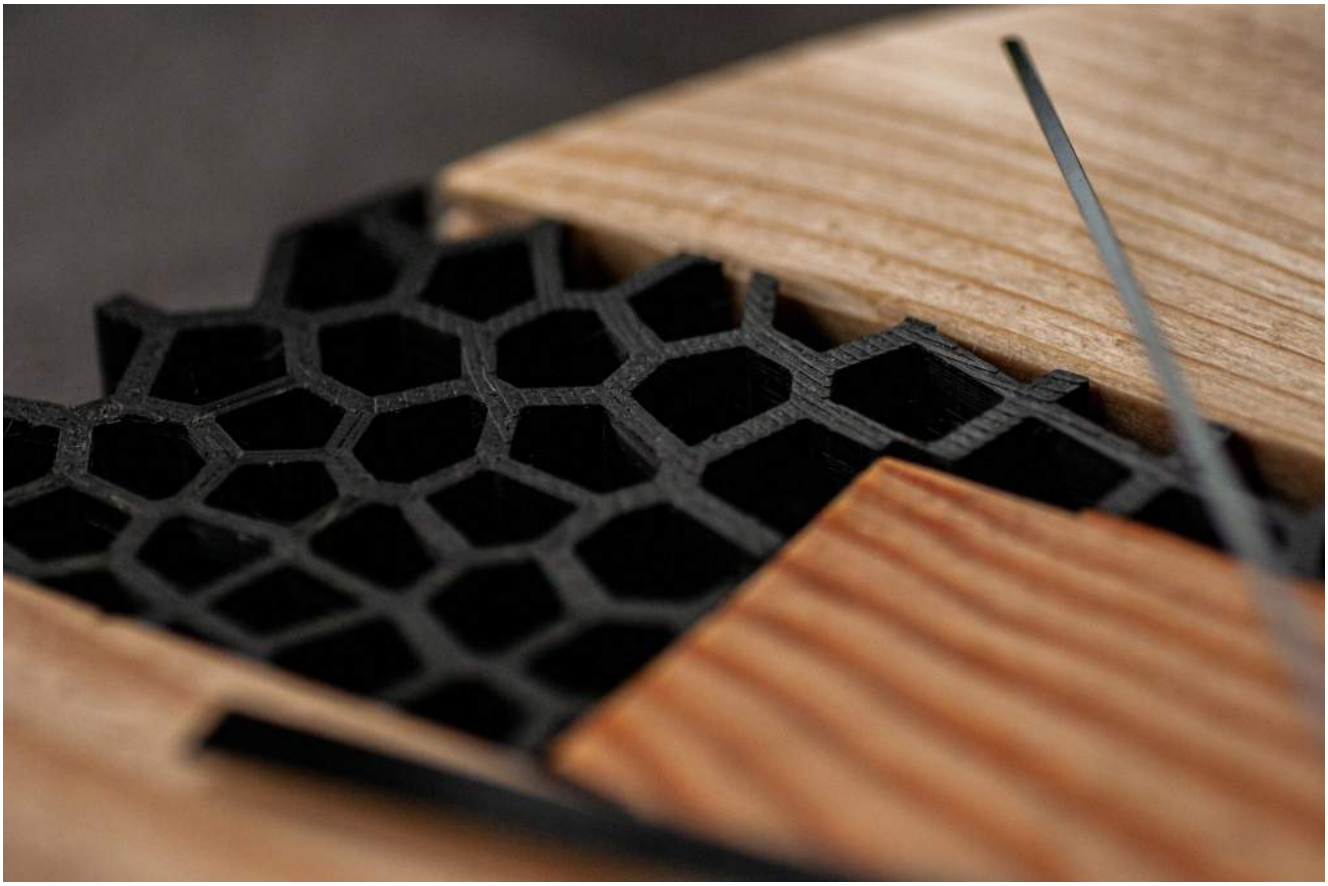
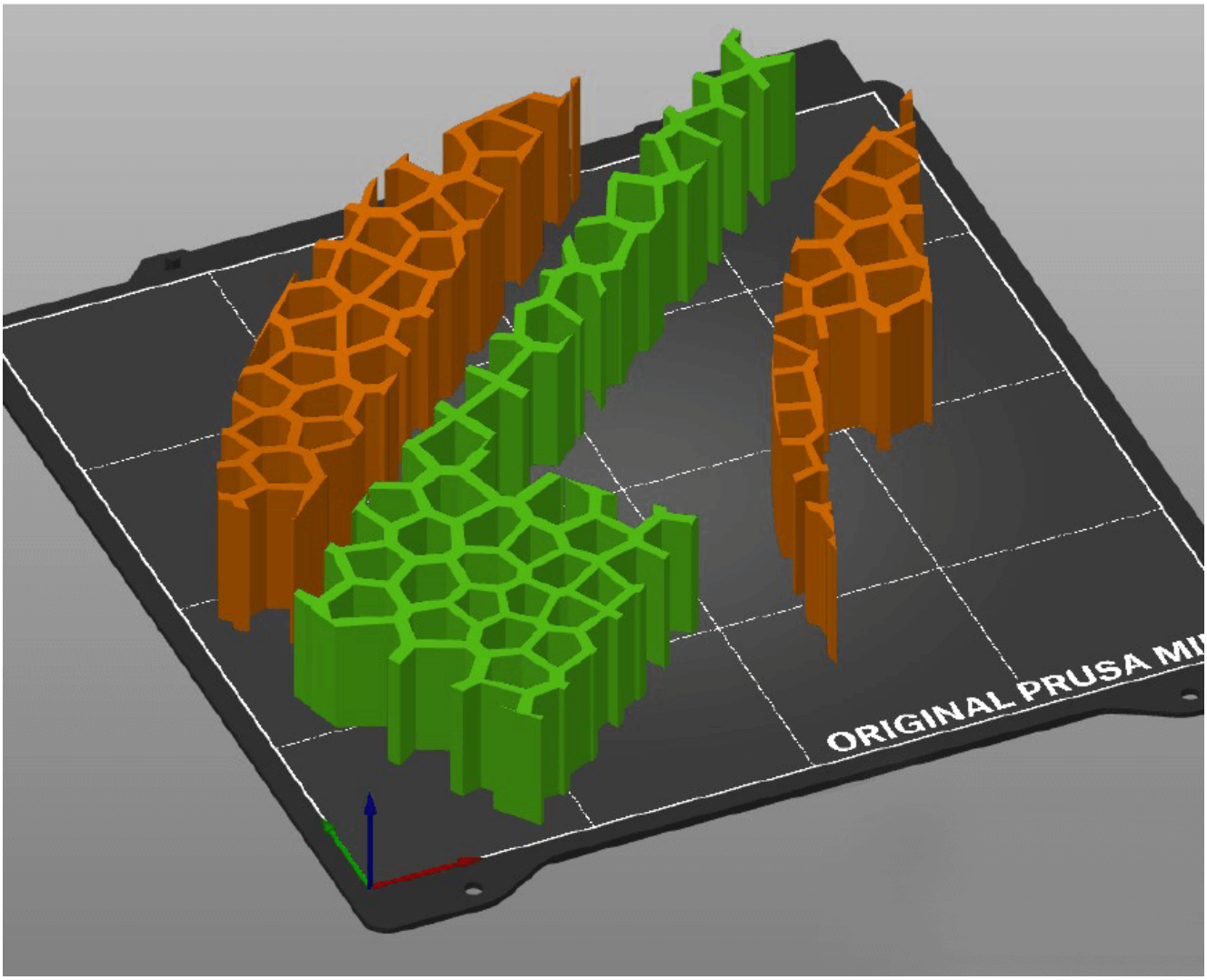
