Rediscover the Joy of Making Things
CONTENTS

04  Message from the Editor
06  Board Updates
10  Hurdy Gurdy Maker Quest
12  By Thor’s Hammer: On Leather, Armor, and Hubris
18  Nova Labs Attends East Coast Rep Rap Festival
20  Featured Entrepreneur: Bo Pollett
24  Happenings in November
26  It’s a Happy Halloween Party at Nova Labs
30  Meet Thrud
31  Call for Volunteers
33  Key Members
Just as Northern Virginia trees trade their blanket of green for a panoply of rust-colored hues, only to drop all their leaves a few weeks later, Nova Labs is caught in its own whirlwind of change, making this an appropriate time to reflect upon what makes our community special. Makerspaces are a seemingly trendy commodity, yet many have closed their doors for good.

Membership in an all-volunteer, non-profit organization comes with an expectation that members not only contribute their personal treasure monthly, but also that they pay in time and talent. Then there is the management of all our diverse interests, tools, and personalities. An outsider might wonder why we bother. I’d like to posit that the sum of our parts really is greater than the whole. Coming in to Nova Labs is rather like wandering into Willy Wonka’s factory—it is so full of both fantastic creations and ingenious makers that you cannot help but feel burnished by their creativity and insight.

Surely, though, the makerspaces whose doors have shut forever also had inspirational projects. Why then do we find ourselves the beneficiaries of enough coin to keep the lights at Nova Labs on?? It must be the communion between our members. We don’t just make together, we hang together. Sometimes, it’s an impromptu bike ride on a Saturday afternoon. Others, it’s a group of gamers on Friday evening. It’s makers hanging out on the black couches in Orange Bay, or kids focused on high-tech pumpkin carving. Jennyfer Peterson likes to call it the Nova Labs Special Sauce.

As we continue our transition to Nova Labs 3.0 and determine what we want our makerspace to be when it grows up, I’d like us all to coddle the special sauce that feeds our handiwork and our souls.

Karen
Karen Shumway
Editor

Find me on Nova Labs Slack: @Karen Shumway
BOARD OF DIRECTORS

Sam Aparicio
President

Daryl Peace
Vice President of Outreach

Jim Girardi
Vice President of Operations

Margaret Kositch
Treasurer

Karen Shumway
Secretary

Mona Davis
Assistant Treasurer and Director

Marybeth Haneline
Director

Brian Jacoby
Director

Shane Smith
Director

Jeff Spugnardi
Director
On October 21, 2019, the Board convened to elect officers for the upcoming term. We thank the incumbent officers for their dutiful service in their respective roles from 2018-2019. The officer election results are as follows:

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Sam Aparicio</td>
<td></td>
</tr>
<tr>
<td>Vice President (Operations)</td>
<td>Jim Giraldi</td>
<td>he will focus on helping Nova Labs run more smoothly</td>
</tr>
<tr>
<td>Vice President (External Outreach)</td>
<td>Daryl Peace</td>
<td>he will focus on institutional relations, fundraising, and relationship building with companies</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Margaret Kositch</td>
<td></td>
</tr>
<tr>
<td>Assistant Treasurer</td>
<td>Mona Davis</td>
<td></td>
</tr>
<tr>
<td>Secretary</td>
<td>Karen Shumway</td>
<td>she will focus on keeping the board organized and helping the board keep open communication with everyone</td>
</tr>
<tr>
<td>2019-2020 Director</td>
<td>Shane Smith</td>
<td>remains an at large director</td>
</tr>
<tr>
<td>2019-2020 Director</td>
<td>Jeff Spugnardi</td>
<td>remains an at large director</td>
</tr>
<tr>
<td>2019-2020 Director</td>
<td>Brian Jacoby</td>
<td>remains an at large director</td>
</tr>
<tr>
<td>2019-2020 Director</td>
<td>Marybeth Haneline</td>
<td>remains an at large director</td>
</tr>
</tbody>
</table>

The Board voted to appoint Mona Davis to the Board.

