

# Radically reduce meshing time

*Get engineering answers in minutes, not months.*

Whether your models are geometrically simple or complex, they are trivial to mesh with Coreform's truly automated meshing technology.

Coreform IGA is an isogeometric analysis solver for non-linear structural mechanics that does not require CAD data to be defeatured.

Coreform IGA leverages the power of smooth splines to deliver faster FEA solutions. It enables analysts to calibrate simulation accuracy and speed to fit any stage of the product development process.

Legacy FEA solvers require time-consuming mesh generation for every simulation. The modern Coreform IGA solver is built to run non-linear simulations directly on CAD.

**MANUAL  
LABOR  
REQUIRED  
TO MESH:**

**10  
seconds**



**30  
seconds**

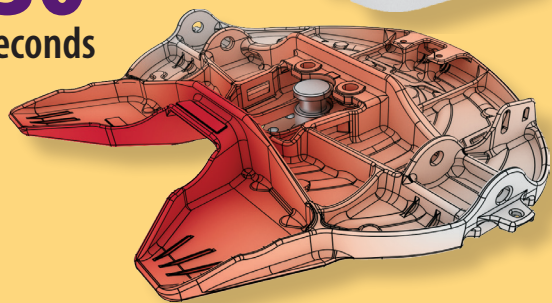


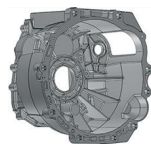
Image generated in collaboration with Sandia, which is managed and operated by NTESS under DOE NNSA contract DE-NA0003525. SAND2022-7001 V.

# It's time for the next generation of simulation.

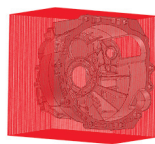
Request a free trial of Coreform IGA today to help you refocus on engineering and rediscover your love for FEA.

## What is IGA?

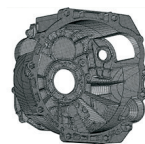
Coreform isogeometric analysis (IGA) eliminates the tedious manual meshing step required for accurate simulations. Coreform's workflow starts with a CAD part, (1) immerses it in a higher-order smooth spline mesh, and (2) performs a fully automated volumetric trimming operation that (3) produces a new trimmed spline mesh, which can be used for linear and non-linear, static and dynamic simulations (4).



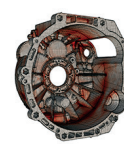
CAD part



Flex meshing  
(4mm elements)



Simulation  
model



Simulation

## Coreform LLC

1427 South 550 East, Orem, UT 84097

801.717.2296

<https://www.coreform.com>

[info@coreform.com](mailto:info@coreform.com)



**Rekindle  
your love  
for FEA!**

# Automate engineering design workflows

*Iteration that makes you feel creative, not exhausted.*

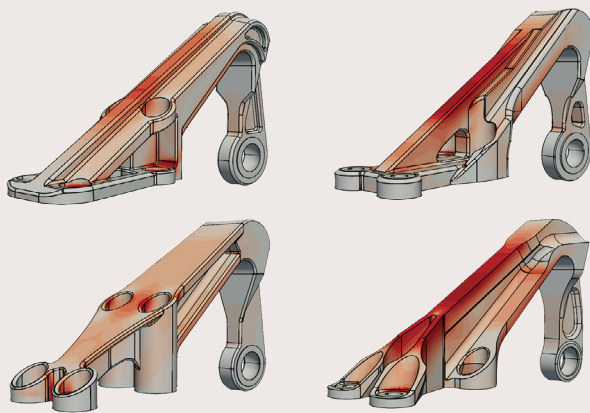
## Traditional meshing

- Defeaturing and simplifying CAD is labor-intensive
- Mesh creation is a tedious art and science
- Many potential sources of truth: design CAD, simplified CAD, and levels of mesh refinement
- Design iterations difficult to integrate with CAD

## Coreform's truly automatic meshing

- No CAD defeaturing or simplification required
- Mesh creation is fully automated
- Single source of truth: design CAD can be automatically meshed for different applications
- Design interactions directly on CAD
- Fully scriptable Python API

Dozens of CAD models from the GrabCAD Alcoa bracket challenge were analyzed with zero manual meshing time.

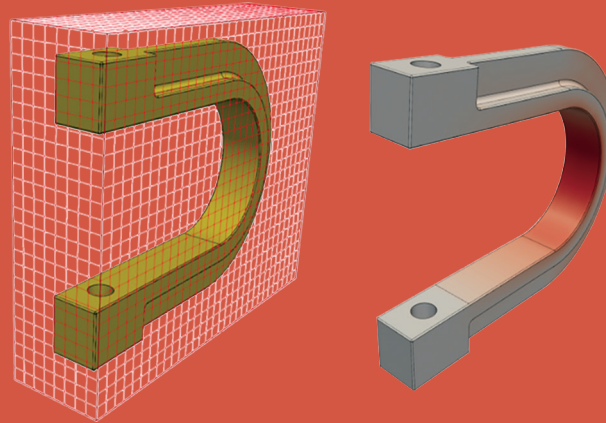


## Supported CAD file formats:

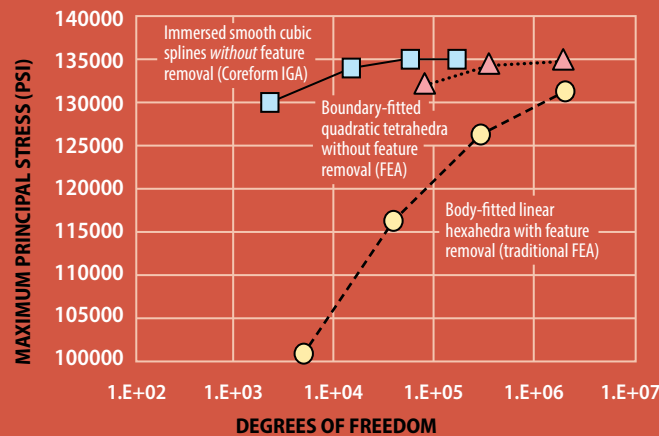
CATIA, NX, creo, SolidWorks, Parasolid, ACIS, STEP

# Enjoy accuracy across all physical domains

*Coreform IGA is mathematically proven to be more robust and accurate per degree of freedom than traditional FEA.*



Coreform IGA enables simulation directly on CAD with fully automated meshing.

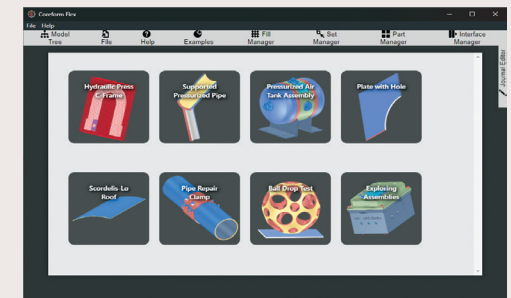


Coreform IGA's high-order, smooth basis functions allow engineers to efficiently obtain accurate and useful solutions.

# Rekindle your love for FEA with Coreform simulation software

## Preprocessing: Coreform Flex

- Fully automatic meshing
- Problem definition and model set up
- Fully scriptable through Python API
- Integration with Coreform Cubit for geometry cleanup and body-fit meshing
- Available for Windows, Linux, or Chrome browsers
- Example journal files for easy learning



## Solver: Coreform IGA

A next-generation solver supporting highly non-linear problems including large deformation, statics and dynamics, incompressible elasticity, plasticity, and contact.

