





Storming Robots, LLC provides year-round robotics engineering and technology education for talented youth. We offer engineering challenges that are not commonly present at grade-school levels. Our high school programs often deliver college level challenges. Through the engineering process, students learn the basic mechanical skills to build robots from scratch. They then program their robots with true programming language. Explore the world of automation!

## Achievements and Facts

**Our program has proven itself through our students' achievements.** For example, our high school robotics club students were the sole team from NJ selected to compete in the 2010 MIT/NASA ZeroRobotics Competition after a rigorous and detailed process.

In addition to many of winning experiences in local competitions, we were invited to represent the United States at the 2009 AND 2010 RoboCupJunior International Competition.

Our student return rate has been over 90% since 2005.

## Locations for Summer Workshops

Storming Robots (The main center): 3322 Rt. 22 West, Suite 402, Branchburg, NJ 08876.

Rutgers Preparatory School (Auxiliary, only for Gr. 7-11): Elm Farm House Building, 1345 Easton Avenue, Somerset, NJ 08873.

Dean of Chess (Auxiliary, only for Gr. 2-4) : 3150 Rt. 22 West, Branchburg, NJ 08876 (by ShopRite)

## Schedule

- ⊕ Eight weeks to choose from.
- ⊕ May sign up for one or more weeks.
- ⊕ For Novice to Experienced. Most projects, despite of having the same name, consist of various complexity levels to stretch students' potential.

## Many Ways to Save

- ⊕ \$10-\$40 off: Early Registration
- ⊕ \$30 off: Returning Student
- ⊕ 10% (up to \$100) off: Siblings
- ⊕ \$30 off: for each additional week.
- ⊕ \$50 off: Refer-A-Friend (Must meet eligibility)

## Features

- ⊕ Friday Free Pizza
- ⊕ Daily nutritious Snacks included.
- ⊕ Flexible extended hours to 6pm. (Subject to hourly cost.)
- ⊕ Extended Payment Plan.
- ⊕ Medals for recognition.
- ⊕ Completion Prize.

Online Details and Registration: <http://summer.stormingrobots.com>

Grade 7+

9am to 3pm

Location: Storming Robots

Prerequisites: Proficiency in Algebra and properties of basic Geometric shapes.

**Jul 11–15 • Robotic Soccer**

\$510

*Find the soccer ball!!! Run toward to the goal!! GOAL!*

Can you imagine programming a robot to play 1-on-1 or even 2-on-2 soccer? Robotic soccer has been introduced in high school and college level. You will explore the fun and intricate robotic soccer game played in the world renowned Robocup and RobocupJunior Events.



For the mathematics enthusiast, we'll introduce the coolness of triangulation using simple trigonometry.

**Jul 25–29 • Maze Challenge with Robotics Rescue II**

\$510

You will build a robust robot equipped with 4+ sensors and program it to seek out and rescue the injured victims. Beware! Your robot will have to be smart enough to negotiate its path through debris, obstacles and hills. Up for this Challenge? If yes, register for this Robotics Rescue - advanced session.

**Aug 1–5 • Motion Sensing Control**

\$510

Ever wonder how a smartphone's ability to interact with a robot or adjust its display either portrait or landscape mode? What does it have to do with the fascinating Micro ElectroMechanical System (MEMS)? Build and program a robot to move along with your hand or fingers. Create your controller and program an algorithm to convert accelerometer feedback in order to remotely control your robot.

**Aug 8–12 • Maze Challenge with Robotics Rescue II**

\$510

If you have taken the previous Rescue session, you will learn to take on more complex algorithmic tasks.

**Aug 15–19 • Robotics Treasure Hunting II • Gr. 7+**

\$510

Have you ever wondered how the military spots a location via satellite communication? GPS technology has started to become more popular in the mainstream. You will learn how to program your robot to simulate a fun and challenging treasure hunting adventure with GPS receiver?

**Fun Facts!**

1. What is the name of the world's first humanoid robot, which could walk and talk.

Online Details and Registration: <http://summer.stormingrobots.com>

# Grade 7+

9am to 3pm

Location: Rutgers Preparatory School

Aug 1-5

Robotics with Physics I • **9-12** \$270

Robotics with Physics II • **12:30-3:30** \$270

**Special: Register both sessions to receive \$40 off.**

These sessions engage students in focusing on physical reasoning with Mathematical applications. Workshops teach students physics concepts in an exploratory, fun and challenging way. These workshops not only provide hands-on robotics experiments to reinforce learning-by-doing, but also stimulate creative thinking and problems analysis.

