SFO Sculptures

Carlo H. Séquin has been a professor in the Computer Science Division at UC Berkeley since 1977. He looks for underlying mathematical structures in the abstract geometrical sculptures by several famous artists. He then modifies these structures slightly and produces novel sculptures that seem to belong into the same family, but are often of higher complexity.
Alternatively he may start with a geometrical model that tries to explain a mathematical concept. He then develops and refines that model until it acquires an attractive presence as a sculpture in its own right and becomes enjoyable even to people who do not know the mathematical ideas behind it.
The geometric shape of both sculptures was generated on a 3D printer. These originals were then cast in bronze by Steve Reinmuth in his Bronze Studio in Eugene, Oregon.

"**Torus Knot_3_5**"

To make an (*S,T*)-TorusKnot, you could wind a string around a donut so it passes *S* times through the hole and winds around it *T* times. If the winding is kept nice and regular, then the knot will have *S*-fold rotational symmetry. In the silvery sculpture the curled ribbon forms a (3,5)-TorusKnot. To obtain a more dramatic artistic presence, the lobes forming the knot have been given a somewhat triangular shape.

"**Aurora Australis**"

A Moebius band is a ribbon that closes upon itself after making an odd number of 180-degree flips. In this sculpture, such a twisted band follows an undulating sweep path drawn on the surface of a sphere. This sculpture has just a single border-line. It also is single-sided; this means that a snail could move to the "other side" of a given location on the ribbon without ever having to cross the sharp border. The overall wavy pattern and luminous color of the ribbon was inspired by the auroras that can be observed in the sky near the two poles of the earth.