



Proposal for the **Berlin's ICCCIA 2022** thematic group: ***The Speculative Object*** - "A collaborative multi-institutional exhibition of computer generated sculptural forms traverse multiple platforms and sites, from traditional to virtual.", led by the Pr. Mary BATES NEUBAUER (Arizona State University).

<https://www.iron-2022-germany.de/>

General introduction (by Pr. NEUBAUER)

The Speculative Object explores emergent sculptural possibilities through an array of technologies. It answers the growing imperative to develop capabilities to disseminate singular artworks across a variety of venues, from traditional gallery spaces to virtual worlds to portable devices. The artworks in this exhibition will begin as digital files, move into the historically collectible and archival medium of cast metal or newer 3D print mediums, then move back out of their material iterations into further new modalities. The results will be multiple, scalable, accessible manifestations of each of the artworks, which will allow the viewer to experience sculptural object in real-world as well as virtual settings.

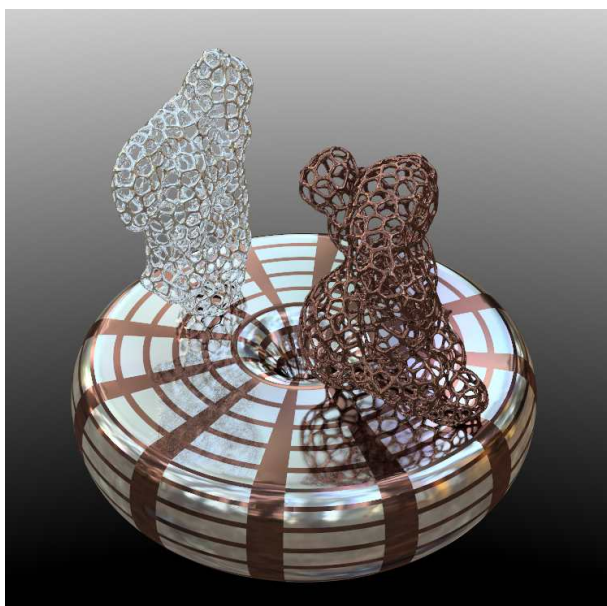
Christian LAVIGNE : short biography

Born in 1959, Christian LAVIGNE studied mathematics and ethnology before he decided to devote himself to art and poetry. Having thus escaped any academic training in the Fine Arts - which is an intellectual advantage in France ! - he began his plastic research in complete freedom of spirit in the early 1980s. Using his scientific knowledge, he became a pioneer of digital sculpture, then founded with Alexandre VITKINE (1910-2014) the international association ARS MATHEMATICA, which since 1993 has been organizing symposiums in this field, called INTERSCULPT. The artist's works are inspired by science and mythology, on which he takes a poetic and/or critical look. Christian LAVIGNE is the current president of ARS MATHEMATICA, and he is preparing a (large) book on the history of cybersculpture, with the participation of Pr. Mary VISSER (Georgetown University, Texas).

My contribution proposal to *The Speculative Object*, Berlin's ICCCIA 2022

My first approach to metal in digital sculpture was that of laser cutting at the very beginning of the 1990s. But it was not until 20 years later, with the appearance of Additive Manufacturing machines using metallic powders, that I been able to make a few sculptures with this advanced technology. So I had the honor and the pleasure of being invited to two ICCCIAs in Great Britain, by my American colleagues.

For this 9th *International Conference on Contemporary Cast Iron Art*, I wish to present an original work, which only a very recent innovation can materialize. Indeed, my sculpture "*Gogottes en méditation à l'horizon des événements*" requires a marquetry of two metals (bronze and stainless steel), until now impossible to achieve in Additive Manufacturing. But the Belgian company AEROSINT SA (Desktop Metal group) is developing a new bi-material process, and has agreed to be my partner in taking up this challenge. On April 2022, this company won the trophy of "3D Printing Innovation" at the international trade fair 3D Print Lyon. For millennia, history has shown that exchanges between artists and technicians (when the two are not the same person) are mutually beneficial, because artists are by nature imaginative experimenters, and technicians can improve their knowledge with tricky projects !