Curriculum was developed by scholars who were supported by various science organizations including the Lemelson-MIT program.

Different projects are assigned to different sessions. Therefore, you may sign up for either I or II, or both sessions. You will obtain \$30 discount for signing up for both.

Pre-requisites:

- Proficient in Algebra, and knowledge in properties of basic geometric shapes.



### Fun Facts!

2. The world's smallest robot is a nanowalker made with "what?"

Online Details and Registration: <http://summer.stormingrobots.com>

# Grade 6 to 8

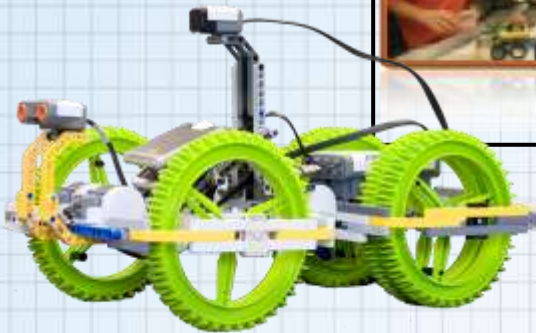
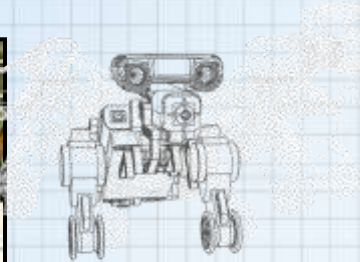
9am to 3pm  
Location: Storming Robots

Jul 18-22 • **Robotics Fun with Math • Gr 6 to 8**

\$465

This course utilizes curriculum developed by the Carnegie Mellon Robotics Academy, and enhanced by the Robotics Mindstorms Technology expert from Storming Robots. Projects are filled with mathematical proofs, investigations and continuous open-ended design challenges.

Prerequisites: Proficient in Pre-Algebra, Ratios, Areas and Circumference of basic geometric shapes.



## Fun Facts!

3. "Robot" comes from the Czech word *robota*, meaning "what?"

Online Details and Registration: <http://summer.stormingrobots.com>

# Grade 4 to 8

9am to 3pm  
Location: Dean of Chess

Pre-Requisites for all Gr. 4+: Proficiency in Arithmetic such as Average, Fractions, and Decimal Places operations.

Those who understand ratio, area and circumference of basic geometric shapes will be able to explore more complex tasks.

## Jun 27—Jul 1 • Robotics Technology Projects

\$435

Every day is filled with engaging robotics projects. You will build various robots from scratch and learn behavior-based programming to make them come alive. Projects such as Ball Roller Coaster, Rattlesnack, Catapult, Dragster, and much more! For those who have more experience, you will be given a more complex task which will flex your "brain muscle".



Come to gain or polish your true programming, and mechanical building skills.

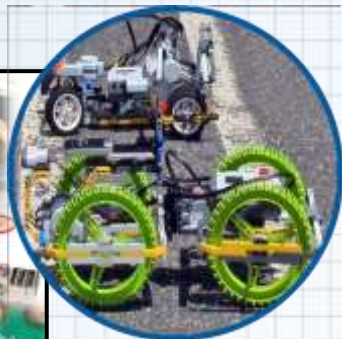
Students will be divided by their skill levels.

## Aug 22-26 • Robotics Technology Projects

\$435

Same as above.

If you have taken the previous session, you may also sign up for this session. This will not only reinforce the skills learned already, but also have the opportunity to take on more complex tasks.



### Fuh Facts!

4. Scientists attach these nano particles to cancer cells to emit light like IR or UV.

Online Details and Registration: <http://summer.stormingrobots.com>

# Grade 4 to 8

9am to 4pm  
Location: Dean of Chess

Jun 27—Jul 1 • **Brainiac Girls Week**

\$360 by April 1st

\$410 thereafter

Finally, a “Fun and Think” camp only for girls! By coupling with the premier Dean of Chess of Branchburg, we are able to offer an one-of-a-kind experience for girls who love to stretch their mind, and creativity. Here is your chance to learn and improve your chess, have fun with math, as well as explore how to make your robots come to life.

Robotics projects may include programming to automate your Spinning Ballerina, Music Box, Dancing bot, etc. All campers will also keep a journal to record daily achievements.

Tuition includes: Camp T-shirt, robotics pin, Scorebook, Worksheets and Binder.



## Fun Facts!

5. In 1981, there was the first case of robot homicide, when a robotic arm crushed a factory worker to his demise. In which country did it happen?

Online Details and Registration: <http://summer.stormingrobots.com>

# Grade 4 to 6

9am to 3pm  
Location: Storming Robots

Jul 11-15 • Robo500 & Drag Racing!

