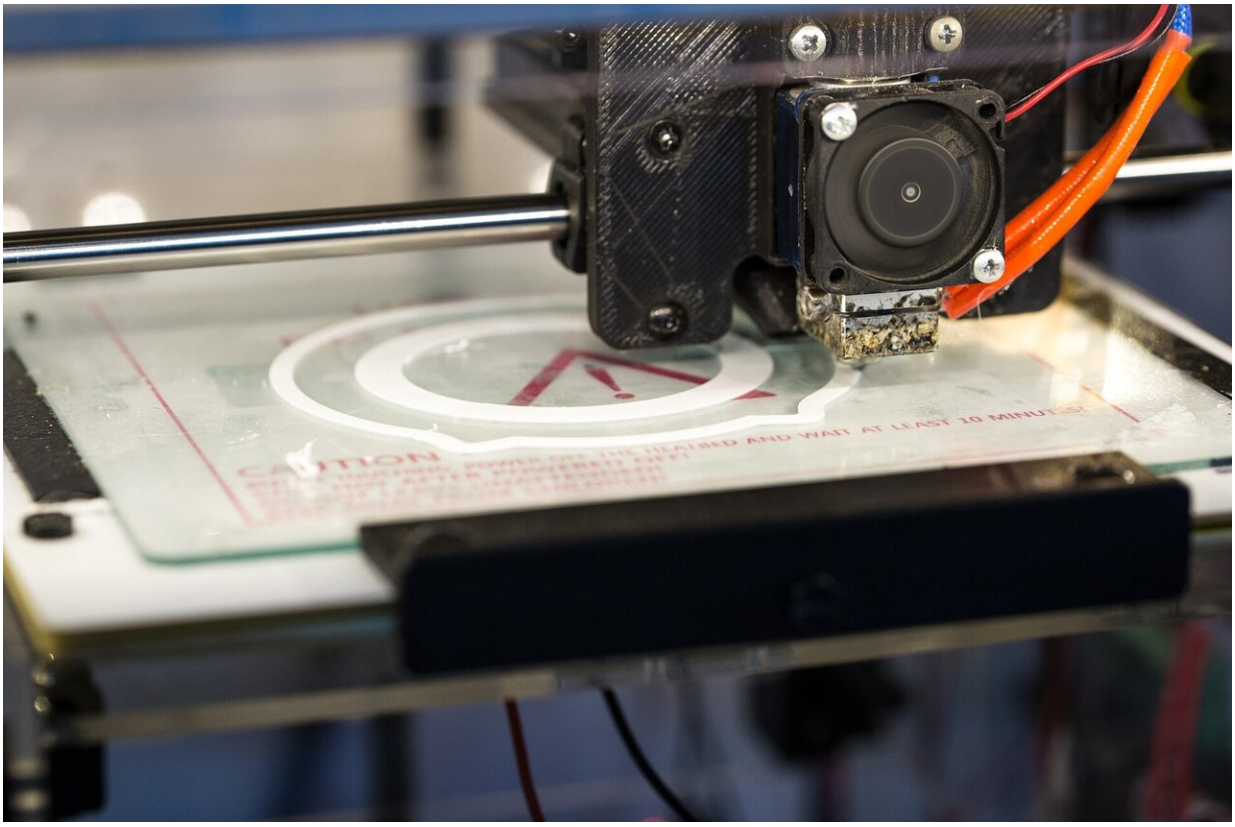
Video: Designing and 3-D-printing a better brace

September 18 2019



Credit: CC0 Public Domain

Almost exactly one year ago to the day, Anuj Thakkar got into an unfortunate biking accident and was left with a broken wrist. It soon became evident that not only would he have to deal with the pain of a

broken wrist, but he would also have to deal with the discomfort of a cloth cast. After a couple of weeks of dealing with the consequences of a sweaty cast that could not get wet during one of the rainiest weeks of the month, Anuj had had enough.

Luckily for Anuj, he was a junior in mechanical engineering at the time, and he became determined to improve his situation. That's when Anuj decided to approach his friend and Atanaz Bohlooli, a mechanical engineering and teaching assistant, to ask if she would be interested in collaborating on a project to engineer a wrist brace to alleviate the pain and discomfort. From then on, the two worked together to create a custom-fit, flexible, waterproof wrist brace to be 3-D printed for Anuj to wear in place of his initial cloth cast.

After about three months of design, modification and testing, the two created a final product. By using a white light scanner, 3-D CAD software and a Stratasys 3-D printer, the wrist brace was durable and ready to be worn. The cast turned out to be a huge success, even garnering doctor approval, which allowed Anuj to wear the wrist brace for the next two months. One fully-healed wrist, and a lot of learning later, Atanaz and Anuj continue to pursue engineering projects and push the barriers of conventional engineering.

Provided by Duke University

Citation: Video: Designing and 3-D-printing a better brace (2019, September 18) retrieved 3 May 2024 from https://techxplore.com/news/2019-09-video-d-printing-brace.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.