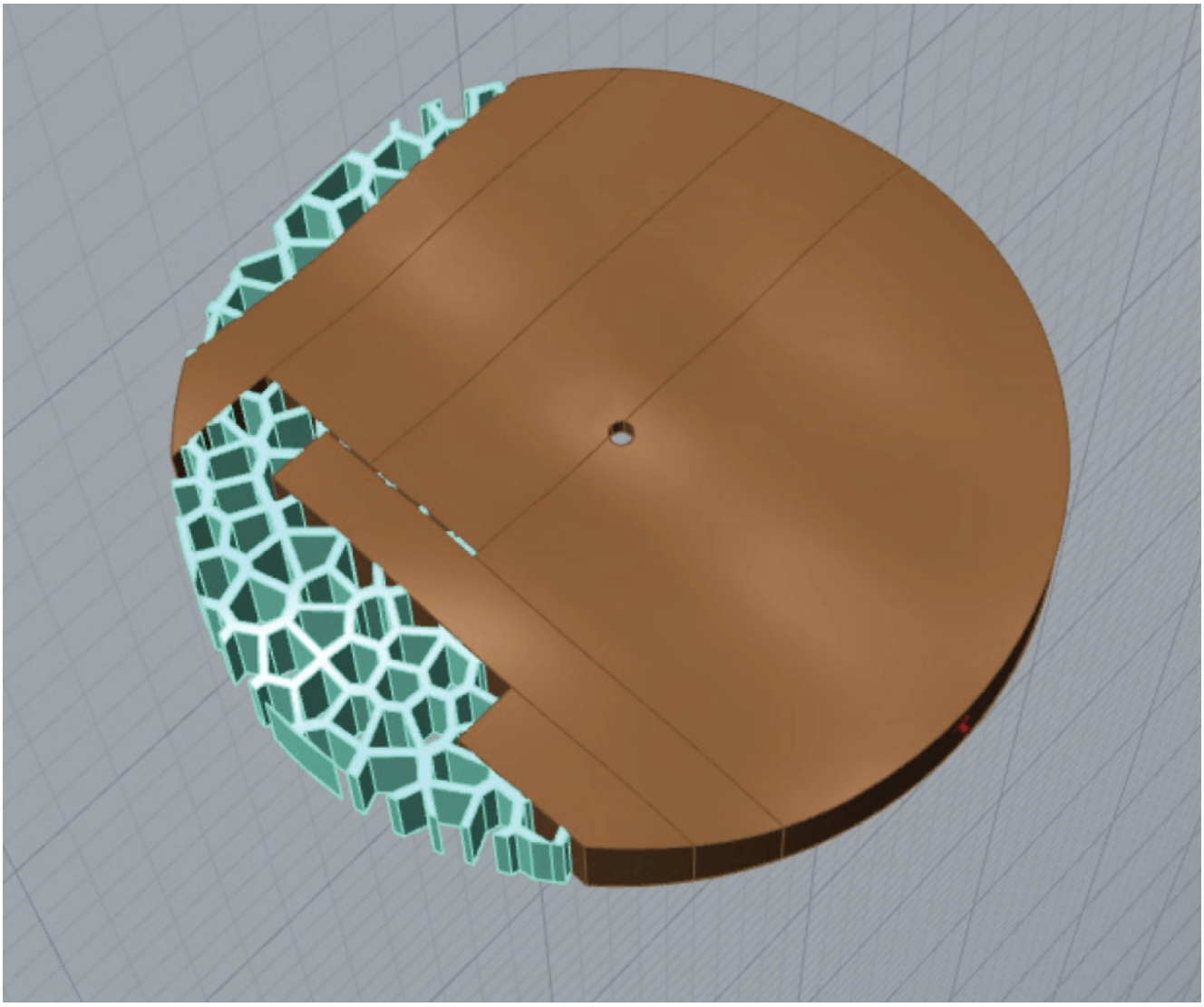
Arloize: Turning Wood Scraps into Personalized Clocks

