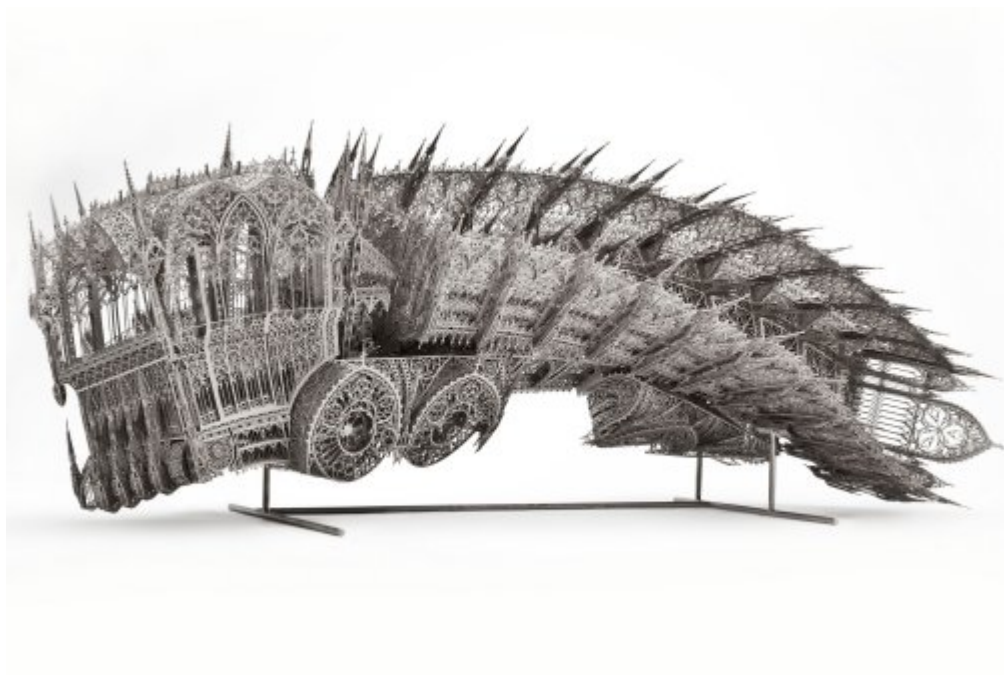




## The World's Most Tech-Savvy Art

by Justin Jones Oct 24, 2013 11:00 AM EDT

**The Museum of Arts and Design presents an in-depth exhibition that explores digital fabrication.**



Wim Delvoye's "Twisted Dump Truck" uses digital modeling, CNC laser cutting, and hand assembly and finishing to create a fascinating combination of machinery and architecture. (MAD Museum)

Be it a sculpture, an elegant chair, an architectural masterpiece, or a Lady Gaga costume, new technology has given rise to an emergent realm of digitally fabricated art and design. For the first in-depth exhibition exploring these ideas, the Museum of Arts and Design in New York is examining how these advancements have developed over the past decade and how they are transforming the future of design as we know it.

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*Out of Hand: Materializing the Postdigital* is what curator Ronald Labaco describes as a representation of “the digitally fabricated world as it exists today.” Looking at works from 2005 to the present, this survey of tech-age art shows us how the practices of designers, architects, and artists are beginning to merge through the use of computer programming and machinery.

Labaco presents the exhibition in such a way that the tech-savvy crowd will not find it over-simplified -- and those less familiar will actually understand it. After all, not everyone is expected to know what Computer Numerically Controlled (CNC), machining and digital knitting are ... just yet.

Three-dimensional scanning and printing, CNC machining, and digital knitting and weaving are the three main practices Labaco chose to focus on in the exhibition. As he describes it, 3-D printing is “an additive process where layers ... are built up” to produce an object where Computer Numerically Controlled machining is a “subtractive process in which material is removed to reveal a form.” And digital knitting and weaving is just that: creating digital designs and sending it through a machine to produce a fabric.

Including pieces that range from fashion and textiles to furniture design and architecture, the exhibition is divided into six sections based on the fundamental design and inspiration of the objects.



Barry X Ball's "Perfect Forms" takes inspiration from Umberto Boccioni's Futurist sculpture remixing it to create a contemporary rendition through the use of 3D scanning, digital modeling, 3D printing/laser sintering, and CNC milling. (Courtesy MAD Museum)

“Rebooting Revivals” focuses on works that have been created by looking to the past for inspiration. Barry X Ball, a New York based sculptor, took inspiration directly from Umberto Boccioni’s 1913 Futurist work *Unique Forms of Continuity in Space*. The mirror-polished 24-karat gold on nickel sculpture, *Perfect Forms*, literally takes an iconic sculpture and puts it through the technological ringer.

Barry X Ball began by three-dimensionally scanning one of the original bronzes and proceeding to alter every curve, line, and edge -- a process that took almost three years of perfect alteration to complete. The result: a

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piece that is both old and new; a reproduction of an iconic sculpture and a new idea born from technological advancements.

If fashion is more your forte, there are even pieces of haute couture and sportswear in the show. For “Remixing the Figure,” Tamae Hirokawa’s *SOMARTA Skin* series features high-quality bodywear made from the seamless production method of whole garment knitting to ensure a perfect fit. Nike is also highlighted in “Pattern as Structure” for Shane Kohatsu’s Vapor Laser Talon being the world’s first 3-D printed shoe cleat plate.



Shane Kohatsu's "Nike Vapor Laser Talon" is sports first 3D printed cleat plate. It is manufactured through the use of Selective Laser Sintering (SLS) - a technique that fuses small particles of matter together with high-powered lasers to create a 3D shape. (MAD Museum)

“Modeling Nature” includes works by designers at Joris Laarman Lab and architect Maya Linn and Ammar Eloueini. Eloueini’s staircase for *Dickens Apartment, Paris* and Joris Laarman’s *Bone Chair* are both smooth, white, organic forms that create web-like structures reminiscent of the Spanish architect Antoni Gaudí from the late 18th and early 20th centuries. He would have had a field day with this technology.



Joris Laarman Lab's "Bone Chair" was cast from a 3D printed ceramic mold and inspired by nature, from Art Nouveau to organic designs of the 60s. (MAD Museum)

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Interactive works such as Francois Brument's *Vase #44*, an installation that allows visitors to create a vase based on voice patterns, and Tim Knapen's *L'Artusian Electronique*, software that lets the viewer mold their own objects through hand motions, gives the exhibition a unique viewer experience. By including these types of hands-on works, it allows novices to better understand how the technology actually works.

The "hands on laboratory is very important," Labaco said. "I wanted to include those because those are projects developed by the artists," he continued, and expressed that they have the potential to be an app that is readily available for all consumers to use anywhere through a smart phone with voice recording and a camera. Other areas include *New Geometries and Processuality*. A bonus section is "OUT OF HAND/HANDS ON," a partnership with Shapeways, which calls itself the world's leading 3-D printing marketplace and community. There, visitors can be three-dimensionally scanned to create unique pieces for purchase.



Richard Dupont's "Untitled #5" used CNC milling and 3D scanning and printing for production. 3D scanning turned Dupont's body into data for this self-portrait. By distorting the figure along one axis, an optical illusion occurs - the distortions disappear when viewed from the parallel plane. (MAD Museum)

*(Out of Hand: Materializing the Postdigital will be on display at the Museum of Arts and Design in New York City until July 6, 2014.*