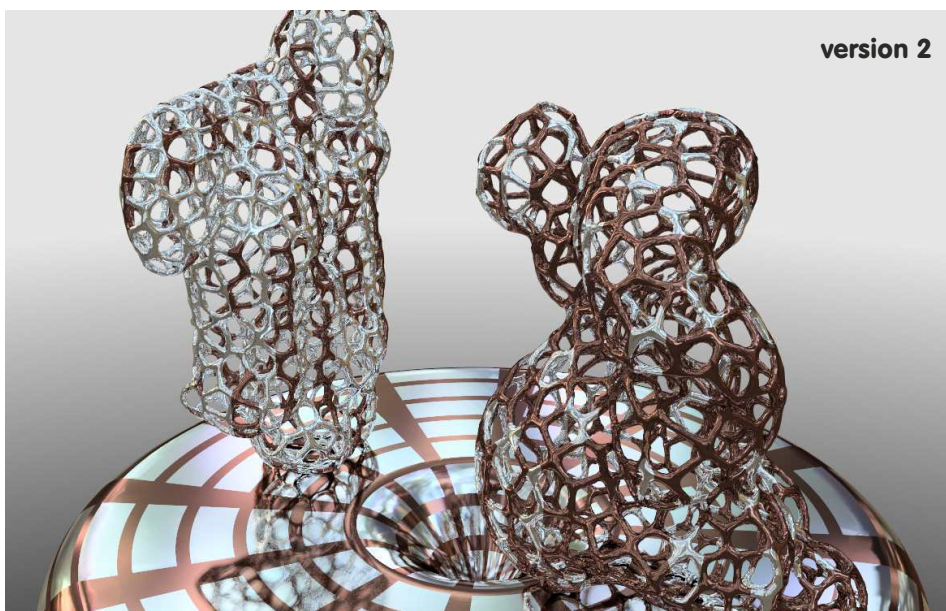
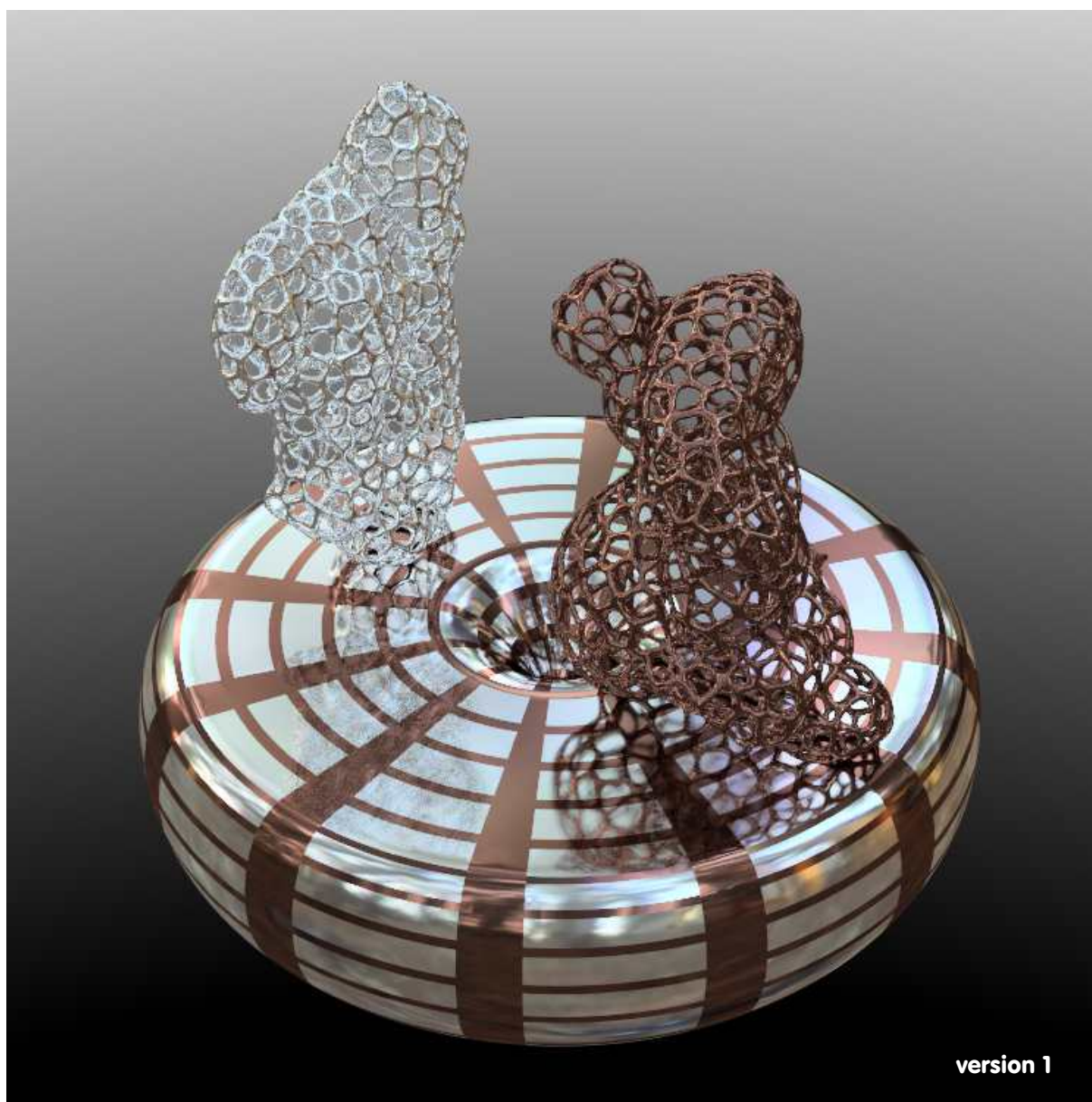
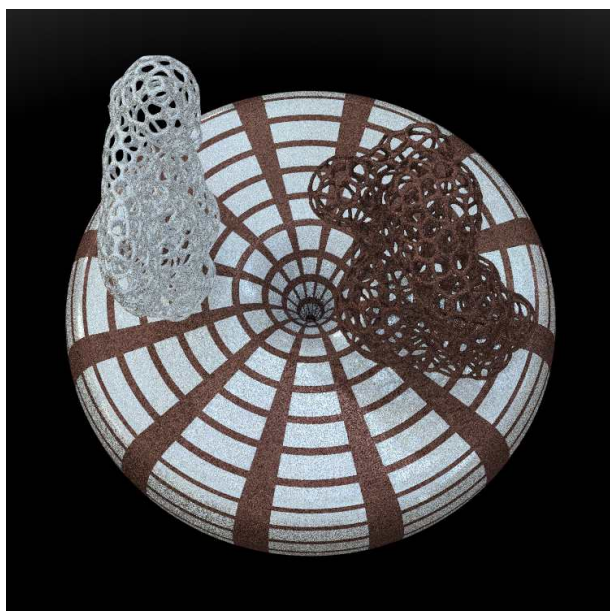
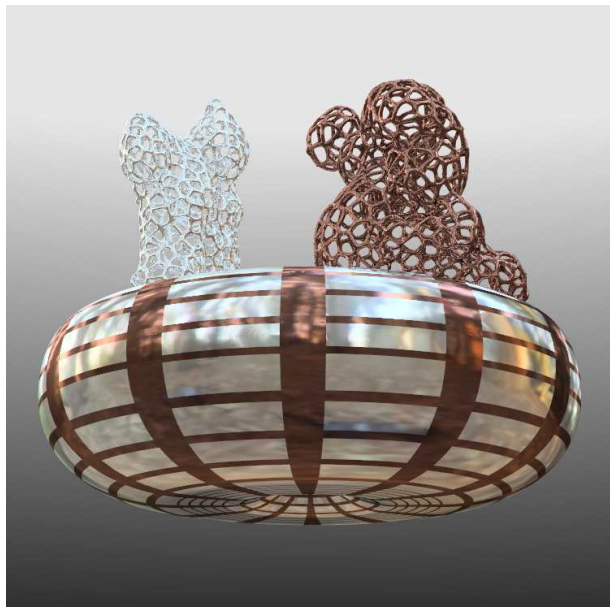
< Here an image of my sculpture (version 1), of which I give a description on the next page.

