

# 2021 Mastercam Wildest Parts Competition Winners



## WILDEST PARTS COMPETITION

Each year, we eagerly await the arrival of the Wildest Parts Competition entries. Seeing what the participants create, and getting to know them through their entries is one of the best parts of what we do. There are a lot of truly inspiring students and professionals out there, and we can't wait to see what they'll do next.

Thank you to all the entrants and to their instructors and teammates! We know it was challenging to get parts cut and submitted this year, and greatly appreciate all of your work and efforts in delivering such spectacular parts!

We will be contacting the winners shortly to arrange delivery of their prizes.

## Secondary Division

### ***1<sup>st</sup> Place – Domino and Dice Cup Game Set – Wes Bruski – Capital High School – Instructor Jim Weber***

Wes and his family have always enjoyed games – they played a lot of cards, dice, and dominos. While they were playing, Wes got the idea to make a custom set of dominos and dice cup. Wes made the prototypes out of wood, then machined the final set. Wes enjoyed every second of this project and learned so much about machining during the whole process.



### ***2<sup>nd</sup> Place – Padlock – Cadogan Wheat – Hamilton High School – Instructor Russ Fisk***

Cadogan's part is a model of a padlock, with a lock and key. Every part of the padlock was milled out of wood or Delrin plastic, except for the tumblers and key.



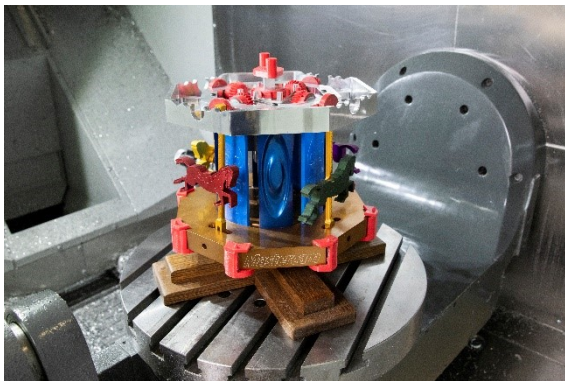
## Postsecondary Division

### ***1<sup>st</sup> Place – Keyboard – Gus Bronk – Washington State University – Instructor Kurt Hutchinson***

Gus wanted to design and machine a unique keyboard from exotic materials. The main case is machined from a Boeing Surplus Forged billet of 2000 series aluminum from the 70s! This project contained the largest single part and the most parts Gus has ever machined and assembled – and he learned a lot more features in Mastercam while making this part.



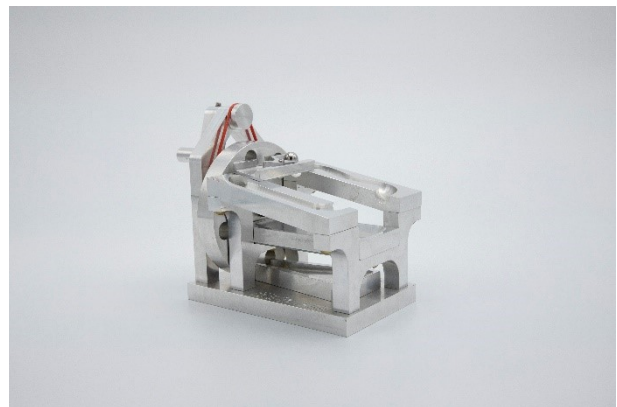
### ***2<sup>nd</sup> Place – Carousel – Jim Courtney – Erie Community College – Instructor Nathan Witkowski***



Jim lives in an area with amusement parks nearby and saw a solar-powered carousel which sparked the inspiration for this part. He didn't want to make a part that would sit in the closet gathering dust after it was over – he wanted to make something fun that would appeal to the kid in all of us, yet still had machining elements that would impress the technical eye. He had hoped to use that piece to get a job, and IT WORKED! He got the job!

### ***3<sup>rd</sup> Place – Marble Machine – Jonathan Hughes – Erie Community College – Instructor Nathan Witkowski***

The goal of Jonathan's part was to make a machine with reasonable complexity and a lifting mechanism so it could be continuously run without the need to manually reload marbles. It worked amazingly! It ran extremely smooth and had a superior finish.



## Professional Division

### ***1<sup>st</sup> Place – Ironman – Andy Beach – Grand Rapids Community College***



Ironman was created to test out a brand new UMC 500 Haas Mill where Andy works. This machine was the 1<sup>st</sup> 5-axis machine ever installed at Grand Rapids Community College, and Andy wanted to give the machine a thorough test by machining a multiaxis part that would push the size constraints of the machine!

### ***2<sup>nd</sup> Place – Dodecahedron of Mastercam Toolpaths – David Berry – Southwestern Illinois College***

David's part was modeled after a 20-side die. It has 5 faces removed and a morphed stand was added to it. Inside the hollowed shape, there is a smaller dodecahedron featuring an engraving of all the toolpaths that he used to create the part! This part was a study in multiaxis toolpaths and David used it to push his understanding of Mastercam.



### ***3<sup>rd</sup> Place – Wireless Charging Disc – PUTEN PLUS – PUTEN PLUS***



In designing this part, many types of wood were tried, including mahogany, Taiwan Asian fir, and green sandalwood. Green sandalwood was chosen because of its hardness and stability. In a circular charging base body, the circuit board is precisely mounted in a wood part through sophisticated machining programming. Polished copper is installed on the surface to make it look like a reflection of the moon!

## Teams Division

**1<sup>st</sup> Place – Thor Hammer in Base – Wrindy Hauser – Grand Rapids Community College – Instructor Andy Beach**

Wrindy and Ethan both belong to a machinist apprenticeship program at GRCC. In making Thor's hammer, coming up with how they were going to fixture the pieces was a challenge. Figuring out how to break up the hammer into different operations to complete was a great learning experience. They said that they wanted to make something that gets people excited about machining. When anyone looks at their project, they are going to think it's awesome and want to learn how to make it!



**2<sup>nd</sup> Place – Museum – Jiao-Hao Wun – Vanung University – Instructor Shun-Chi Kuo**



Jiao-Hao's team (Jiao-Hao, Bo-Yu) wanted to make a modern museum with a traditional view. It is a multi-faceted machine part with a curved shape to it. Using only 3 axes, they designed and processed multi-faceted machining parts to learn more machining methods.

**3<sup>rd</sup> Place – Robot – Ming-Yang Chen– Vanung University – Instructor Shun-Chi Kuo**

Ming-Yang and Gu-Hao thought the robot was very cool and they created it by themselves. In order to challenge the assembly, they had to grasp the size of the hole when assembling. They learned that the size of the machine is very important, and that they must be careful of the size changing due to temperature shifts.

