



Stunning 3D printed sundial changes shape with solar data

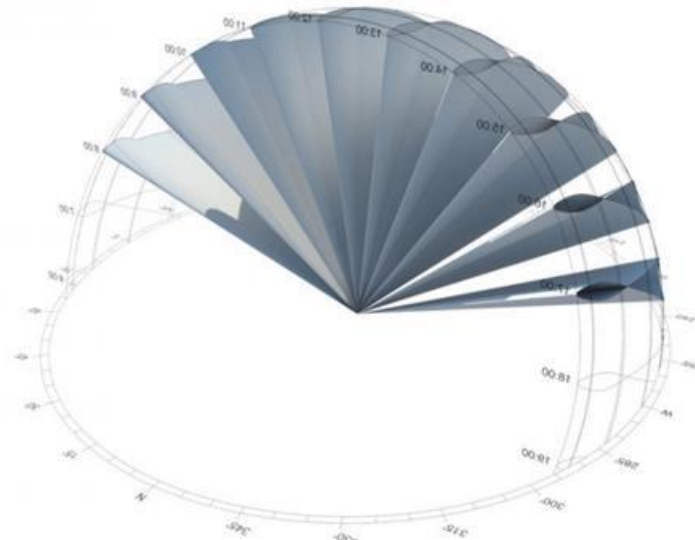
May 15, 2016 | By Tess



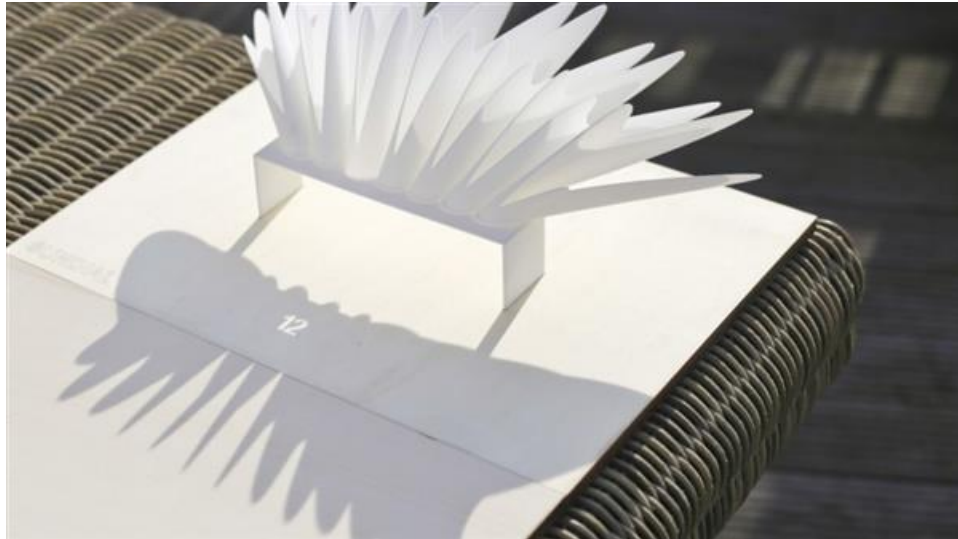
Sundials have existed for thousands of years, helping societies from all around the world to tell the time of day based on the sun's movements through the sky. And while nowadays we have digital and mechanical clocks to keep us on schedule, sundials continue to exist, both as time markers and as sculptural decorations. Recently, Amsterdam based urban design and architectural firm [prescription.](#) teamed up with global engineering firm [Arup](#) to modernize the sundial by creating a stunning 3D printed installation for the city of Amsterdam.



The sundial created by the two firms does not bear much resemblance to the flat-topped sundials you may find in a park or garden, but rather resembles a sort of blooming or fanned flower. Made from a series of petal-like 3D printed flexible plastic sheets, the sundial tells the time through its cast shadow, which changes depending on the time of year and geographical location.



additively manufactured sundial's design itself was created based on solar path data, which the design firms were able to feed into a specially made algorithm to generate the petal-like design. The almost tubular shapes you see of the petals are actually determined by the the sun's movements during specific months of the year and in a specific part of the world. In other words, depending on where the sundial is situated its shape and form will change, making each one essentially unique. In an innovative addition to the sundial's design, cutouts have also been made so that the moving shadow will project a digital number to represent the hour of the day.



Presently, the 3D printed sundial installation is set to be presented in Amsterdam, though because the time-telling sculpture's design is scalable and modifiable, it could feasibly be installed anywhere in the world. Perhaps someday we will be seeing the innovative design in large-scale in places like Central Park, or at outdoor festivals and events, or maybe we'll even have our very own miniature 3D printed sundials installed in our personal gardens.

<http://www.3ders.org/articles/20160515-stunning-3d-printed-sundial-changes-shape-with-solar-data.html>



Chi tiết ô tô



* FDM: Fused Deposition Modeling 熔融擠製成型
(Công nghệ tạo hình bởi từng lớp nhựa nóng chảy)



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