Re:Build Fikst and is working on two musical projects: composing the music for a new musical which is an adaptation of Virginia Woolf's novel "To the Lighthouse;" and orchestrations for the new original musical "Jack & Aiden", which premiered at the Ground Floor Theatre in Austin, TX in November 2023. Julie and her family will be in attendance at the event on Saturday, April 6.

Arthur Ganson is a kinetic sculptor, making mechanical art demonstrations and Rube Goldberg machines with existential themes. He has a permanent installation at the National Inventors Hall of Fame in Akron, Ohio, and one of his kinetic sculptures is featured at the entrance to the Lemelson Center for the Study of Invention and Innovation located in the Smithsonian Institution's National Museum of American History, on the National Mall in Washington DC. Since 1995, a large collection of his works has been on permanent display in *Gestural Engineering: The Sculptures of Arthur Ganson* at the MIT Museum. He has held residencies in science museums and collaborated with the Studebaker Movement Theatre. Members of Arthur's family will be in attendance on his behalf on Saturday, April 6.



Once each division has completed playoffs, the two divisional champion alliances will compete in a best two out of three finals competition to determine the 2024 New England District Champions.. These final matches will be played on INGENUITY Field in honor of our 501(c)(3) not-for-profit public charity, named IngenuityNE.

All teams competing at the NE *FIRST* District Championship will earn additional ranking points, and the top 30 in the New England District will qualify to compete at the *FIRST* Championship event against *FIRST* Robotics Competition teams from all over the world.

Additional New England *FIRST* Robotics Competition Event Results: <u>https://www.nefirst.org/district-events</u>

Available Activities

The NE *FIRST* District Championship will feature not only the culmination of the *FIRST* Robotics Competition season in New England, but also feature all FIRST programs, including the *FIRST* Tech Challenge New England Invitational, a *FIRST* LEGO League Challenge Experience and *FIRST* LEGO League Explore Expo. The NE FIRST Expo Experience will feature Battlebots team Aberrant Robotics, the 501st New England Garrison, create-your-own artwork with Positive Street Art, and the Hall of Fame, celebrating 10 Years of NE *FIRST*.

Event Sponsors

The 2024 NE *FIRST* season is made possible thanks to generous contributions by RTX, BAE Systems, National Grid, Medtronic, Mathworks, Boston Scientific, Carrier, the United States Air Force, PTC, ARM, Education First, Brooks Automation, Teradyne, Textron Charitable Trust, Tokyo Electron, OTIS and Parker.

The 2024 New England District Championship is also possible thanks to sponsorships provided by Re:Build Manufacturing and Eversource.

About NE FIRST

New England *FIRST* supports the global mission of *FIRST*[®] in all six New England states: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Founded in 2014, this season marks a decade in the <u>District Model</u> for *FIRST* in New England. NE *FIRST* provides accessible, innovative robotics programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills. NE *FIRST* is supported by ingenuityNE, a 501(c)(3) not-for-profit public charity incorporated in the State of Connecticut. Learn more at <u>nefirst.org</u>.



About FIRST®

FIRST[®] is a robotics community that prepares young people for the future through a suite of inclusive, team-based robotics programs for ages 4-18 (PreK-12) that can be facilitated in school or in structured afterschool programs. Boosted by a global support system of volunteers, educators, and sponsors that include over 200 of the Fortune 500 companies, teams operate under a signature set of *FIRST* Core Values to conduct research, fundraise, design, build, and showcase their achievements during annual challenges. An international not-for-profit organization founded by accomplished inventor Dean Kamen in 1989, *FIRST* has a proven impact on STEM learning, interest, and skill-building well beyond high school. Alumni of *FIRST* programs gain access to exclusive scholarships, internships, and other opportunities that create connections and open pathways to a wide variety of careers. Learn more at firstinspires.org.

About FIRST Robotics Competition

FIRST Robotics Competition (FRC) is an international high school robotics competition. Each year, teams of high school students, coaches, and mentors work during a six-week period to build robots capable of competing in that year's game that weigh up to 120 pounds. Robots complete tasks such as scoring balls into goals, placing inner tubes onto racks, hanging on bars, and balancing robots on balance beams. The game, along with the required set of tasks, changes annually. While teams are given a kit of a standard set of parts during the annual Kickoff, they are also allowed and encouraged to buy or fabricate specialized parts. *FIRST* Robotics Competition is one of five robotics competition programs organized by *FIRST*, the other four being *FIRST* LEGO League Discover, *FIRST* LEGO League Explore, *FIRST* LEGO League Challenge, and *FIRST* Tech Challenge.

About CRESCENDOsM presented by Haas

In <u>CRESCENDO</u> presented by Haas, two competing alliances are invited to score notes, amplify their speaker, harmonize onstage, and take the spotlight before time runs out. Alliances earn additional rewards for meeting specific scoring thresholds and for cooperating with their opponents.

A red alliance of three robots plays against a blue alliance of three robots. Alliances are randomized during qualification matches, then chosen by the top ranked teams to compete in the event playoffs.

During the first 15 seconds of the match, robots are autonomous. Without guidance from their drivers, robots leave their starting zone, score game pieces, called *notes*, in the field's speaker or amp areas, and collect and score additional notes.

During the remaining 2 minutes and 15 seconds, drivers control their robots. Robots collect notes from human players and score them in their amp and speaker. Each time an alliance gets two notes in their amp, the human player may amplify their speaker for 10 seconds. Notes scored in an amplified speaker are worth more points than those scored in an unamplified speaker.

Bonuses are earned when robots and human players complete specific actions throughout a match. As time runs out, robots race to get onstage by hanging on a chain in the stage area of the field, and deliver notes to their traps. The alliance that earns the most points wins the match.

