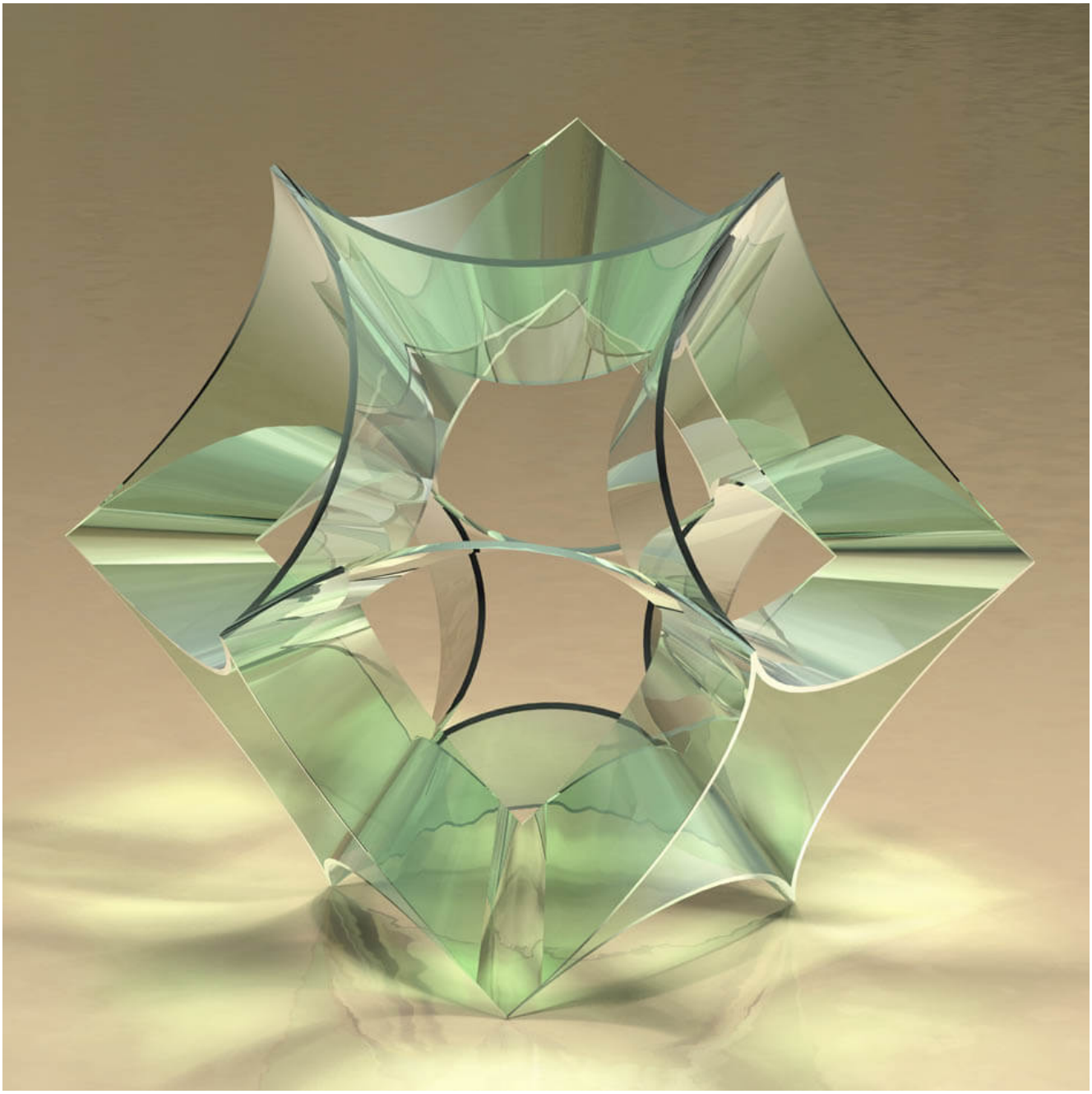
A Pioneer’s Journey at the Intersection of Art, Mathematics, and Technology

As we celebrate Rhino’s 25th anniversary, we recognize the contributions of Rinus Roelofs, a visionary artist who has played a significant role in this incredible journey. Roelofs’ unique creations combine art, mathematics, and technology to produce a stunning and captivating display of creativity.



BACKGROUND & EARLY INFLUENCES

In 1971, after high school, Roelofs had to choose between attending an art academy or pursuing a mathematics degree at the Technical University in Enschede. He chose the latter and enrolled in applied mathematics. During this period, he honed his math skills and delved into programming, when computers were still as big as houses and punch cards were used to access data and programs.

