

# GPS Newsletter for October 2019

## General Events/News for October

### October 2nd, 12:30—GPS Open Meeting:

Stop by Room 202 to hear about each committee's plan for everyone for the rest of the fall semester! Lunch will be provided but you have to fill out [THIS FORM](#).

### GPS Apparel Coming Soon!

Fill out the GPS T-shirt pre order form [HERE](#). We are also looking to gauge interest in a long sleeve version of the shirt and a zip-up hoodie. If you have any other ideas, please contact Alex Thomas.

## Social Events for October

### October 18th, Time TBA-- Diwali Celebration:

The social committee is excited to celebrate Diwali this year. The idea is to host a more traditional event that celebrates and explains the ideas behind the holiday. If you are interested in helping the social committee plan Diwali, please email Lauren Callahan.

### November 1st, Time TBA—Third Year Happy Hour:

Join your fellow graduate students and faculty in Room 202 for drinks and food!

### Intramural Sports:

IM season is in full swing! We currently have volleyball and soccer teams going and others are upcoming. If you are interested in participating, please contact Derek Shank.

### Returning Interest Groups:

If you are interested in our de-stress group chat, contact Stan Letchev for the de-stress group. Have a hankering long form board games, contact Samuel Henderson for the board game group. Love Notre Dame athletics or sports in general? Contact Alex Thomas for the sports group chat. Not a fan of sports but love attending a tailgate? Let Thomas Bailey know and join our tailgate group. Are you a trivia fanatic? Reach out to Alex Thomas and join the trivia group.

## Outreach Events for October

### October 25th and 26th--Spooktacular:

The Outreach committee is still accepting volunteers for our Spooktacular event. Contact Chevelle Boomershine or Scott Carmichael for more information on a spooky time of science demos and fun for all!

## Professional Development News for October

### GPS Fall Conference Coming in November. Application is open!

The GPS Fall conference is hopefully going to be held on November 13th. Be thinking about if you would like to either give a talk or present a poster. Details will be coming soon! If you want to, go ahead and submit an abstract [HERE](#)

## Department Events and News for October

### Now until October 6th—Grad Student Appreciation Week:

Notre Dame's Graduate Student Appreciation Week is in full swing! Check [HERE](#) for a full listing of events for the rest of the week.

### October 19th – October 27th—Fall Break!

Check out our Twitter and Website!

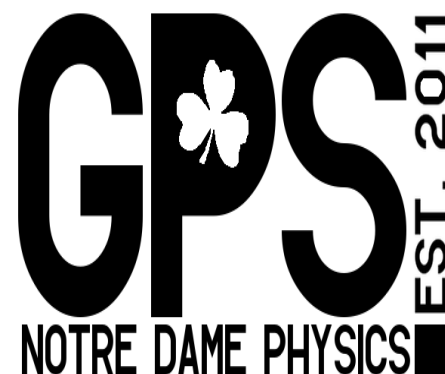
For the most up to date information of happenings within the department, follow us on Twitter [@NDGradPhysics](#) and visit our website: <https://gradphysics.nd.edu>

## About this Newsletter

We in GPS Executive Board and the Public Relations committee are constantly looking for ways to keep in touch with the Notre Dame physics population. This newsletter provides information on events for the upcoming month. Check for active hyperlinks!

## The Recap:

Thank you to everyone who came out to the department picnic, the game night, and the football watch party last month!



# Student Spotlight

Here is where we will show how proud we are of our students and highlight their work. If you have someone in mind, fill out [THIS FORM](#). In addition, here is where we will show any publications that have been made by our graduate students or any articles written about them in the past month. A form for that is [HERE](#).

These forms can also be found on the GPS Website.

## Student Spotlight!

October's Student Spotlight is Nathaniel (Nate) Rupprecht! He is a sixth-year student working under Dr. Dervis Vural in Condensed Matter. Nate is our student spotlight because of "his creativity, and his ability to find time to do high quality research and to learn new things just out of curiosity despite all his family commitments."

Recently, Nate has been working on a project studying how the power output of Maxwell demons changes when the demon has size and time restrictions. A Maxwell demon is a thought experiment where a "demon" controls a door between two chambers of gas and selects only particles moving at certain speeds to move across the boundary, breaking the second law of thermodynamics. Nate modeled the probability of different events occurring and used it to determine how the power and number currents that different types of demons can sustain depend on the size of the demon's door and its response time. You can read more in his recent [Physical Review Letter!](#)

Nate is originally from Albany, NY and received his Bachelor of Science in Math and Physics from Grove City College in Grove City, PA. Outside of physics, Nate enjoys playing the marimba, figure skating, and spending time with his five-month-old baby boy.



## Upcoming Thesis Defense:

Andrew Bechter is having his Thesis Defense on Tuesday, October 8th at 10:00am. The title of his defense is "Enabling Doppler Spectroscopy at the Diffraction-Limit". All interested parties are cordially invited to attend the first 30 minutes.

## NOTICE OF DEFENSE

ANDREW BECHTER

TUESDAY OCTOBER 8, 2019  
ROOM 202 - 10:00 A.M.  
NIEUWLAND SCIENCE



TITLE OF DEFENSE

ENABLING DOPPLER SPECTROSCOPY AT THE DIFFRACTION-LIMIT

All interested parties are cordially invited to attend the first 30 minutes