The Board would be remiss if we did not recognize and thank Marybeth Haneline for her efforts during her presidential tenure on the Board. Board service is one of the toughest volunteer roles at Nova Labs, and Marybeth performed her role as president with dedication and personal sacrifice. Her individual and tireless efforts supported the growth of Nova Labs as a community resource and forwarded the maker movement writ large. Marybeth fostered relationships with key entities and individuals that contributed to the overall mission and welfare of Nova Labs. We thank Marybeth for her service and look forward to her contributions as a continued Board member.

Also in October, Yuri Beckelman regretfully resigned from the Board due to an increase in his work engagement.

---

**MEMBER MEETING**

**DECEMBER 16 | CLASSROOM A | 7-9PM**
**STEWARDS**

Frank Sogandares  
Woodshop Steward

Zack Borschuck  
CNC Steward

Frank Hum  
Metalshop Steward

Patrick Marstall  
Blacksmith Steward

Patrick Thompson  
Laser Lab Steward

Carrie Hafer  
Crafters Cove Steward

Steve Fritzinger  
Plastics and Composites Steward

Paul Chase  
3D Printer Steward

Stewards to elect a new Steward Coordinator or Interim Steward Coordinator
Maker Market and Artisan Fair
Saturday, December 7, 2019
10 a.m. — 4 p.m.
Free. Bring your friends, family, and kids.
Handmade gifts made by our artisans on our makerspace 3d printers, laser cutters, etc.
Etched/painted glassware, personalized items, vases, bowls, cards, jewelry, ornaments, and more!

Activities/Entertainment: Blacksmithing demos, tours, Play in our magic sandbox and virtual reality rooms.

Nova Labs, Inc
1916 Isaac Newton Sq. West
Reston, VA

Nova Labs, Inc is a 501(C)3 Non-profit Charitable Organization
TEAM LEADS

Jennyfer Peterson
Operations Services

Jeanne Marshall
Outreach Team Lead

Fabiana Cesa
Youth Team Lead

Patrick Thompson
Safety Team Lead

Empty, Inquiries Welcome!
Education Team Lead
In early June 2019, I was invited to a pirate-themed murder mystery party with some family and friends. This is usually a fun get-together where everyone dresses up and gets into character. I was looking for props to make or bring, and came upon the idea of bringing a Hurdy Gurdy (https://en.wikipedia.org/wiki/Hurdy-gurdy). However, the cheapest I could find one for was around $600, which was way too expensive for a prop for a party.

However, I’m a maker! I kept looking and eventually found the Nerdy Gurdy (http://nerdygurdy.nl/), which provides kits and plans to make your own Hurdy Gurdy. After a couple hundred dollars’ worth of materials, some false starts, laser cutter frustration (make sure your wood is flat before cutting), and a few months of “an hour here and there” in my basement I finally got my gurdy done. It’s not the prettiest, and it’s fairly screechy, but it’s the first big project I’ve ever done and I was excited to complete it!

The body is made all from laser cut wood (Baltic Birch, sourced from Woodcraft in Leesburg). All pieces were glued together in my basement with wood glue, then sanded, stained, and polyurethane lacquered. If I had it to do over again, I would have stained before gluing, because that was pretty difficult. I also needed to do an extra coat or two of poly after a sanding mishap where, in the process of getting the wood smooth, I accidentally sanded through the back and beyond the stain, requiring me to redo the back top of the gurdy. After it was all pretty, it was a simple matter to install the rest of the hardware (although, the tuning pegs fit pretty tightly as they had to be “coerced” into place).

Additionally, I had to find a new model for the strap pegs, the ones that it came with were too flimsy and ended up breaking, almost dumping the gurdy to the ground. The biggest issue I had was that the sides and the top/bottom didn’t line up. I ended up solving it by heating with a heat gun, pressing the sides back into place, and sanding smooth.

After making the hurdy gurdy, I’ve spent a decent amount of time tuning it up to make it sound less like a screeching cat and more like a harmonious instrument. I’ve spent a little time fiddling around with it, but I haven’t learned to play much. It seems like most of the songs I’ve heard played on it were a collection of whole notes. I’m looking forward to being able to take this instrument back to Renfest next year and actually performing for some people. Until then, I’ll work on tuning.