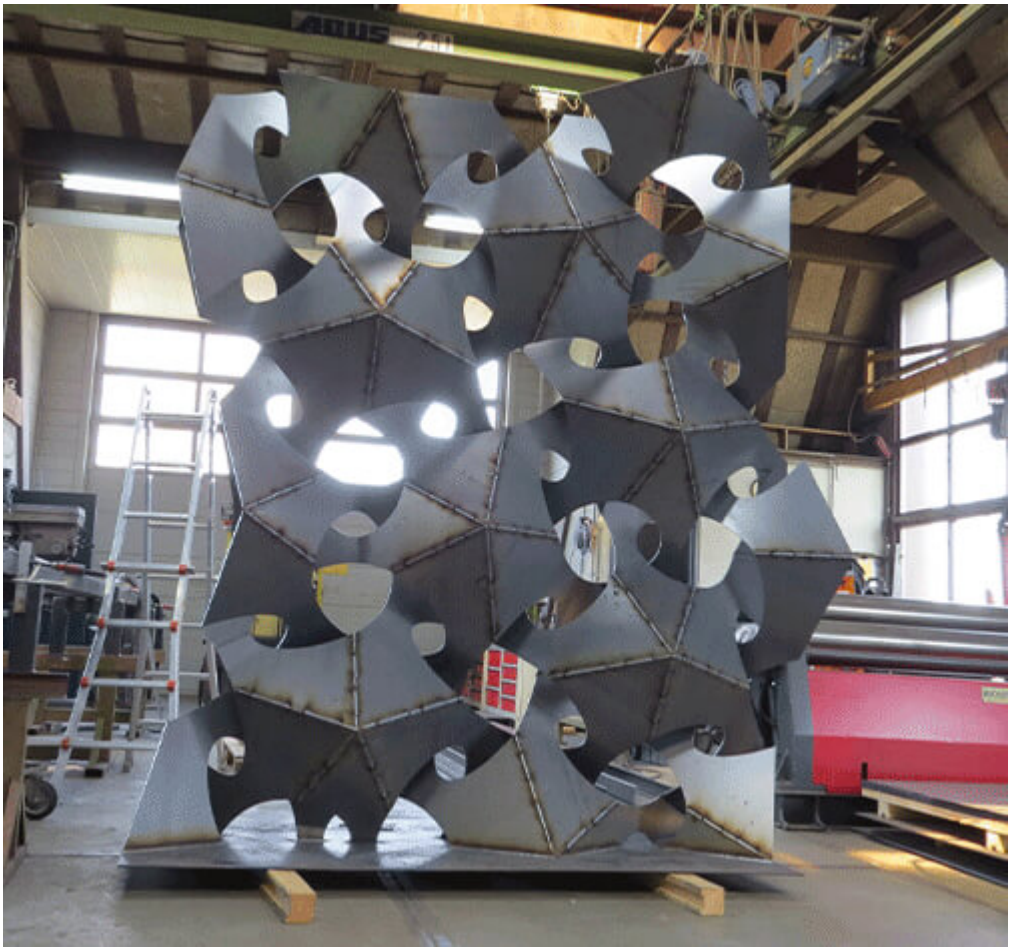
Although Roelofs eventually transitioned to the art academy, his passion for mathematics remained. Escher's work profoundly influenced him, inspiring his quest to blend mathematics and art.

