

## WELCOME!

We look forward to your school's participation at the NJAAPT sponsored "NJ Physics Olympics" to be held on Saturday, January 15<sup>h</sup>, 2022 at Monmouth Regional High School for North/Central New Jersey and at Timber Creek High School (CamdenCounty) for South New Jersey. Schools may choose one location at which to participate. The competition is a lot of fun and your students will meet, share experiences, and compete with other students from various parts of New Jersey.

In order to participate, you *must be a member of NJAAPT and register on the NJAAPT Site:* [njaapt.wildapricot.org](http://njaapt.wildapricot.org).

Rules & directions can also be obtained on this site. No purchase orders can be accepted. The fee will be reduced to **\$30.00 per team** if the team registers by **December 19, 2021**. (Late registration is \$40 per team). Each team may have up to six members.

Each high school must have **at least one faculty member** accompanying the team who will be asked to help judge one of the events. More than one faculty member will be welcomed. **We could really use the help.**

On the day of the Olympics, plan on arriving for the final registration between 8:00 am and 9:00 am. **The first event begins at 9:00am.** The day's activities should **conclude around 2:30pm.**

You may bring your own **box lunches**. The cafeteria will not be open. Morning refreshments will be served (coffee, tea, juice, bagels and donuts). Please note that there are no restaurants walking distance from the school. You may arrange to have pizza/subs delivered.

## EVENT GOALS

**PLEASE NOTE:** *The following are only brief descriptions of each event. Full rules, competition scoring procedures, and the scoring formula can be obtained at:*

[njaapt.wildapricot.org](http://njaapt.wildapricot.org)

- **FERMI QUESTION** - To estimate the order of magnitude of a quantity that is difficult or impossible to measure.
- **CANTILEVER** – Design and build the longest cantilever segment using only spaghetti and glue.
- **PENNY BRIDGE** – Design and build a bridge constructed solely of pennies.
- **COLLAPSING TOWER**-To cause a domino from a tower of dominos to land in a collapse zone as far away from the base of the tower as possible.
- **SPAGHETTI WIND POWER LIFTER** -. To design and build a device that will lift a 375-gram load through a vertical distance of approximately 1.0 meter in the minimum amount of time.
- **SPAGHETTI MARSHMALLOW TOWER** - Design and build the tallest tower that can support a load of 375 grams.

Updates to the rules and discussion questions with answer are available at:

[njaapt.wildapricot.org](http://njaapt.wildapricot.org)

**Rules:** top menu, select "Events -- Physics Olympics 2022"

**Discussion:** top menu, select "Forum"

**It is the team's responsibility to periodically check or inquire about changes and clarifications to the rules.**

## Awards

Participants at each location will be awarded the following trophies:

### **Six First Place Trophies**

One for the highest score in each of the six events.

### **One Third Place Overall Trophy**

To the team with the third highest overall score in all six events.

### **One Second Place Overall Trophy**

To the team with the second highest overall score in all six events.

### **One First Place Overall Trophy**

To the team with the highest overall score in all six events.

## **The NJ PHYSICS OLYMPICS SILVER SERIAL BOWL**

**The first place trophy team will also receive the NJ Physics Olympics Serial Bowl. The name of the winning team's school will be engraved on the bowl and that school will proudly display it in their school's trophy case until the next Physics Olympics.**

## REGISTRATION

Register by logging onto the NJAAPT Site:  
(you *must be a member of NJAAPT*)

[njaapt.wildapricot.org](http://njaapt.wildapricot.org)

New to this year: you will be asked to  
choose a location:

North/Central New Jersey  
Monmouth Regional HS

Southern New Jersey  
Timber Creek HS  
(Camden County)

A team can have up to 6 students.  
A school may enter more than one team.  
(see \*\* note on “Welcome” page above)

Fee: \$30.00 for each team entered by  
December 19, 2021.  
Late registration is \$40 per team after  
December 15, 2022.  
No purchase orders can be accepted.

## Contacts

Logistic questions?

North/Central New Jersey-email  
John Valente at:  
[jvalente@ctemc.org](mailto:jvalente@ctemc.org)

South New Jersey-email  
Nancy Michaelsen at:  
[hhsphysics@comcast.net](mailto:hhsphysics@comcast.net)

Questions concerning the events and  
rules, please log onto the NJAAPT  
site and go to the Physics Olympics  
in the Forum.

## COMMITTEE

NJAAPT Executive Board Members

The  
New Jersey Section of the

**AMERICAN  
ASSOCIATION  
OF  
PHYSICS TEACHERS  
(NJAAPT)**

Invites you and your school to the

**2022 NEW JERSEY  
PHYSICS OLYMPICS**

on

**Saturday  
January 15<sup>th</sup>, 2022**

at

**2 Locations (choose 1!):**

North/Central New Jersey  
Monmouth Regional HS

Southern New Jersey  
Timber Creek HS  
(Camden County)

Outline of this year's events  
with registration instructions  
and deadlines are inside.