

# GEARHEADS GAZETTE



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## HIGHLIGHTS OF THE WEEK:

- > Getting ready for the season
- > Newcomer's Viewpoint
- > Group Descriptions

Faculty advisor Don Pata giving the team a pep-talk before the kickoff event.

## GROSSE POINTE ROBOTICS SHIFTING INTO HIGH GEAR

As Team 1189 prepares for the new season, Gearheads new and old are excited for what build season has in store. After reorganizing the workshop, the new members have a good idea of where all the tools belong, where all the drill bits go, and where the safety glasses are. The veterans are revving up for build season in January because they know that it's hard work, but in the end, when they have the grease on their hands (so much robot blood!), they know that it is not only a valuable experience but also a great team-building exercise. This upcoming season holds much promise; not just for the competitions but also for the students. The new and old stu-



dents will be able to work together and not just make new team mates but also make new friends, and you know what they say: the friends you make in high school will last forever. With the skills that we have learned and will learn, all

of Team 1189 is excited for the season, even though we have no idea what we are delving into yet, but whatever it is we are going to have fun with it.

Training new members and passing along knowledge is crucial to future successes.

“The atmosphere in the shop is very positive; bordering on electric!”

Mentor Steve Beckett working with team members to prepare the shop for build season.

## A NEWCOMER'S VIEW

Sophomore Alanna Sparks is a new comer to Team 1189, and she can already tell this season will be great. “I’ve already learned so much. There are so many things I never imagined I would know how to do,” Sparks said. It’s still pre-season, and Sparks has already learned how to use the lathe, which is a machine to cut circular objects. “When they asked me to use the lathe, my first response was, ‘What?

Me? Okay then,’ but as it turns out I work really well with it.” At first, Sparks was scared to work with such a large and dangerous machine, but now she can’t wait until she has to use it again. “I was supposed to cut four aluminum rods to mount the control board. When I finished, I said ‘Sorry these are so bad,’ but they just kept telling me how well-cut they were.” And that’s the moment that she felt like she actually be-

longed here. The first reason Sparks came to robotics was because her friends told her it was fun, but in reality, she just went to hang-out with her friends during the summer. “Now, looking back, I never thought I’d be on the robotics team and actually liking it. This time, I’m not here for my friends. I’m here for the experience.” Ω



## THE ROBO-TRINITY: A PROGRESS REPORT

### BUILD GROUP:

As the new season grows closer, the build group is hard at work on the old robot. What are they doing? Surgery.

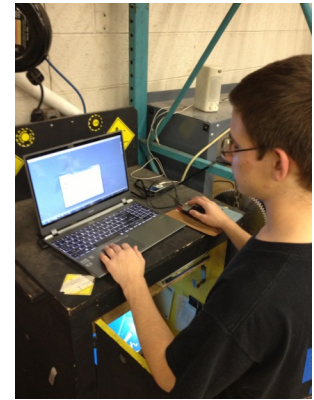
Scavenging for potentially useful parts, they have—regrettably—had to start disassembling last year’s robot. The superstructure of last year’s robot has been deemed useful, and

now the build group is aiming to salvage it. Last year’s bot was indeed a functional piece of machinery, after all, and we hope to create another functional robot next year.

The quest is going very smoothly as of late, and the robot will likely be soon dissipated throughout the shop.

Along with robo-autopsy, the build group is acting as the custodial group. The members not working on the parts operation are going around the shop, making sure that everything is in its place.

Overall, build group is a well-oiled machine, performing at maximum efficiency.



Junior Neal Troscinski, head designer, practicing with *Solid Works* the CAD program used by the team.

### DESIGN GROUP:

While the build group tears apart the old bot’s skeleton, the design group is busy drawing up some new ones. Three, to be exact.

The CAD minions (a term used affectionately) are busy CADing up all of the three most likely useful

chassis types in preparation for next year: the classic 4-wheel drive, the 6-wheel tank drive, and the 4-wheel Mecanum drive. Since all are plausible necessity, design has gotten a step ahead of the game by having the CAD done before build season starts, giving us more time to

build.

As the chassis are all CADed, the new members are learning hands-on how to use SolidWorks, which will speed up performance during the time crunch of build season.

The design group CADs the robot in *Solid Works* which give the builders and fabricators the design.

### CONTROLS GROUP:

The controls group, meanwhile, has also been keeping itself busy. The old robot has proven to be useful to more than just the build group. The control board from last year’s robot has a whole plethora of components which can be recycled, and the controls group has not hesitated to salvage.

Before delving into the mechanical skeleton, however, the controls group spent their time learning how the Lab-View code for the last robot functioned. They’ve learned, specifically, how the robot turned last year, in terms of the code.

They covered the use of the gyro (on the control board) and the encoder (on the bot) worked in junction to make the bot drive properly on a Mecanum drive.

The controls group writes the code that makes the robot go!