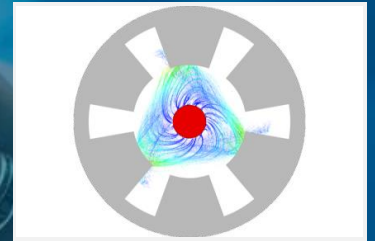


CST STUDIO SUITE - CHARGED PARTICLE DYNAMICS

SIMULIA COURSE DESCRIPTION



Level: Advanced
Products: CST Studio Suite
Disciplines: Electromagnetics

Audience
Particle Dynamics Simulation Analysts

Why take this course?

Throughout this course you will become familiar with the use of the Charged Particle Module. You will be able to use and run the different solvers available within the CST Studio Suite environment. This training course is well suited for the design of vacuum electronic devices, the accelerator community and any applications taking into account the propagation of a charged particle beam under vacuum or a dispersive media like a plasma. The Multipactor analysis is also one of the capabilities of this tool.

What will you learn?

Upon completion of this course you will be able to analyze electromagnetic devices which interact with charged particles. You will:

- Understand how to define a particle source and apply the available emission models to it.
- Load Different types of precalculated fields for the particle simulation.

- Use the different postprocessing capabilities to read out fields and particle result data.
- Use and run the tracking and the PIC solver.
- Be familiar with the Wakefield analysis for accelerator components.
- Characterize material properties such as the secondary electron emission.

Explore Your Learning Options

Live Sessions	Engage in Real-Time, interactive group workshops guided by experts. Learn and collaborate live in your preferred language and time zone.	Join a live session
On-Demand Learning	Access expert-designed courses anytime, anywhere. Perfect for independent learners looking to build skills on their schedule.	Start Learning Now
Private Training	Exclusive, tailor-made sessions designed to meet your team's unique goals with expert guidance.	Contact Us for Custom Training



Gain hands-on experience and master real-world workflows through guided, practical training sessions.

Model and analyze electromagnetic behavior for advanced design validation and system optimization.

– SIMULIA Training Expert Team

What You Need to Know Before Starting

Introduction to CST Studio Suite

Agenda for Virtual Live Sessions

Participate in hands-on, real-time workshops where you'll gain practical expertise. Here's what you'll cover:

[Join an Instructor Led Session](#)

Day 1

Lesson 1: Introduction to Charged Particle Dynamics

Lesson 2: Supporting RF and Static Solvers

Lesson 3: CST Particle Studio Solvers

Workshop 1: Static Solvers Introduction

Workshop 2: Quadrupole Simulation

Workshop 3: Tracking Simulation

Workshop 4: Gridded Gun Simulation

Workshop 5: Wakefield Example - Pillbox Cavity

Workshop 6: PIC Simulation

Workshop 7: Traveling-Wave Tube (TWT) Simulation

Workshop 8: Multipaction

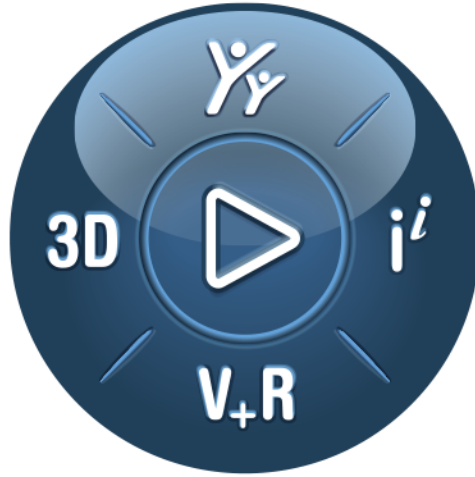
Workshop 9: Magnetron

Want to Learn More?

Expand your knowledge by exploring our [course Catalog](#) and browsing learning paths on [Eduspace](#), our dedicated e-learning platform.

Join the Community!

[Join the SIMULIA community](#) to connect, learn, and stay updated.



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