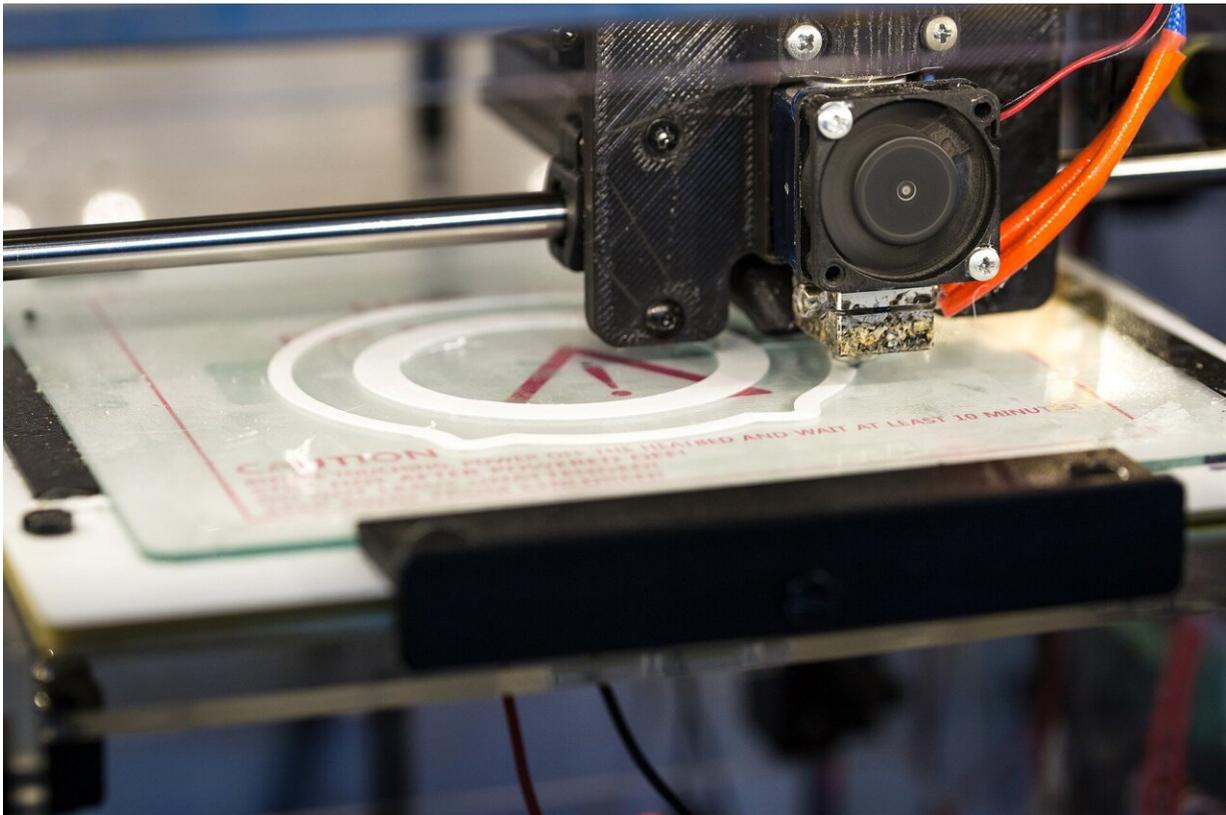


Video: Designing and 3-D-printing a better brace

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

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