In short, since I want to come in person to ICCCIA Berlin, I suggest:

- to exhibit my work as part of "The Speculative Object"
- to make a small illustrated lecture on this work, and the uses and perspectives of the Additive Manufacturing metal in art.

Christian LAVIGNE, mai 2022.
christianlavigne@free.fr

Christian LAVIGNE ★ cybersculptures



GOGOTTES EN MÉDITATION À L'HORIZON DES ÉVÉNEMENTS 2020-2022

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**cybersculpture en Fabrication Additive
cybersculpture by Additive Manufacturing
AEROSINT multi-material
new 3D printing technology**

L'esprit humain se caractérise (aussi) par sa capacité à se projeter dans les divers éléments de la Nature. Il serait bon qu'il puisse continuer à s'y reconnaître, au lieu de croire aujourd'hui pouvoir s'en extraire.

Il y a quelques années un ami m'a fait découvrir les gogottes, très rares concrétions gréseuses à ciment siliceux - formées par de la silice déposée par des eaux circulant dans une couche de sable. J'ai scanné en 3D deux de ces "sculptures naturelles". Les objets numériques me firent penser à des silhouettes humanoïdes. Je les imaginai alors dans l'Espace, méditant au bord d'un trou noir, êtres immortels mais éternellement perplexes, ne gardant que leur forme essentielle reconstruite en surface de Voronoï.

La matérialisation d'une telle oeuvre soulève bien des problèmes techniques. J'ai pensé à divers matériaux et procédés, jusqu'à ce que je rencontre la société belge AEROSINT SA (groupe Desktop Metal) qui a récemment breveté un système de Fabrication Additive multi-matériaux métalliques. Je me réjouis donc que cette entreprise de haute technologie devienne mon partenaire pour relever ce défi technico-artistique !

The human mind is (also) characterized by its ability to project itself into the various elements of Nature. It would be good if he could continue to recognize himself in it, instead of believing today that he could extricate himself from it. A few years ago, a friend introduced me to gogottes, very rare sandstone concretions made from siliceous cement - formed by silica deposited by water circulating in a layer of sand. I 3D scanned two of these "natural sculptures".

The digital objects made me think of humanoid figures. I imagined them then in Space, meditating on the edge of a black hole, immortal beings but eternally perplexed, keeping only their essential shape, constructed by a Voronoi surface.

The materialization of such a work raises many technical problems. I thought about various materials and processes, until I met the Belgian company AEROSINT SA (Desktop Metal group) which recently patented a multi-metal Additive Manufacturing system. I am therefore delighted that this high-tech company will become my partner in taking up this technical-artistic challenge!

Christian Lavigne • tel : 33-(0)6 25 89 54 07
christianlavigne@free.fr • www.christianlavigne.art