# Digital University 2018

Breakout Session Descriptions

## Solid Edge – What's New

Are you looking for the latest news about Solid Edge's newest version? With the naming convention change comes a whole host of new capabilities, tools and add-ons – this session will explain each one of them in detail.

## Hands-on: Solid Edge Tips & Tricks

Do you want to learn Solid Edge from the experts? Or are you an experienced CAD guru with that one burning question that you need answers for? If so, come along to our Tips and Tricks session, where we'll push the boundaries of what's possible with CAD software - and save you some time in your day-to-day work while we're at it.

## Solid Edge Part and Sheet Metal Modelling

This session will be all about how to use the modelling tools in Solid Edge 2019's Part and Sheet Metal environments. Come along if you want to see how robust, reliable models can be created with the fewest possible steps, in both Synchronous and Ordered environments.

## Assembly Modelling in Solid Edge

In this session, we will take an in-depth look at the assembly functionality in Solid Edge 2019. With the shift towards Digital Transformation and add-on software for any occasion, this demonstration of the full capabilities of Solid Edge's assembly modelling is sure to impress.

## Solid Edge Drafting & Documentation

Creating models is only one stage of the design process - draft creation is still vital to any CAD package. Solid Edge's drafting environment and intelligent document creation will be on show in this session, so if you want to give your engineering documents that extra "edge", come along and see what's possible.

## Managing your Solid Edge Data

Managing data becomes easier in Solid Edge 2019, with Design Manager and in-built data management tools having been refined even further – this session will show you how to avoid broken file links, assign unique part numbers to your data, and much more. No data server? No problem - find out how to manage and share your designs via tried and tested cloud storage.

## Technical Publications and KeyShot Rendering

This session will show you how to make your designs stand out from the crowd, with Technical Publications allowing you to make interactive technical documents, and KeyShot, which provides photorealistic renders for any product and any scenario.

## Solid Edge Hybrid Modelling

In this session we will cover "hybrid modeling", a design concept taking advantage of both synchronous and ordered features. Since 3D modelling has existed, mesh bodies and b-rep bodies have been almost impossible to get to work in one modelling environment. With the release of Solid Edge 2019, that gap is closing. Whether you create native Solid Edge models or reuse imported foreign data, you'll learn that the combination of synchronous and ordered techniques greatly speeds product design.

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## Solid Edge Surfacing

When none of the standard modelling commands give you what you want, Solid Edge's surfacing tools allow freeform shapes to be easily created and edited. In this session, we'll demonstrate what tools you can use to create more "organic-looking" parts.

## NX - What's New

With the release of NX12, Siemens have updated their software for use in a truly next-generation design office. With hundreds of user-requested updates, advanced display capabilities and modelling tool refinement, this session will demonstrate the major changes and new tools.

## Assembly Modelling in NX

This session will show how NX12 has improved assembly performance – not only have many add-ons been updated, but assemblies now benefit from faster load times. If you want to work more efficiently with your assemblies, we recommend this event.

## NX Drafting & Documentation with Model Based Definition

In this session, NX12's Part Manufacturing Information and drafting capabilities will be explained in detail. With both 2D draft files and 3D view-only models, it's never been easier to display your vital model information to those who need to read it.

## NX Advanced Part Modelling and Styling

No matter how complex the design, there's always a way to model it. This session will demonstrate the more exciting modelling tools available in NX12, so come along if you want to be inspired to create even more intricate and intelligent parts.

## NX Generative Design

With the wide availability of 3D scanning technology, along with 3D printers becoming common in industry, NX12 has been developed to work with these new tools – this session is designed to showcase the functions that allow you to avoid "over-engineering" your products and predict their behaviour while in use.

## Hands-on: NX Tips & Tricks

Everyone – from a modelling novice to a hardened NX veteran - can always benefit from advice. With NX12 comes new ways to make life easier, use existing tools in new ways, and integrate new capabilities with your own method of working. Learn about the new best practices from the NX experts in this session.

## Teamcenter - What's New

Teamcenter 12 continues to deliver enterprise wide product lifecycle management solutions. Enhancements to cloud deployments and additional functionality within Active Workspace 4 improves efficiency and lowers costs associated with product development.