\$435

Simulation of the DARPA Grand Challenge with the award winning robotics technology LEGO Mindstorms. This program has proven itself to be one of our most favorite robotics exercises in the past few years because of rewarding fun.

Build and program an unmanned vehicle that will race on a treacherous terrain uphill through speed bumps, dark tunnels, etc. Students will build a robot from scratch and automate it to come alive with true computer programming.

For those who love math, you will see how mechanical math applies to your autonomous vehicle.

Jul 18-22 • Mindstorms Robotics Zoo

\$435

Come and join us to create a robotic zoo! You will have hours of fun with these animal-like models that walk and crawl! How about incorporating it with the sensors to add in survival intelligence?

Jul 25-29 • Maze Challenge with Robotic Rescue I

\$435

Are you brave enough to join this roboteam to navigate around treacherous terrain filled with debris after an earthquake? Your job is to build a robust robot and program it to seek out the injured victims in the building in order to rescue them.



Gear up rotation sensor to increase precision



## Fun Facts!

6. Robots eat sewage! Yes, researchers at the Bristol Robotics Lab developed robot to use Microbial Fuel Cell technology to create energy! What is the name of this robot?

Online Details and Registration: <http://summer.stormingrobots.com>

**Aug 1-5 • Remote Control Racing Bot**

\$435

Build a robot car and controller from scratch. Learn to program the remote controlling capability with multiple sensors. You will have such a blast to remotely drive your own creation to race through treacherous terrain. For more advanced students, you will incorporate onboard sensors for your robot car so that it is smart enough to stop at the moment of danger and minimize the chance of falling to its demise.

**Aug 8-12 • RoboDog vs. RoboMailman**

\$435

Our RoboMailman is out delivering. BUT!!! Here comes the maniac robodog! The mailman needs to be smart enough to run away from the robodog!

This workshop may be divided into several segments by complexity. It ranges from building a simple "RoboDog", to program the intricate strategy for the RobogDog to chase after the RoboMailman.

**Aug 15-19 • Mindstorms Robotics Zoo**

\$435

If you have taken the previous Zoo session, you will be given different robotics creature to build and program.

**Aug 22-26 • Robotics Sabotage**

\$435

Explore bot-to-bot communication! As a squadron leader, you command a fleet of interactive robots. They should be capable of following, helping, or even preventing others from being sabotaged by enemy robots! During the mission, you will experience how to make your robot perform robot-to-robot communication, sending distress signal, or even sabotaging messages!

**Fuh Facts!**

7. Roboticist Mark Rosheim produced miniature bot named "Anthrobots" for NASA to "do what?".

# Grade 2 to 4

Location: Dean of Chess

\*\*\* We are expanding our workshops for Gr. 2 to 4 at the auxiliary sites. Please check online to view any additional programs for Gr.2 to 4 at [summer.stormingrobots.com](http://summer.stormingrobots.com).

## Jul 25-29 • Amusement Park I

\$225

12:15—3:00P

Participant will build an amusement park filled with various motorized activities. Activities will include Merry-go-round, Ferris Wheel Ride, etc. Children will have fun and gain good understanding in how simple machines provide us mechanical advantages. The complexity is only limited to what the child can do. For those who are up for the challenge, they will have the opportunity to even program and automate the constructions with a programmable controller.



## Jul 25-29 • Mechanical RoboDog

\$280

9:00 —11:45A



Build a mechanic robodog and explore the fundamentals of simple mechanics. Then, you motorize it with a battery box and motor. What makes it even better? You will bring home your own *mechanical creation!*

## Aug 1-5 • Amusement Park II

\$225

12:15—3:00P

Part II will include more automated machines such as Crazy Tour Bus, and Bumper Car, and Ghost Ride. Children will be amazed to see how they can inject self-awareness into the robot to do tasks.



## Aug 1-5 • Mechanical Ferris Wheel

\$280

9:00 —11:45A

Take home your motorized Ferris Wheel *mechanical creation* (including motorized kit). This is a very unique creation, because it was developed in-house by one of our expert builders. Learn the Mechanical Advantages of gears, and axles, as well as their significance in basic structure and force. For advanced students, you will learn rudimentary true programming skills to automate your creation to come alive as you wish.



### Fun Facts!

8. A soccer ball is about 10 septillion times bigger than a buckyball, which are molecules that have 60 carbon atoms. How many digits does one septillion contain?

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Register online:  
<http://summer.stormingrobots.com>

Online Details and Registration: <http://summer.stormingrobots.com>

