



Hi <<First Name>> ,

Welcome to the September 2019 Nottingham Hackspace Newsletter!

It's the end of summer but that doesn't mean the fun stops here. This month we have a Trustee Election, a new 3D Printer, lots of Craft events, Crapathon and loads of other stuff too happening at the Hackspace! Happy Making!

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### **September Trustee Election**

Following James' resignation, we are holding an election to fill the open position. From making sure the space is comfortable for all of its users to keeping tabs on the rent bill, the trustees help make the

space the amazing place it is.

The election began on the 7th September and will run for 7 days. Opavote is being used to conduct the election with [James Fowkes](#) acting as the returning officer.

Dominic Morrow, Dom Marshall & Andrew Armstrong have all nominated themselves for the position.

[Read about the Candidates](#)

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### **Hackspace Funding**

Due to a large increase in our monthly costs and dwindling membership contributions, we are in danger of running out of money. **We are therefore urging all members to consider increasing their standing order to the space by at least £5 a month.**

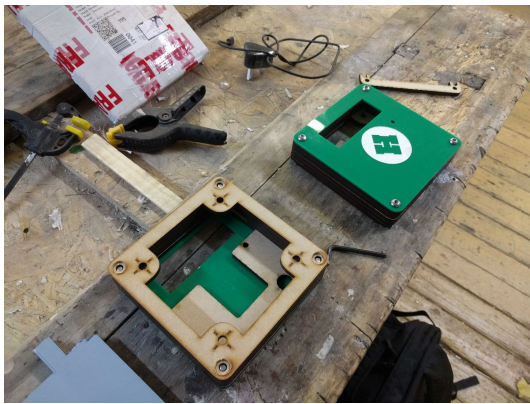
Since we sent out the first communications about this, 68 members have increased their membership contributions. This is fantastic, but it's still not enough. If you haven't already, we implore you to consider doing the same.

If you'd like to make a one off donation to the space, a donation function has been added to HMS that makes this incredibly easy. Have a look on your [HMS homepage](#)!

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### **Tuesday Night Infrastructure work**

Despite the freeze on spending currently in place, the Hackspace 2.5 team have been doing some excellent work on Tuesday evenings in the past few weeks.



They have been:

- Building work surfaces in the new screen printing room that joins onto the studio. In this room, there will not only be an exposure unit for developing screens but also some other tools like our new book press!
- Building gatekeeper RFID units for the team storage room.
- Cleaning the downstairs area and removing a lot of the scrap.
- Putting together the new heavy duty metalworking benches downstairs.
- Making space upstairs for a second laser cutter coming to the space soon.

If you are interested in helping out, come to the Hackspace on Tuesday, at 7pm, and look for Betty, Josh, Bob or Steve (Moop).

## Team Member Changes

- Dan G & Stuart M have joined the [Membership team](#) and will be helping out on Wednesday evenings by giving tours to visitors and potential new members.
- Stuart C has joined the [Craft team](#) and will be working with the other team members to look after the Craft Room.
- Nick H volunteered at the July members meeting to join the [Tools team](#).

Joining a team is an easy way to meet new people and help keep the space running. There's now some handy instructions on HMS to tell you how to get started.

Want to Join a Team?

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## Upcoming Workshops

We've got loads of workshops coming up over the next couple of months. Our September Craft Day is up next where you can give leatherworking, screen printing or Origami a go. Workshops are a great chance to meet other like-minded hackers and learn a new skill!



Buy yourself a ticket, tell all your friends, buy your mum a ticket for her birthday, send an email a round your office, do anything you can to



make it known that we have events now and let's get all these tickets sold.

### What's on:

CNC for Beginners - 19th September

Craft Events - 21st September

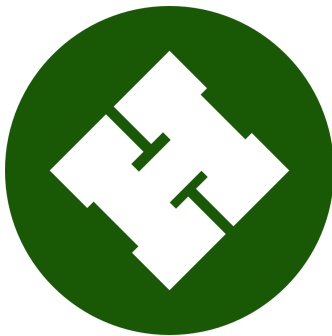
Arduino for Beginners - 5th October

Craft Events - 12th October

Pyrography - 19th October

Tickets are available here:

### Event Tickets



### *Members Meetings!*

This month & last month have seen lots of people engaging in the members meetings by attending at the space or following along online. Once a month we've been piling into the newly completed classroom to discuss the current financial issues facing the space.