The Arloize project, spearheaded by student Ward Sabbe under the guidance of Dr. Ing. Davy Parmentier and Ing. Yannick Christiaens at Ghent University, tackles the issue of wood waste in the woodworking industry. This innovative endeavor utilizes the Grasshopper program to transform leftover wood pieces into customizable clocks.



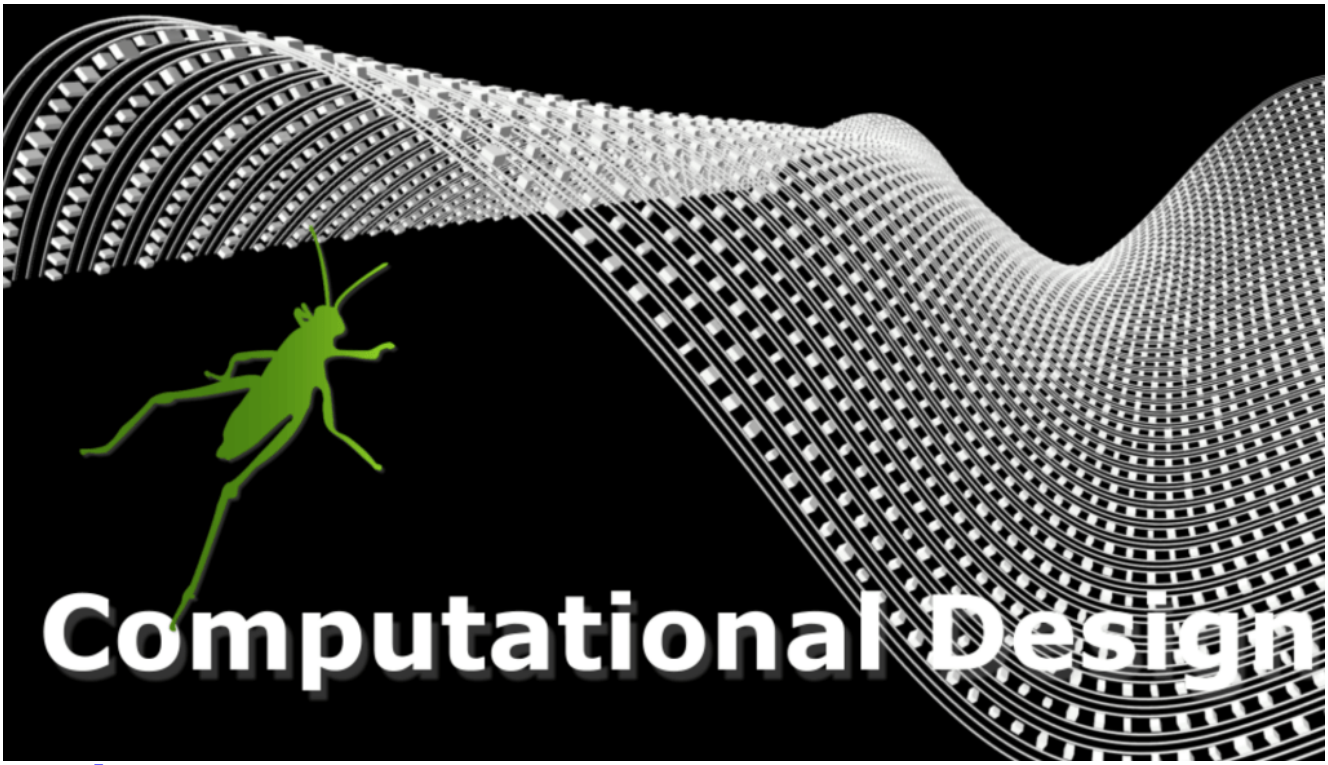
Often, woodworkers face the dilemma of disposing of small or aesthetically flawed offcuts, which are generally deemed unusable. The Arloize project was born out of the frustration of seeing unique wood pieces discarded. With the assignment to create an object using Rhino and Grasshopper in the “Design for Advanced Manufacturing Techniques & Environments” course, Ward Sabbe saw an opportunity to address this problem while designing a functional clock.


