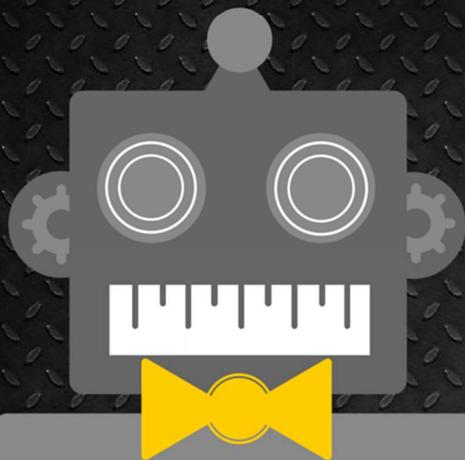




# The Piqued Geek

Art by Eric Joyner



## Upcoming Events:

Boo! At NDSU, Oct 26 5pm-7pm

Bison BEST Competition

## Large Group Meeting:

Oct. 26<sup>th</sup>, Dolve 215

Nov. 9<sup>th</sup>, Dolve 215

Nov. 30<sup>th</sup>, Dolve 215

## Bi-Weekly Watts Up:

### Boo! At NDSU:

On October 26<sup>th</sup> from 5:00 pm to 7:00 pm we are running an activity table at the Mathew Living Learning Center for kids to have fun. We are in need of 2 or 3 volunteers to run the table. The activities are planned so all you would need to do is show up and help the kids have some fun. If you are interested please contact Emma at [emma.schreifels@ndsu.edu](mailto:emma.schreifels@ndsu.edu)

### Bison BEST Competition:

It's almost time for the High Schools who are participating in Bison BEST to compete! If you are an old member of one of the BEST teams or just want to cheer them on you can find more information by clicking [Here](#).

### MRI Summary:

The training at MRI is now over and we are all back home and ready for next semester to volunteer at the FIRST competitions. It was a long, tiring but fun weekend for all the volunteers who went. I'm looking forward to not only what the FIRST competition will be but also the fun we will have while being there!



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Sun 10/22

Mon 10/23

Tues 10/17

Wed 10/18

Thurs 10/19

Fri 10/20

Sat 9/21

Snowplow:  
6:00pm Auxiliary  
Enterprises

Quad: 6:00pm QBB  
108

NRMC: 7:00pm  
Dolve 215

Battlebots:  
5:30pm Dolve 117

ICCC: 7:00pm  
Dolve 202

Snowplow:  
7:00pm Auxiliary  
Enterprises

Video Game  
Design: 5:00pm,  
QBB 114

Snowplow:  
6:00pm Auxiliary  
Enterprises

NRMC  
Mechanical:  
5:00pm Dolve 115

Quad: 5:00pm,  
TBD

NRMC GITogether:  
6:00pm

Quad: 6:00pm QBB  
108 or ME  
Computer Lab



<b>Sun 10/29</b> Snowplow: 6:00pm Auxiliary Enterprises	<b>Mon 10/30</b> Quad: 6:00pm QBB 108	<b>Tues 10/24</b> Battlebots: 5:30pm Dolve 117  ICCC: 7:00pm Dolve 202	<b>Wed 10/25</b> Snowplow: 7:00pm Auxiliary Enterprises	<b>Thurs 10/26</b> <u>Boo! At NDSU</u> Video Game Design: 5:00pm, QBB 114 Snowplow: 6:00pm Auxiliary Enterprises <u>LGM: 7pm</u>	<b>Fri 10/27</b> <u>Bison BEST Comp</u> NRMCMechanical: 5:00pm Dolve 115  Quad: 5:00pm, TBD NRMCMGITogether: 6:00pm	<b>Sat 9/28</b> <u>Bison BEST Comp</u> Quad: 6:00pm QBB 108 or ME Computer Lab  Snowplow: 8:00pm Auxiliary Enterprises
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# Project Updates

**NRMCM**

Contact: [noah.m.curfman@ndsu.edu](mailto:noah.m.curfman@ndsu.edu)

Test Frame is fully mechanically assembled and should be driving by the beginning of October. The team will now enter a design and prototyping phase to get everything prepared for the manufacturing phase that begins November first.

There is no GroupMe just email the email above.

**Quadcopter**

Contact: [abdullah.almosalami@ndsu.edu](mailto:abdullah.almosalami@ndsu.edu)

Detailed CAD model of UAV constructed, from which new design shall be made and simulated, tests shall be run on Solidworks. Computer Vision team is working on thoroughly understanding the OpenCV library and has run some basic image analysis algorithms using our cameras. Obstacle Avoidance System team currently working with an Arduino with a sensor shield connected to several ultrasonic sensors. Control team is working through and building upon previous MAVLink and QFroundControl code. Initial phase of statistical model used to predict most likely location of a single targets is completed. GroupMe Link [Here](#)

**Snowplow**

Contact: [abdullah.almosalami@ndsu.edu](mailto:abdullah.almosalami@ndsu.edu)

Now that CAD model has been completed, various designs have been put up to improve upon the current design and within the coming month, orders shall be placed and modifications will be made. Software/Electronics: All individual modules are ready to be used (GPS, IMU, encoders, LIDAR, motor controllers) and logic model is being built up to start putting it all together. Strategists: Initial phase of strategy selection is complete. Due to faster time, less risk, and more reliability, we are going with a more vertical method of clearing the field instead of row-by-row. This comes with the added requirement of yaw-orientation control of the plow, which is on the other two teams to now work on. GroupMe Link [Here](#)

**Volunteering**

Contact: [rose.m.mcnamee@ndsu.edu](mailto:rose.m.mcnamee@ndsu.edu)

Many opportunities to get involved in Bison Robotics through volunteering! Updates on different volunteer opportunities throughout the year will be sent out via GroupMe, your email, or at large group meetings. Looking forward to a great year!

There is no GroupMe just email [bisonroboticsservice@gmail.com](mailto:bisonroboticsservice@gmail.com)

**Game Development**

Contact: [benjamin.mohan@ndsu.edu](mailto:benjamin.mohan@ndsu.edu)

Bison Robotics' Video Game Development Club will be hosting a Game Jam with Vacuum Door Interactive October 21<sup>st</sup> from 10 am to 10 pm in QBB 114. All skill levels welcome. Food and drink provided. For more information contact the email above

GroupMe Link [Here](#)

**ICCC (Learn Code)**

Contact: [Joseph.cluett@ndsu.edu](mailto:Joseph.cluett@ndsu.edu)

Last week we finished the intro to pointers and functions. This week we start structs, classes and loops. Next week we start on our collaborative project.

GroupMe Link [Here](#)

## Battle Bots

Contact: Kevin.king@ndsu.edu

We are working on our CAD and developing the pneumatic system. CAD should be completed before Thanksgiving.

GroupMe Link [Here](#)

## Ri3D

Contact: brian.kalvoda@ndus.edu

Robot in 3 Days (Ri3D) is one of BR's most intense events as members are tasked with working as a team to create a fully functional robot in just 72 hours. This event takes place in early January but, planning starts now! Keep an eye out for more updates and join the Ri3D GroupMe to be a part of the action.

GroupMe Link [Here](#)

## AGVR

Contact: karl.klindworth.2@ndsu.edu

Dr. Selekwa has almost finished the equations of motion. We hope to integrate the equations late next week to have the complete robotic system. After that it will be a matter of finishing the necessary programming in order to achieve path tracking control.