### *Extraction System*

We are now using all three ports on the large extractor in the centre of the room. Each port has been fitted with a blast gate. Extraction is on when the slider is up.

Air flow to the extractor is best when only one blast gate is open. If you notice that the extractor filter bag is not fully erect then



### *Leo's 3D Printed Robot*

Leo & his Dad, Chris, visited the hackspace on open night and with the help of the 3D printing team mastered the art of layering melted PLA for a school show and tell project.

Leo designed the robot using Tinkercad and printed it on our Ultimaker. He was "chuffed as punch"

The next meeting is at 8pm on 2nd October in the Classroom.

check the blast gates; then the hoses for blockages.

with the outcome! We think it's awesome.

## Meeting Minutes

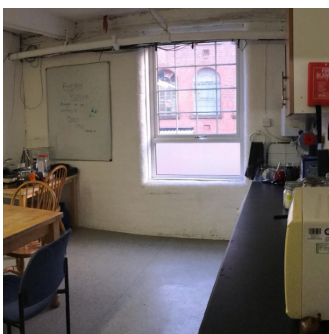
## More Info



### *New SLA 3D Printer*

The SLA printer that was recently acquired through a pledge drive has been brought into the space! The printer is an Anycubic Photon that uses Resin to produce very high detail models. It will require an induction when it is available.

The 3D Printing & Infrastructure teams are currently working on making the RFID access boxes needed to make it available for general use.



### *Call for a Plumber!*

Are you a plumber? or do you know a plumber who would be willing to volunteer to take a look at our pipes?

The hot water boilers in the kitchen & bathroom have been leaking for a while.

The kitchen boiler will now not produce any warm water.

**Get in touch!**



### *Crapathon*

Nottinghack's annual Crapathon is coming up on the 28th September. Crapathon is a one day hackathon to conceptualise and create projects with no value whatsoever!

Main event will start at 12 noon in the studio. We will be having breakfast too at 10am in GB Cafe, Sneinton Market. No tickets are needed, just turn up.

# Featured Project

## Die Cast Maker Coin

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Eugene J & Dan S have been experimenting with the new Pewter casting equipment that is on loan from Nick H. They used the CNC machine to cut an aluminium die and cast 5 Hackspace makercoins. Read about the process below!

The coin was designed in Fusion 360. It is 45mm in diameter, this was chosen because the aluminium we had for the die was about 50mm across. The total thickness of the coin is 5mm. Where possible we added a 5° draft angle onto the coin so that it wouldn't get stuck in the mould when we cast it. The die split line was halfway through the coin with a 5° angle applied from the centre.



We built the die blocks around the coin by creating new

components inside the Fusion 360 session. Doing this meant that we could subtract the coin model from the Die blocks to produce the cavity. The sprue was also added along with two holes for alignment pins and two air release channels.

We used two tools to cut each side of the mould. The first was the 6mm Flat End Mill for an adaptive clearing tool path that removed the majority of the material. The second was a 2mm Ball Nose Mill that was used for a 3D parallel toolpath.



Once the CNC cuts on the mould were finished, we took it upstairs and used the Startrite Bandsaw to remove the excess clamping stock. Burrs were removed with the belt sander.





Casting was a simple case of pouring the hot metal into the mould. We got a fairly good finish from the castings when they were polished up. The buffing wheel was very aggressive when used with the pewter so some of the coins are a little bit out of round, need to be careful in the future! The internal parts of the Hackspace H came out much shallower than we wanted, next time we need to either make the shape bigger in the design or use a smaller tool when cutting the die to get extra detail.

If you're interested in Pewter Casting, before you jump in, talk to **Nick H**. He can be found in the space usually in the evenings. See the full write up of this project with more pictures on the wiki.



[Full Wiki Article](#)

***Got a cool project or build log you'd like to share?  
Email us with some pictures and a description!***

***Contact: [Comms@nottinghack.org.uk](mailto:Comms@nottinghack.org.uk)***

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