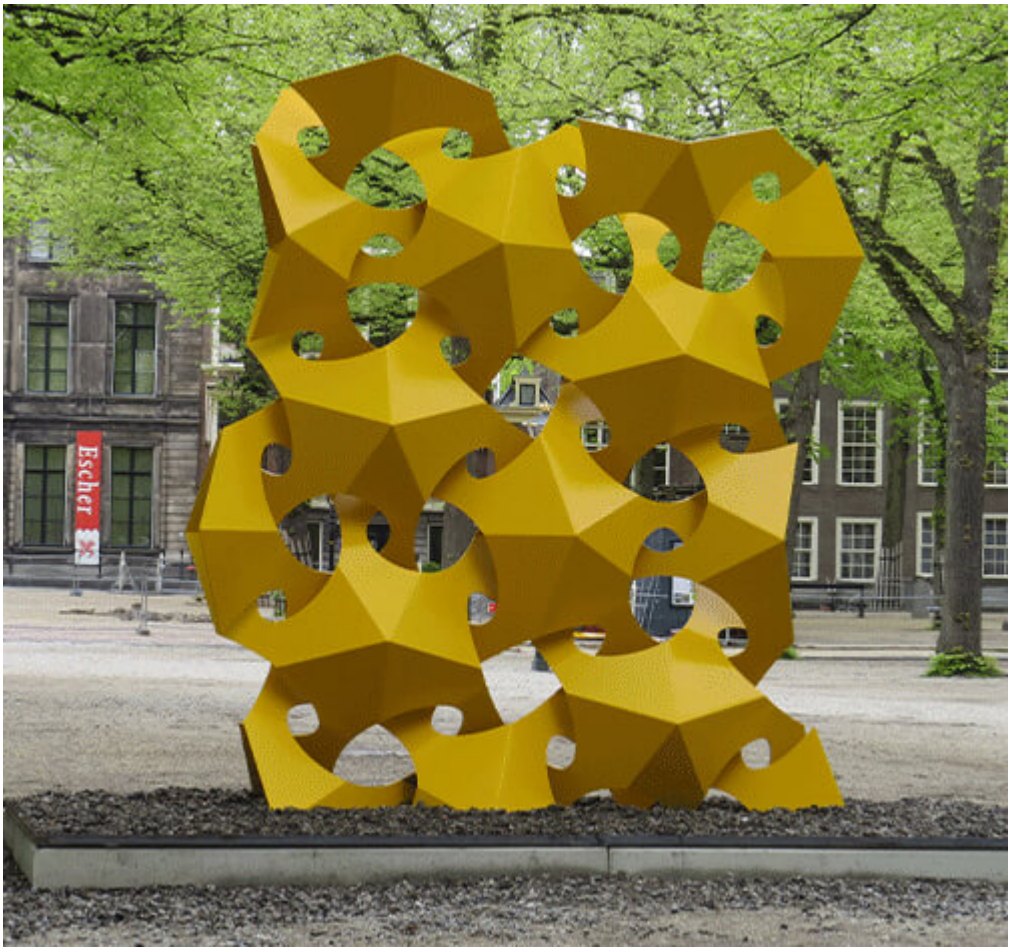
ARTISTIC STYLE & BEAUTY OF MATHEMATICS

Roelofs’ artistic style reflects his deep fascination with the beauty of mathematical structures. His art celebrates the essence of mathematics itself. He has evolved his passion for visualizing mathematical concepts, which he crystallized during his Ph.D. pursuits in 2018. His research led him to discover new uniform polyhedra and explore the art of visualizing mathematical concepts. This culmination was marked by the completion of his Ph.D. in 2020.

PIONEERING THE USE OF DIGITAL TOOLS

Roelofs was a pioneer in using digital tools for artistic expression. Rhino’s ability to create almost any 3D shape perfectly aligns with his creative vision. It allows him to bring his sketches to life and integrate programming while utilizing his mathematical expertise. His toolkit is further enhanced with the addition of Grasshopper.

- 



3D PRINTING: A TECHNOLOGICAL ARTISTIC REVOLUTION

The introduction of 3D printing was a turning point in Rinus’ artistry. It empowered him to transcend traditional limits while maintaining a personal touch.

Notably, his design for the Philips Award transitioned from an SLS-printed model to a br

