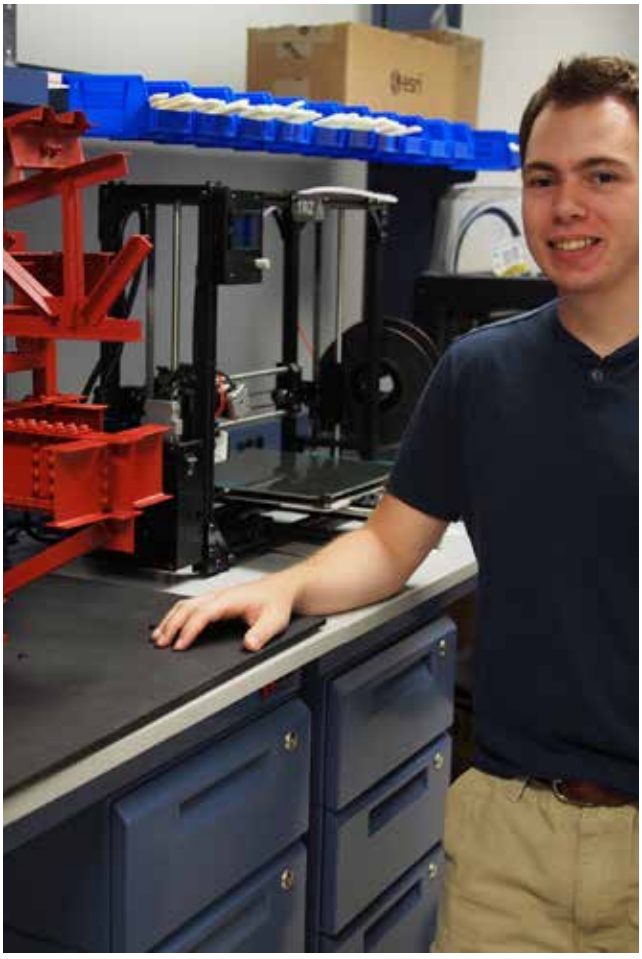
structurally sound

3D STEEL



A STUDENT-PROFESSOR TEAM at George Mason University's Volgenau School of Engineering proves that do-it-yourself 3D printing is a thing of the present.

This 3D-printed steel sculpture, created by student Jeff Bynum (above) and assistant professor David Lattanzi, is a smaller version of the AISC steel sculpture. It is scale-accurate, with just a few minor modifications to help printing. (The AISC steel sculpture is a valuable teaching aid that exemplifies the many methods of steel framing and their corresponding connections, and can be found on more than 150 college campuses worldwide. See **www.aisc.org/steelsculpture** for more.)

Each section was modeled and printed individually per the AISC-provided drawings. The only parts of the sculpture that weren't 3D printed are the fasteners, which are simple machine screws.

The print medium was filament on a TAZ 4 printer, with some backup printing on a Makerbot while the TAZ was down for standard maintenance. Overall print time was estimated at 100 to 125 hours, and the print was spray-painted red to make it more realistic.

In addition to filament, it is currently possible to 3D print a variety of metal alloys as well.

How do you think 3D printing could enhance structural steel framing systems? Let us know on Twitter, using the hash tag #3Dsteel. You can also Tweet at us (@aisc) or post on our Facebook page at **www.facebook.com/AISCdotORG**. ■