ORIGINAL PRUSA



Arloize uses Grasshopper's parametric capabilities to allow users to dictate the clock's size, shape, and features. The process begins by defining the main shape with customizable parameters such as diameter and thickness. Next, leftover wood pieces are sorted and filtered. Pieces that are too large or small are excluded, ensuring safety and compatibility with CNC machinery.

Once sorted, these pieces are arranged using the OpenNest plugin, which optimizes the layout of the wood fragments to create a cohesive structure.



See Also

COMPUTATIONAL DESIGN WITH GRASSHOPPER

The clock’s aesthetic is further enhanced by an organic wave pattern, which is generated by manipulating points in a plane to create a dynamic yet harmonious appearance. Any gaps in the wood structure are

filled with a Voronoi pattern, adding a unique, organic feel to the design.

The project leverages accessible production methods like CNC milling and 3D prin

ti
ng
,
wh
ic
h
ha
ve
be
co
me
mo
re
av
ai
la
bl
e
to
ho
bb
yi
st
s
an
d
ma
ke
r
sp
ac
es
.
Th
is
ap
pr
oa
ch
no
t

only keeps costs low but also supports local production, ensuring that anyone can create

their own Arloize clock. The project provides detailed guidance on using these tools, ma

king
it
easy
for
individuals
to
start
crafting
their
personalized
clocks
.

The Arloize project embodies a sustainable approach to design by repurposing wood waste into functional art. It empowers the maker community with the tools and knowledge to produce unique clocks, blending modern technology with traditional craftsmanship. By addressing wood waste creatively, Arloize not only contributes to environmental sustainability but also fosters local craftsmanship and innovation.