Demo video
https://youtu.be/dLaQPFEmWu4

A video of me actually playing something that doesn’t sound screechy and horrible
https://youtu.be/zA8HloD1Jz0

Find me on Nova Labs Slack: @Brian Kidwell
BY THOR’S HAMMER: ON LEATHER, ARMOR, AND HUBRIS - An overview of designing, patterning, and building leather armor: Part 1
by Melissa Cochran
Pour some Scotch and grow that moustache, it’s time to talk about working with LEATHER.

Leatherworking is an ancient and time-honored tradition, so, like any reasonable maker with aspirations, I started with a full suit of upper body armor. Let’s go!

As a person with ADHD (I mean a cosplayer), I get my hands dirty and dyed in a number of disciplines. I’ve realized the only solution, since we all die eventually and I have a limited amount of time on this earth, is to dive into the deep end. This time, I set my sights on replicating Thor’s armor from the film Thor: Ragnarok.

There were several immediate hurdles to overcome:

1. I had never made anything significant out of leather, unless you count the Barbarian Link armor, which is dicey since it was mostly shredding goatskins and covering my nethers.

2. The film’s armor was likely cast and molded all in one piece out of some kind of rubber, or plastic, or, actually, I’m not sure, go talk to Steve F (one of Nova Labs’ resident moulding and casting experts). I knew it would look great in leather, but the fact was, that’s not actually what it was made out of, and I was on my own for a process;

3. I am exactly ¼ the size of Chris Helmsworth.

So I did what any of you would do: I barreled on ahead and figured it out along the way.

**PLANNING YOUR PROJECT**

I began my odyssey by drawing myself in Thor’s garments. I made sure to include the fact of my hips, as they were not going anywhere.
One of the challenges of creating a garment, specifically a cosplay from something animated or simply having a huge budget, is that the garment doesn’t work. If originating from something animated, it sometimes can’t actually be worn. If it comes from a film, there could be any amount of body glue and Fixing-It-in-Post – you just do not know. I went to see Cats recently, and did you know that their costumes are leotards covered in Sharpie? It doesn’t matter because it looks great from the STAGE, but people see cosplayers up-close all the time. I can’t just Sharpie on my abs and call myself Thor.*

Part of that challenge is creating a way to get the garment on and off, a struggle that a fictional character just doesn’t have. Animated characters are famous for never changing clothes, and when they do, half of them just wave a wand or jump in a phonebooth or something—the cheaters. Chris Helmsworth has a fleet of underpaid Millennials to don his fake rubber armor for him while he gazes into a mirror**. I have to be able to get it on and off—ideally by myself.

The second challenge, once you figure out the physical engineering of the object existing IRL,
is making it look good on YOU. Even if you’ve chosen something similar to your body type, there will be some editing. In this case, the detailed paneling within the armor, the layout of the rivets - all that would probably change. I do not have the same amount of chest as Helmsworth. Trying to duplicate it exactly might be impossible, and it definitely wouldn’t look good on me. Don’t hesitate to take the style lines and move them to a suitable place on your body, on a sketch or a dressform. You’re going to be the one wearing it.

The third challenge is finding reference. There’s a lot of photos of this garment—from the front. Every photo from the back, of which there are few, are covered by the cape. There’s some guesswork back there. Design before you start chopping.

BUYING LEATHER

Cost, vocabulary, that good barnyard smell
This is a step that prevents many from getting involved in leather, and it’s analogous to the reason why I have yet to learn much about hands-on casting and molding: There’s a lot of options, a LOT of vocabulary, it isn’t standardized by brand, and making a mistake can be, well, expensive.

For this project, I did purchase from Tandy. I don’t always recommend them for price, but Margie had a dope discount. Thanks, Margie! Thor took about two shoulders of cowhide, 4-6 oz, all natural veg-tan leather. That’s the critical bit for making anything that you’re going to really work with: dying, moulding, etc. Got to be VEG. TAN. I got their good stuff but not the best?*** Just like when I order at a bar.

If you’re already lost in vocabulary do not worry; that’s normal. I don’t have the real estate to go deep into comprehensive vocabulary here, though Tandy has a pretty good guide for how to understand the WEIGHT (which is the thickness) and CUTS (shoulder, belly, etc), and even how to calculate the square feet you need. You can find all that here: Tandy guide

If you’re worried about dropping a Benny on a side of cow and ruining it, here’s a few tips:

1. Watch for sales: Cows are natural resources and not all hides are the same. Leather suppliers have sales to move out one kind of hide when receiving another. The most standardized and consistent brand is Tandy, but honestly, unless you can get one of their discounts (business or military is the best), they’re always the priciest.

