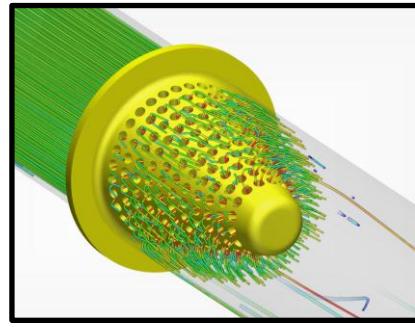




Fluid Structure Interaction

Ryan Abel – Autodesk



SM3855 Will my part fail? Will it be cooled effectively? Simulation can answer these and other critical questions early in the design process. This class will show how these simulations can be taken a step farther by examining fluid structure interaction (FSI) or, more specifically, taking advantage of the thermal results from a computational fluid dynamics (CFD) analysis to use as input into a mechanical stress and strain calculation. We will examine new workflows for running a thermal analysis in Autodesk® Simulation CFD software, processing the results, and using the thermal data within the setup of a thermal stress analysis.

Learning Objectives

At the end of this class, you will be able to:

- Identify opportunities for reducing prototyping cost and time to market using simulation
- Prepare your organization for making best use of cloud-based simulation tools
- Take advantage of the power of the cloud for solving mechanical, fluid and thermal simulations
- Access software resources for Autodesk Simulation 360, Autodesk Simulation Mechanical, Autodesk Simulation CFD and the Project Simulus Technology Preview

About the Speaker

Ryan Abel has a Masters in Mechanical Engineering from Lehigh University where he focused on New Product Development. At Lutron Electronics he lead a team of engineers to bring new products to market embracing CAE and specifically simulation products to make informed design decisions and improve product knowledge to drive innovation. More recently working for Autodesk Simulation he is now applying his experience to educate customer to do the same by getting the right tool in the hands of the right person early in the design process where they can have the biggest impact.

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Agenda:

- Background
- Overview of FSI applications and technology
- Current Autodesk FSI Capabilities
- R&D and Labs Activities in FSI
- FSI in the Cloud

