



Rinus Roelofs (the Netherlands)

> sculptor, pioneer of the digital sculpture, member of ARS MATHEMATICA.

> personal website : <http://www.rinusroelofs.nl>

Biography

Rinus Roelofs was born in 1954. After studying Applied Mathematics at the Technical University of Enschede, he took a degree from the Enschede Art Academy with a specialization in sculpture. His commissions come largely from municipalities, institutions and companies in the Netherlands, but his work has been exhibited further afield, including in Rome as part of the Escher Centennial celebrations in 1998. For 30 years, the artist uses computers, NC devices or (since 1998) AM machines, and is now well known as a pioneer in digital sculpture. In 2001 he was one of the winners of the digital sculpture competition organized by Intersculpt. From this moment he started experimenting with the various 3D printing techniques. His big 3D printed Sculptures in concrete can be found in the Netherlands (Enschede) and Italy (Arte Sella, Borgo). From 2004 he is a yearly presenter at the Bridges Conference, a conference about the connections between science and art.

Lecture title and abstract

Structures and sculptures: the development of the digital techniques as a tool for the artist.

The main subject of my art is my fascination about mathematics. And to be more precise: my fascination about mathematical structures. Since I use the computer as my main sketchbook these ideas come to reality first as a picture on the screen. From there I can decide what the next step towards physical realization has to be. A rendered picture, an animation or a 3D physical model made by the use of CNC-milling, laser cutting or rapid prototyping. Many techniques can be used nowadays, as well as many different materials. But it is all based on my fascination about mathematical structures.

3D printing is a fast growing field and the number of materials, the possible size and the quality are growing. The role of the software, used to transform an artistic idea into a printable CAD-file is not to be ignored.

In my presentation I will try to explain my artistic work process with the digital tools, showing some of my sculptures as examples.