2. Suppliers: On that note - when you start searching for leather you’re always going to find Tandy. Again, their stock is consistent, but they are NOT the only supplier out there. There’s a range of places from big businesses to momses and popses. Unless you’re in a big city, Tandy may be your only option to shop in person, but eventually if you can get away from them, do it. Springfield Leather is another good option. Some straight up ranches in the midwest do some online sales. A ton of the places in the Garment District of NYC have online presences and their stocks can be wild. Do some hunting.

3. Leather Quality: Try “Grade D”. Tandy doesn’t sell it, but Springfield and some others do (it may go by a few names, but it’s basically, you know, not the best leather.) The truth is that Grade D just means that the cow isn’t suitable for sacrificing to a picky deity. It might have a brand, some bug bites, a scar—but it’s cheap, and most of it is perfectly good, making it GREAT to practice on. Or even use for a finished product - you’ll often luck out and get plenty of good skin to work with.

4. Buy bulk scraps: Some suppliers will cut their hides into square feet to sell. But remember, a hide is animal-shaped - that means scrap. Buy bags o’ scrap! Keep in mind if you want to work it, you need that good VEG-TAN leather - nothing already treated with chemicals will do. Still, if you find treated (usually bag or upholstery) leather cheap and in bulk, you can do some fun decorative stuff with it. Tandy overcharges even for scrap - look for mom and pop places, the kind of stores that have websites from the nineties and still give a phone number. They will help you out. It’s one of the nice things about pursuing an Old Fashioned art.

5. Make. A. PROTOTYPE.
CREATING A PATTERN/PROTOTYPE
If you were hanging out around the lab this spring and summer, you may have noticed that someone was covering Fran the Dress Dummy in various arrangements of geometric, neon foam. That person was me.

I am 200%, in-your-face, evangelical about prototypes - in sewing they’re called “muslins,” but it’s a prototype. I was part of a startup for a year, once, and now I like to jam stuff together and yell “fail fast” as it collapses into a heap. Once your Prototype works, it becomes your Pattern.

When creating a Muslin/Prototype/Pattern for sewing/leatherworking, take the following into consideration:

1. Make it out of something cheap…
2. But also out of something with similar properties. In this case, for leather, I chose EVA foam. It’s thickness and propensity to bend was similar enough, and it’s a fraction of the price.
3. Masking tape is your best friend.
4. LABEL. EVERY. THING.

If you’re into cosplay, then you have already made half of your belongings out of EVA foam and you can name three suppliers. However, the big secret is: It’s “craft foam”. It’s also what they make gym mats out of. Since I was imitating leather, I was able to just buy a few cheap packs of craft foam at Michael’s - it was maybe 4mm thick, just right for my leather.

EVA foam also had the advantage of being able to be drawn on and easily cut, even on the mannequin, since it holds a form. I began the process by taping my style lines - those are seams - on the mannequin, then just… holding the foam up to it and cutting the shapes like a jigsaw puzzle. I discovered that if I sharpied intersections on the tape, then quickly pressed the foam to it, the pattern would just print right onto the foam for an accurate cut right away. Then… tape it together to check that it works.

You might remember me just doing this for weeks. Honestly, it was probably more time than was necessary, but I was in too deep by then. The learning was so good.

Before disassembling the pattern that satisfies you, don’t forget:

1. LABEL each piece. Give it a name. Note how many of them you will cut and of what.
2. MARK distinct places where pattern pieces will join, especially on long curves or lines.
3. PHOTOGRAPH it. You might need the help when it comes time to reassemble.
4. CLEAN UP YOUR SPACE. C’mon guys, Jennyfer is not your mum.****

Did you like this blog yet thirst for more? Classes in leatherworking are coming up. Keep an eye out. Ta-ta!

* I absolutely can, but that’s some other kind of art entirely.
** ** I want to be clear that I am not being critical of Helmsworth. I would do exactly the same in his place, and so should you.
*** They have fancy names for the quality levels: for Tandy, I think Oak is best while “Craftsman” may have some defects. In this case, I also bought two individual shoulders instead of one full shoulder because it was cheaper that way. Follow your heart, and your wallet.
**** Unless you are Keane. Then she is definitely your mum. But she probably doesn’t clean up after him, either!

