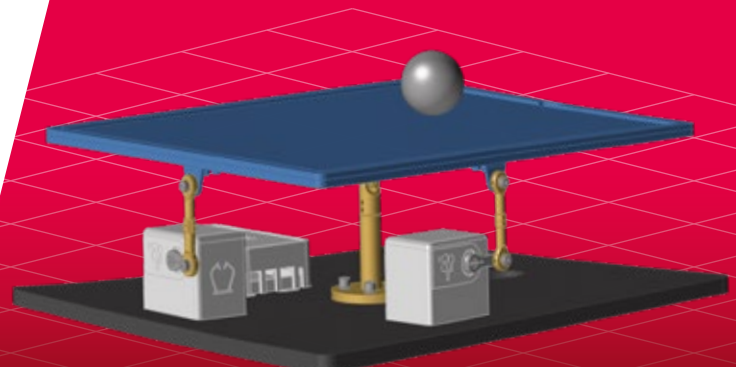


# A TRUE DIGITAL TWIN EXPERIENCE

*A comprehensive educational kit to teach and learn model-based development with the highest fidelity digital twin simulations.*



Balancing a ball on a table in a desired position is one of the most important and classical problems of control theory. Altair, partnering with ACROME, promotes the unique experience of a digital twin mechatronics simulation and hands-on experiment platform to teach and learn model-based controller design concepts with a 3D+1D system co-simulation engine.

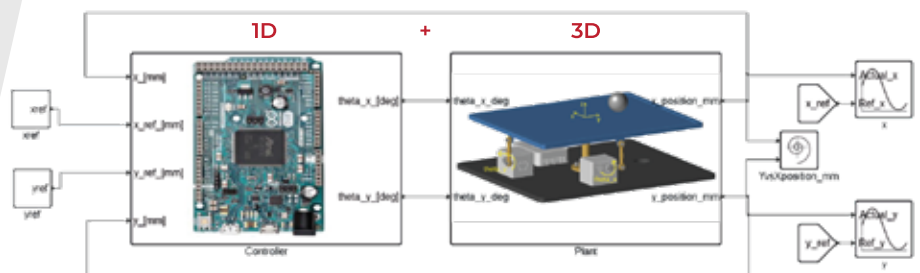
## TEACHERS

Prepare your students to hit-the-ground-running in their work as mechatronics engineers!

## STUDENTS

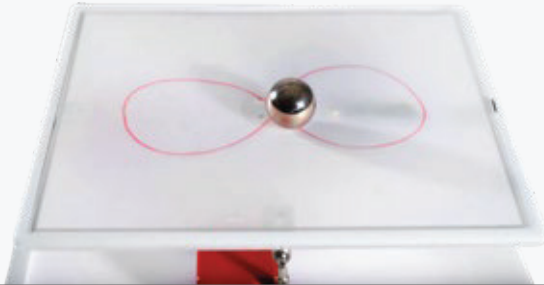
Get the premier mechatronics jobs! As an explorer, empower yourself with the next generation engineering tools to innovate better and faster.

## FOR THE ULTIMATE MECHATRONICS EDUCATION!

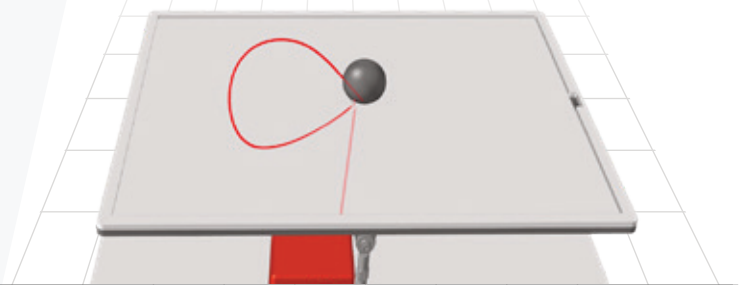


Powered by Altair Activate, an open integration platform for multi-disciplinary system simulations, combining classical 1D block diagrams and system models with 3D motion models.

### HANDS-ON, PROJECT-BASED LEARNING WITH DIGITAL TWINS



Hardware-based project



CAE simulation-based project



Plant modeling with no compromises. This Ball Balancing Table allows you to simulate the digital twin in 3D + 1D and compare the results with the real data. The Mechatronics Education Kit seamlessly integrates engineering concepts with actual hardware.

#### WHAT'S INCLUDED

#### STARTER KIT<sup>1</sup>

#### EXPANSION KIT

Hardware + Courseware



'Teaching License' of Software<sup>2</sup>



Initial Setup Help and Training (via web)



1) Only 1 Starter Kit is needed. If you already have the Altair software, you need only purchase Expansion Kits.

2) Software License includes: Altair Compose®, Altair Activate®, Altair MotionSolve™ & MotionView™.

All software apps can be installed and run on student computers and/or on school computers.

#### What can be studied with the Starter Kit?

- ◆ System dynamics and automated control concepts
- ◆ Integration of high-fidelity controllers with high-fidelity mechanical plants.
- ◆ Virtual commissioning of real platform via digital twin
- ◆ Optimization of the controller gains with different operating conditions and controller types.



**Altair MotionSolve™**

3D

**Altair Activate™**

1D

**Altair Compose™**

0D



For more details,  
scan the qr code

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