## BOM Masterclass

Teamcenter continues to offer multiple tools for controlling various BOM definitions, including; Part BOM's, Manufacturing BOM's, BOM configuration and variant control. The BOM can be accessed by all levels of the business, allowing correct data to be found quickly and easily.

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## Teamcenter Integrations (ERP)

To leverage the PLM content throughout the business often requires downstream processes to consume the data. An integration between Teamcenter and Enterprise Resource Planning (ERP) systems allows business to leverage PLM data into extended business processes.

## Visualisation, Digital Mock-up & Virtual Reality

Teamcenter Visualisation tools allow anyone within the business to collaborate and consume 2D & 3D data, without requiring the original, expensive authoring tool. Digital Mocks based upon real-time data allow businesses to streamline development processes throughout various disciplines. The additional Virtual Reality capabilities within Teamcenter allow improved decision making throughout the development process.

## CAM – What's New

Siemens continue to increase the rate of delivery of high quality new functionality with NX CAM V12, enabling users to make great productivity gains. A few of the headline items include: NX Adaptive milling - the new rouging strategy that dramatically reduces cycle time while at the same time increasing tool life. Additional powerful 5 axis strategies have been added including the new 5 axis roughing options and new guided curve finishing. Toolpath verification has also seen significant additionally functionality which helps ensure high quality NC code is delivered to the shop floor first time. The array of improvements in NX CAM V12 means productivity improvements for everyone.

## Preparing Part Models for NC Programming

One of the great strengths on NX CAM is the ability to create toolpaths directly from model geometry - faces and edges for example. But production engineering is not always as straight forwards as creating an operation to make the finished part, in many cases stage models to reflect the geometry throughout the manufacturing processes are required. NX CAM provides the tools to quickly and easily create these associative stage models direct from finished part, these same tools can also be used to easily create fixtures while the drafting environment is ideal for creating associative work instructions or setup detail.

## 3D Printing & Additive Manufacturing

What was once thought of as a niche technology has moved into mainstream manufacturing. The development of technology in these processes has opened a whole new opportunity for cost effective manufacture of complex production parts in both plastics and metals. The arguments for their adoption are compelling: Reduced number of parts in assemblies, reduce weight, topology optimisation, shorter lead times and customised design are but a few. Terms such as 3D nesting, latice support structures and multi axis deposition maybe new to you today, but like the technology itself they will become mainstream very shortly.

## Simulation – What's New

Siemens simulation, test and analysis portfolio is by far the most comprehensive. This session will give you an overview of the various products, as well as detailing what's new in the latest versions.

## Simulation Driven Design

What is simulation driven design, why is everyone talking about it and why is it relevant to you? Companies who have adopted a simulation driven design methodology have shown that they will beat their competitors to market, lower product costs, have fewer manufacturing errors and greatly increase profitability This session will breakdown the principles of simulation driven design and explore how it can fit into your design workflow.

## Concurrent CFD with FloEFD

Computational Fluid Dynamics have long been considered a dark art, too complex to be used effectively by anyone, other than dedicated CFD analysts. Siemens Mentor FloEFD is specifically targeted at engineers, not analysts. Embedded within your CAD environment, FloEFD simplifies the CFD analysis process, giving you the ability to move CFD upfront in the design process. This session will introduce FloEFD and demonstrate how design exploration is made easy, accessible and accurate.

## Design Validation

Your daily challenges include; overseeing progress, managing risks, resolving impacts, and ultimately formulating hundreds of decisions. Design Validation is a suite of tools, which can be configured into a custom solution, that can deliver visual product analytics, enable you to quickly synthesize information, check designs for compliance to requirements, and help you make informed decisions. This session will explore how these tools can help you ensure product quality, as well as reduce errors and rework.

## Manipulating Non-Native Data including Point Clouds

These days we are forced to work with an ever-increasing number of data formats - whether point-cloud data from a 3D scanner, STL files for 3D printing or standardised neutral file formats, such as; STEP and IGES. This session will focus on how we can manipulate this data, extract manufacturing information and make design changes, quickly, easily and accurately.