Coming up in Part 2:
CUTTING UP YOUR MONEY, I MEAN, LEATHER DYE AND DYING FIGURING OUT THE ORDER OF THINGS.
YES, YOU GET TO USE THE CONSEW INDUSTRIAL SEWING MACHINE
NOVA LABS ATTENDS EAST COAST REP RAP FESTIVAL 2019!

by Paul Chase
Nova Labs took our show up to Bel Aire, Maryland for a two-day celebration of 3D printing, particularly the RepRap project.

John Link exhibited his large-format Link One printer, a unique machine built into a table with a gigantic print area and a fully functional Formula 1 RC car.

I (Paul Chase) exhibited my 11-year-old original Prusa Reprap, crowd-pleasing marble machines, and Beltalowda, an experimental continuous-belt printer.

Daniel Vrolijk helped man the table, and Nova Labs members Craig and Rachel were also in attendance along with Lawrence Nightingale and other friends from NVCC.

Adrian Bowyer (MBE), the founder of the entire RepRap project and the reason we have cheap, affordable 3D printers today, headlined the show (and signed my ancient printer!).

Other industry leads included Josef Prusa of Prusa Printers and Brook Drumm of Printrbot fame, plus a large assortment of 3D printing bloggers.

Find me on Nova Labs Slack: @Paul Chase
FEATURED ENTREPRENEUR: BO POLLETT
by Loretta T. Dipanda
Bo Pollet, engineer, businessman and maker, is living the dream. A maker’s dream, that is! Bo is an entrepreneur running his full-time, successful business out of Nova Labs.

With an extensive background in engineering and the aeronautical industry, and a master’s degree in business from George Mason University, Bo has built his company, Theta Composites, to target the midrange customer who needs product consulting and development, design and manufacturing. Theta Composites developed a process to fabricate high-quality, low-cost parts with a fast turn-around time – and uses the Nova Labs machines to make that happen.

Bo says he typically works with customers “after the prototype, when an inventor, or start-up, or an innovation department of a large company needs a medium production run; more than a small, initial run, but less than the ten thousand parts that might be produced in China.”

His company specializes in small aircraft structures for commercial and sport drone applications, performance automobile retrofits, custom marine structures, and music and sport equipment weight reduction.

Why Nova Labs? Bo explains that Nova Labs is not the first maker place he has joined, but it’s one of the best. “A great community,” he says, “makers coming together to share tools, knowledge and connections – professional and personal.” He has been involved with Nova Labs since the early days and has contributed a great deal to the growth and success of our maker’s place.

You can find Bo at Nova Labs 6 days a week working with the machines and computer-driven tools, from morning until evening—and sometimes through the night! He often hires other Nova Lab members to work with him on his client’s projects.

Bo puts the laser cutter, 3-D printing machines,
CNC and other machines from the woodshop to the metal shop through their paces. “I actually use every machine in the place,” Bo says, and he means it.

Recently, a customer stopped by to meet with Bo, expecting him to be working hard and finishing up the customer’s project. Bo was using one of Nova Labs’ sewing machines. The customer asked, “Are you working on something personal?” “Nope,” Bo answered, “This is for your project.”

His current passion is solar-powered drones. “Regular drone batteries drain quickly, and tethered drones have limited range, so I want to make solar-powered drones that can range farther geographically and stay up for an extended period of time, for surveillance and information gathering projects.” Next, solar-powered planes? (It doesn’t seem possible now, but you never know what a maker like Bo can do when they put their mind, and Nova Labs machines, to the task.)
But Bo’s connection to Nova Labs is not just his thriving company, it is also the many ways he contributes as a teacher, mentor, advisor, and planner. Bo has created curriculum to teach robotics, electronics, aerodynamics, and rapid prototyping. He has expanded educational programs at Nova Labs to include university-level STEM education.

Bo can teach most of the classes at Nova Labs, including classes in the metal shop, woodshop, programming, CNC, and more. Bo is a very popular teacher; he has a talent for explaining safety and productivity, and can teach at all levels, from beginner to professional.

