

CP122990

Fusion 360 for 3D Printing FDM Technology Workflow

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Learning Objectives

- Understand the Fusion360 environment for additive technology
- Leverage the benefit of 3d printing changing the way to design
- Better perform your model using design optimization
- Take away tips and trick for optimize the production time of your 3d printer

Description

Join this class if you want to know more about the design process using FDM 3d Printing Technology, leveraging the power of a very flexible modeling workflow in Fusion360. A real example will be used to show how to concept, design and optimize your models for fitting this powerful production technology. A session of tips and tricks will end the presentation for letting you to better perform in design for additive and definitely make anything!

Speaker

With 17 year experience on CAD\CAM\PLM product as Application Engineer in several companies, Matteo Crocetti joined Autodesk in 2013 as a Technical Sales EMEA focused on Digital Prototyping Products and Data Management. On his skills, there is a passion for disruptive technology and everything that can help to find a new way to make anything!

3d printing, technology for everyone

3D printing, also known as additive manufacturing (AM), refers to processes used to create a three-dimensional object in which layers of material are formed under computer control to create an object. This process has been developed since 1980 but only at the beginning of the new millennium, costs and application allow to spread it around manufacturing and production workflow. There are a lot of methodology and material developed but the most accessible is FDM technology (fused deposit material) and in particular the one that use fused filament deposition.

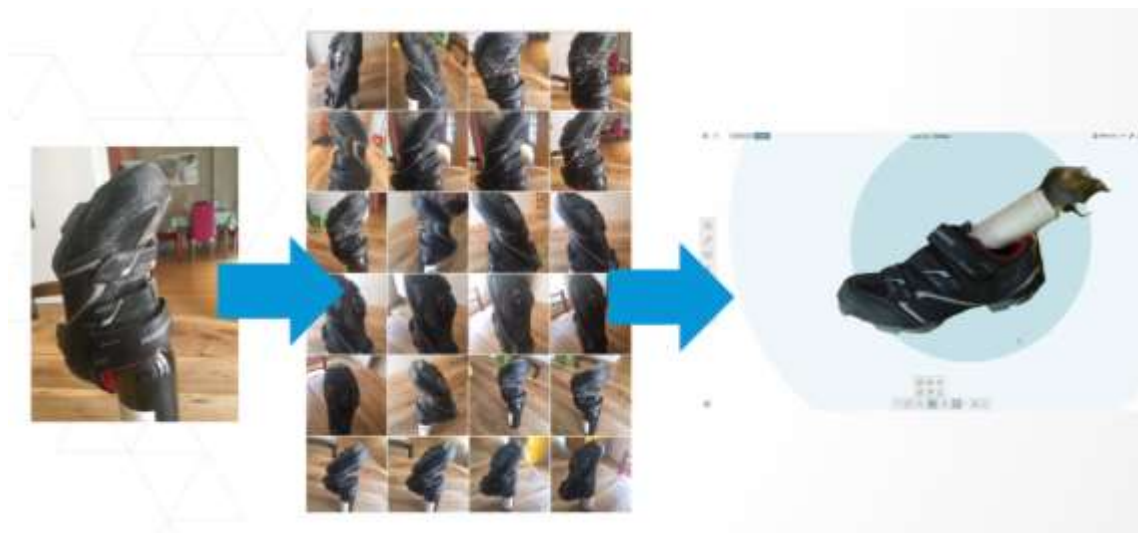


Fusion360 environment for additive technology

Fusion 360 is the first 3D CAD, CAM, and CAE tool of its kind. It connects your entire product development process in a single cloud-based platform that works on both Mac and PC.

Using 3d modeling environment is easier than ever with the possibility to define solids, surfaces, meshes on a single flexible environment.

On this class there will be a real product development example for letting people on the track and show how is simple to put idea on the table and develop it.