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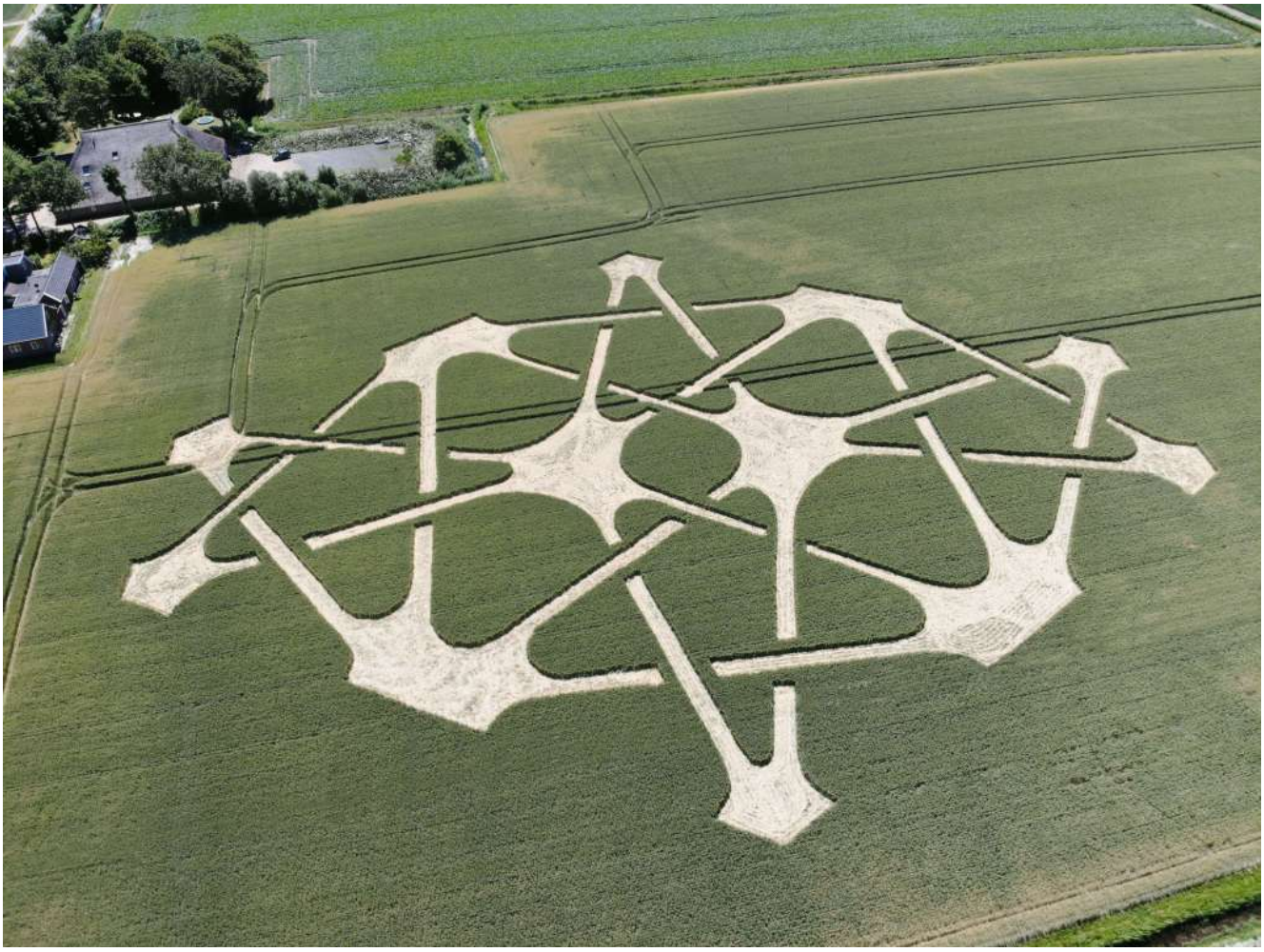
The entire design process of this project, along with Rinus' captivating presentation to Philips, unfolded within the innovative realm of Rhino 1. Philips was notably impressed and appreciated the fact that it was conceived and crafted in the sophisticated landscape of a 3D design software.

This facilitated the 3D printing process to bring this visionary concept to life, all of this being remarkably modern in the year 2000. The following year, Rinus won a digital sculpture competition (image below) hosted by Ars Mathematica as a recognition of his exceptional skills. Rinus continued to innovate with six 3D-printed concrete sculptures and a cast iron statue, leading to collaborations.

MATERIALIZATION & ADAPTABILITY

Roelofs designs sculptures using Rhino without preconceived notions of scale, material, or color. This flexible approach allows him to explore spatial dynamics freely, making informed decisions on his creative journey. Roelofs takes a practical approach to big projects. He starts with smaller models using different materials to experiment.

He can anticipate and resolve production issues with a CNC milling machine and laser cutter. This technique helps him reduce obstacles. Roelofs uses various techniques and collaborates with specialists to turn his digital ideas into tangible objects. His proficiency in Rhino allows him to work with other professionals to achieve his artistic vision seamlessly. Communication and teamwork are crucial to his success. With the help of Rhino and GPS technology, Roelofs created his most extensive drawing, a vast grain drawing spanning over 100 meters.



FUTURE DIRECTION & INNOVATION

As we come to the end of our exploration into the world of Rinus Roelofs, it’s fascinating to catch a glimpse of his recent projects and future aspirations. His innovative approach to art is evident in his creation of a unique portrait for the town hall in his hometown of Hengelo, where he used shadow as a powerful artistic element.

Rinus’ adeptness with cutting-edge technology is also clear in his incorporation of Grasshopper in this endeavor. Moreover, in the autumn of this year, nine impressive sculptures of his will find a permanent home in the square in front of the railway station in Hengelo.

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on his creative journey.

As we celebrate Rhino’s 25th anniversary, Rinus Roelofs is a shining example of the innovative and creative spirit that has propelled this software to greatness. His journey is a testament to the endless possibilities when mathematics, art, and technology create something extraordinary.