Bo’s passion for making, teaching, building community and helping others succeed is a shining example of what one can bring to a maker’s place like Nova Labs.

Find me on Nova Labs Slack: @aerotech106
HAPPENINGS IN NOVEMBER

Some of the Main Attractions in November are below. Class names are clickable.

Nov 2  WW: Woodshop Router Red Sign Off
Nov 2  AC: Intro to Jewelry Making, Ring Soldering Workshop
Nov 2  MW: CNC Mill Sign Off Class
Nov 2  BL: Blacksmithing 101 Safety Sign Off (This class is every saturday).
Nov 3  WW: Intro to Wood Turning Lathe Sign Off
Nov 5  WW: Wood Lathe Skill Enhancement
Nov 7  MW: CNC Mill Sign Off Class, 10-week Series
Nov 7  AC: Jewelry Making: Wire Working Workshop
Nov 7  CC: OnShape for 3D printing
Nov 7  Computational Mathematics: P=NP for students and engineers at Nova Labs
Nov 8  BL: Blacksmithing 101 Safety Signoff
Nov 11 BL: Forging a Feather Wall Hook
Nov 12 AC: Halloween Doll Jewelry
Nov 12 LC: Laser 103 – Creating engraved shot glasses and class coasters
Nov 12 WW: Woodworking 101
Nov 15 ST: Make your Own Microscope Slides
Nov 15 EL: Introduction to Sensors with Arduino using TinkerCAD
Nov 16 EL: Arduino 101
Nov 16 STEM4Kids - Kids Open Maker Meetup
Nov 18 INCA: Idea-to-Invention-to-Patent - Cost Effective IP Strategies
Nov 20 NoVA TOOOL Locksport Meetup
Nov 20 ST: Fish Dissection
Nov 21 ISC2 Sponsored Cyber Tech Talk – Pentesting
Nov 22 AC: Soap Making Workshop
Nov 22 ST: Meet the Bees
Nov 22 AC: Skull Piñatas to celebrate Día de los Muertos
Nov 23 WW: Mason Bee House
Nov 23 EL: Soldering Station 101 - Learn SMD soldering, desoldering, reflow Sign off
Nov 26 3D Printing 101
Nov 28 AC: Intro to Jewelry Making
Nov 28 Nova Labs Maker Thanksgiving 2.0 (potluck)
Dec 07 Nova Labs Maker Market and Artisan Fair

Calendar of Events
Provided by Instructors and Karen Shumway
**Woodshop 101 by Margie Foster**

It seems like the magic of our woodshop is getting noticed! Many new associates and visitors are expressing interest in learning woodworking at Nova Labs. To accommodate all the new woodworkers, we’ve built a class to get them started on their journey!

Woodworking 101 fills the gap between Green Orientation and getting sign-offs started, by introducing people to the culture of our woodshop, general safety and what to expect. It’s also a great way to learn all the lingo, learn what you need to know to start buying wood for your projects, get pointers on how to pick a good project, and understand the processes from preparing wood to finishing it.

This is also a valuable class for people who have gotten their sign-offs and have been in the woodshop for awhile, but don’t know how board foot measurements work, haven’t learned the definition of quartersawn lumber, or haven’t started to navigate the world of finishes.

If you’re serious about learning woodworking, or if you’re just curious if it’s something you’d like to try, sign up for Woodworking 101 and learn the foundation you’ll need to get started on your journey! The next class is Tuesday evening, November 12.

Price $19. Click here to sign up.

**Nova Labs Maker Thanksgiving 2.0**

**by Jennyfer Peterson**

Join us for a holiday Maker meal! We’re gathering for a friendly potluck Thanksgiving dinner featuring turkey, ham, brisket, and all the delicious things you’ll make and bring. This is great for anyone not traveling home for the holiday who wants to share a meal, conversation, and plenty of laughter.

Link to Group Meal: [https://www.PerfectPotluck.com/TROD1750](https://www.PerfectPotluck.com/TROD1750) (password is 1916)

Bring your maker stuff and enjoy after-dinner making/crafting, football game (in a separate room), and nibbling on leftovers and deserts. Don’t stress out by cooking the whole meal—make two of your traditional sides or a meat and a dessert to share.