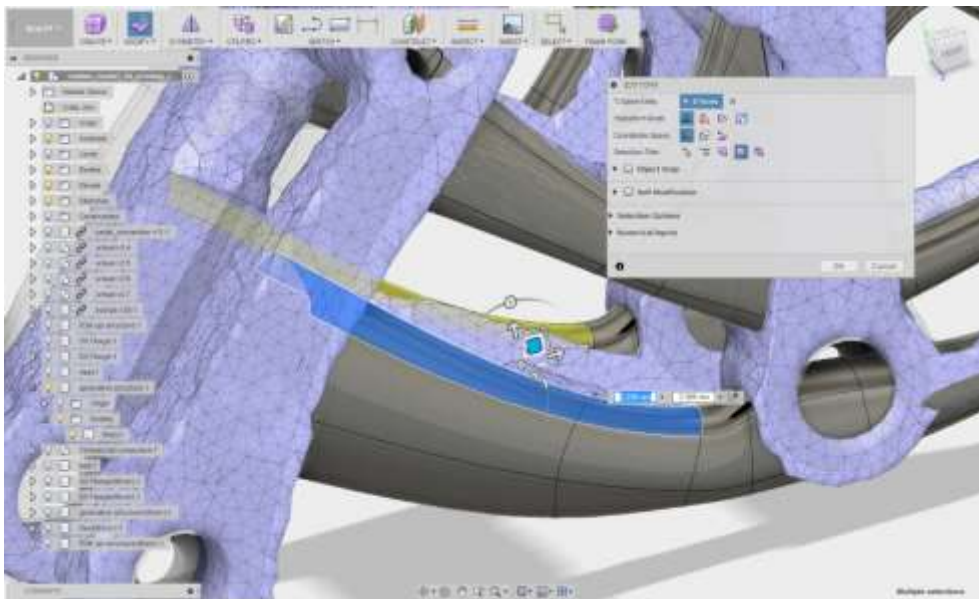


Leverage the benefit of 3d printing changing the way to design

From the engineering point of view, if you think about a casted part, a moulded part or a simple part generated from subtractive methodology (milling, turning ect) you certainly have to prevent on the shape all the workflow process in order to create something manufacturable. The more the design will use the rules of manufacturing the more the shape will not change on the manufacturing process. (draft angle for plastic part, undercut for milled parts ect ect)

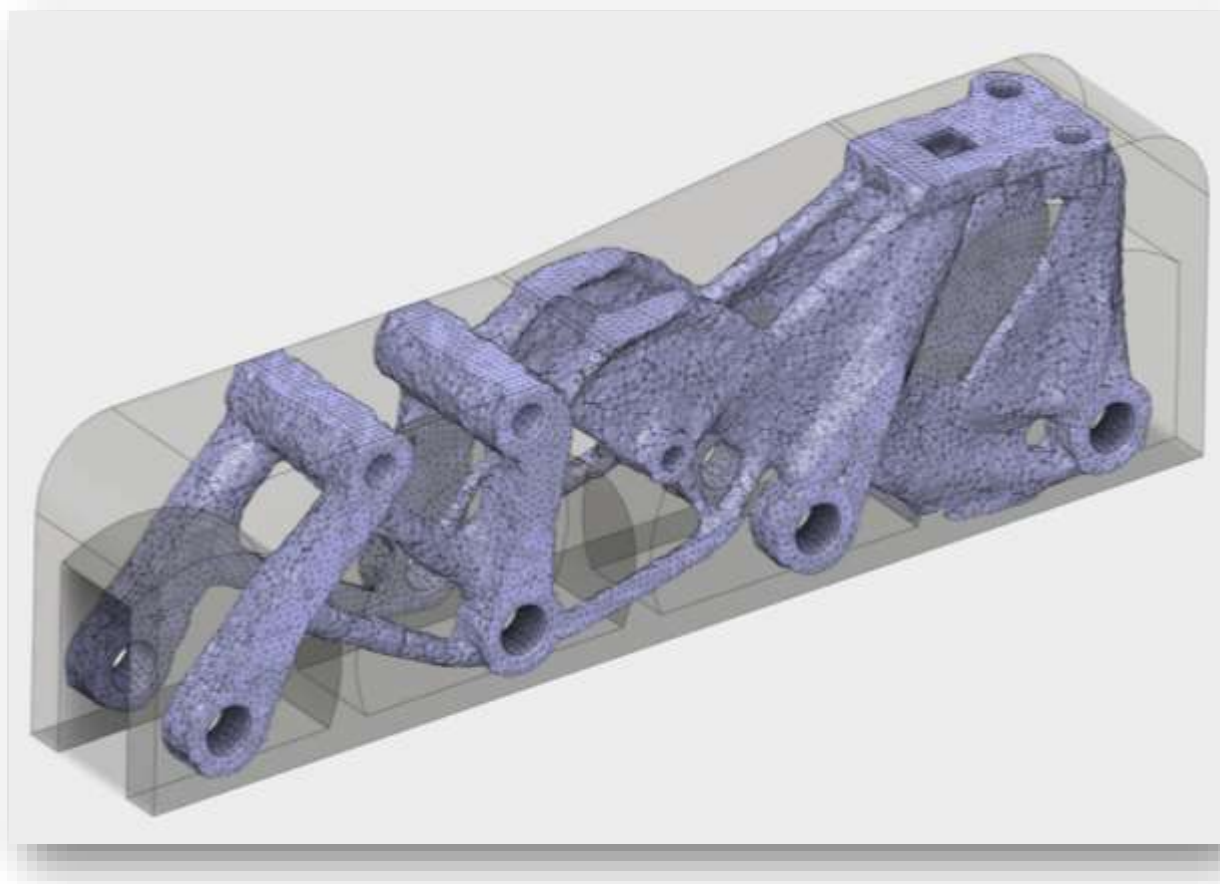
Using the 3d printing as a production methodology prevent or at least reduce the rules that designer need to respect for best performing and obtain good parts.

Additive technology also allows to completely change the way to shape, assemble and optimize your project.



Better perform your model using design optimization

3d printing is going to completely free the way of image, design and produce products. For this reason, Fusion360 adopt new technology for helping people to change the engineering paradigm and think “over the wall”. Optimization, generative design and lattice structure are going to be very important in order to best perform in production parts.



Tips and trick for optimize the production time

During the project developing people must take a look on:

- Model Orientation
- Support material
- Shrinkage and warping
- Holes
- Fillets
- Finishing
- Wall thickness

All of those aspect must impact the production quality. Knowing material and 3d printer behavior can also impact the printing time.