IMPORTANT: Sign up EARLY/SOONEST with what you plan to bring at the link above!!

We’ll eat at 1:45 pm, so have the main food there by 1:30. If you’ll stop by after your family dinner, please use the link below to indicate you can bring dessert or snacks for grazing, hanging out with movies and conversation, and post-meal making. People will be here for a while.
IT’S A HAPPY HALLOWEEN PARTY NOVA LABS!

by Jennyfer Petersoon
The Nova Labs 2nd annual Halloween Party was a fantastic community event. Halloween is the maker national holiday after all. It was a huge turn-out of about 40 people. Classroom A was the hub with lots of great conversation. We had four tables of food, almost all potluck.

Thanks to all who brought food! The two spicy chillies, ice cream cake, chicken pieces, and foggy swamp punch with dry ice were all popular. People dressed up in costumes they made, altered, or put together for the party. Check out the photos of some of our favorite costumes. Dave Fritz was a hit with his maker-eating huge boa constrictor. Julia’s costume was an inspiration—just Wow. Another favorite was the cute squirrel with a gorgeous tail. The kids were the cutest, though. Check out Mona, the Iron Chef, and her son.

Our host, Adam Winsor, and a team of helpers built the giant spider web in Orange Bay well in advance. Many of you have made spiders using different materials to add to the web. Those of you who haven’t added one, please try one. It’s a community build project and all appropriate materials are welcome. Adam also provided a great maker activity the night of the event. You could make a swamp creature eyeballs and hair and other ingredients. Eeek! Very gross. But every fiend wanted one.

Thanks to Dave, Bryce, Shane, Elena, and Ceredwy for help setting up. Thanks to Kathy, Jalene, Farina, and everyone who helped with trash disposal, dishes, and resetting the classroom. It was great to come in this morning and find the room ready and the kitchen so spotless. You guys are awesome.

Thanks to all who came out for this community event. Our next one is the Makesgiving event on Thanksgiving Day. These community events bring us together as a community. They are critical in dampening the effect of separating ourselves into stewardships that need to operate separately to work. When everyone gets together for common meals and shared activities, it is good to see us act as one unit to foster and grow the idea that we are one community with shared goals. The more we see leaders and makers participating from the front area, the shops, and each tribe, the more we can foster and strengthen our shared community.
MEET THRUD! by Patrick Marstall

The Blacksmithing tribe acquired a new forge this week, a six-burner “studio” forge from NC Forges. This new forge is designed with a wide, flat work area that will allow more smiths to use a single device and to allow larger pieces.

Going with our tradition of naming Nova Labs’ forges after Valkyries from Norse mythology, this one will be called “Prúðr”, after the daughter of Thor and Sif, whose name means “strength”. Transliterated into English, this is pronounced “Thrud”, which is coincidentally the noise that the forge makes when being lit for the first time each session.
CALL FOR VOLUNTEERS

Front Desk and Help Desk Assistants:
Monday (5:30pm-8:30pm) or Saturday (1-4pm)

Internships with free makerspace access:
available for college and high school students and homeschoolers age 17 and up who can work once or several times per week during the evening or daytime.

Woodshop Volunteers:
Work on small assigned tasks and tool maintenance

Video Equipment Admin:
Work with operations team to improve, fix, and maintain A/V equipment

Computer Admin:
Work with operations team to manage makerspace CAD computers, events laptop, kiosks, and maintain computers and printers.

Software Developers:
Join our team of volunteer Coders and Sys Admins who help maintain our IT infrastructure. If you have experience in any of these areas we could use your help: Perl, Php, Python, Javascript, Routers, Switches, and LANs.

Newsletter Managing Editor:
Work to coordinate content creation with the graphic designer and copyeditors to publish the monthly newsletter.

Newsletter Journalists:
Interview makers to generate articles every month for the newsletter; pieces due by the 15th. You need not be a professional writer, we have great copyeditors!

Contact volunteering@nova-labs.org if you’re interested!
You can also visit us at https://www.nova-labs.org/volunteer/
Thanks to all who have consistently used the Nova Labs computers and network only for purposes that support our mission. Your thoughtfulness in complying with this best practice has prevented more notices from our service provider for the downloading of illegal or unauthorized videos and malware breakouts. You’ve kept your use in scope. Hooray!

Safety Reminder of the Month:
Clean off your safety glasses after each use. Do not use damaged or scratched safety eyewear. Damaged equipment should be dropped off at the front desk with a note so we can track issues, burn rates, and detect trends. If people would like free safety glasses for their personal or charity use, please let us know. We have plenty to give away.
Name: Carlos Pilonieta  
Sponsor: Ted Markson  
Biography: He came to Nova Labs in October 2017 where he was glad to see a thriving maker community in Reston. He is an industrial designer and enjoys using the shops for work and hobby. Carlos has become involved in several areas of Nova Labs, like Empower2Make and Rhinohawk. You can usually find him on the laser cutter, or building scale figures from TV shows and movies.

Name: Rahman Abdelhameed  
Sponsor: Brian Kidwell  
Biography: Rahman has helped during the woodshop roundup this previous weekend, as well as assisted in various routine maintenance procedures in the woodshop. Rahman, affectionately known as noodles around the shop, is a burgeoning woodworker with a good eye for beautifully figured woods (walnut). He’s been making cutting boards for friends as of late and is starting up his first big project: a beefy wraparound desk. Good luck, Noodles!

Name: Nicholas A. Brault  
Sponsor: Doug Calvert  
Biography: Nick and his girlfriend have enjoyed working on a number of projects in the woodshop. Most recently they have completed some frames for wedding presents and a shoe rack for the foyer. Nick also enjoys car racing.

Name: Nick Lattanze  
Sponsor: Pat Marstall  
Biography: Nick needs no introduction given how active he’s become in the Nova Labs community over the last few months. Jack of all triads, master of a few. Life long local of NoVA and currently a cyber security DevSecOps consultant. With a diverse career background including IT ops, HVAC, Mechanic, Construction and EMT. Hobbies all over the place, now including blacksmithing. Likes to make, learn and grow. He’s become a bit of a fixture in the blacksmithing community and he is always asking about how he can help set up or clean up after a session. Recently he’ve asked him to step up and become a blacksmithing “lead” to help grow the tribe.
**Name:** Matt Barnard  
**Sponsor:** Daniel Schneider  
**Biography:** I grew up in Annapolis, Maryland, and lived in Atlanta and Philadelphia along the way before settling in Northern Virginia. I got into making stuff early and spent a good portion of my teen years rebuilding old BMWs to drive and eventually race. After stints selling motorcycle parts, building race cars professionally, and tuning engine computers, I found my calling as a reverse engineer, and for the last ten years or so, I’ve focused on making sense of the software that runs complex embedded systems. I’m currently working on a long term project – swapping a modern engine into a vintage race car and using it to get back to instructing on track. My interest in Nova Labs started with the metal shop, because making race car parts is more fun than buying them, but I enjoy woodworking and love learning any type of new skills.

**Name:** Dave Shapiro  
**Sponsor:** Jennyfer Peterson  
**Biography:** I joined Nova Labs as an Associate about 3 months ago now, but I have been attending various classes for around 5 years. I’ve primarily been working on Glassblowing for the past few years; earlier in my life (high school), I spent three years woodworking and working with stained glass, and so I’ve been refreshing my knowledge from then. Outside of Nova Labs, I’m currently pursuing my MBA at Georgetown and previously worked as an analyst in the pre-transactional corporate investigations field.

**Name:** Mona Davis  
**Sponsor:** Sam Aparicio  
**Biography:** is interested in everything maker-related, and loves woodworking in particular. She loved being part of Empower2Make and enjoys both individual and group building. Outside of Nova Labs, Mona is a finance professional with a career focused on banking and healthcare, and an interest in entrepreneurship. Mona participated in the last Empower2Make in one of the build groups. With Nova Labs 3.0, she has acted as the facilitator for the Real Estate working group, attended county hearings, evaluated new properties and coordinated the effort of other volunteers. With the Treasurer she has performed dozens of hours of work, building an asset inventory, managing the expensing process, implementing a new automated accounts payable system, doing financial analysis, preparing reports for programs and working with the bookkeeper on a weekly basis.
KidSTEM activities have been rebooted at Nova Labs! Join #kids-stem to learn about impromptu bike rides, pumpkin carving, spontaneous crafting, dissections, and more.