

Hello RoboCup participants,

Here is the latest news from **MathWorks**, Global Sponsor of RoboCup.

MATLAB Release 2019a is Now Available!

As part of our support for RoboCup, you now have access to the [latest MATLAB and Simulink product features](#).

If your team already has a license, [download R2019a here](#). Else, request a complimentary license for your [RoboCup](#) or [RoboCupJunior](#) team.

New capabilities include:

Machine Learning and Computer Vision

- [Reinforcement Learning Toolbox](#) **[NEW!]**
- [YOLOv2 object detectors](#): Train and deploy to NVIDIA GPUs
- [Deep Learning Toolbox](#): Support for 3-D image data and combining LSTM and convolutional layers
- [Computer Vision Toolbox](#): C/C++ code generation for point cloud processing functions, ORB feature detectors, and ACF object detectors
- [Signal Labeler](#) for deep learning with signal data

Algorithm Development

- [Robotics System Toolbox](#): Trajectory generation functions and blocks, C/C++ code generation for 2D lidar SLAM and 2D/3D pose graph backends
- [Stateflow charts in MATLAB](#): state machine development and deployment

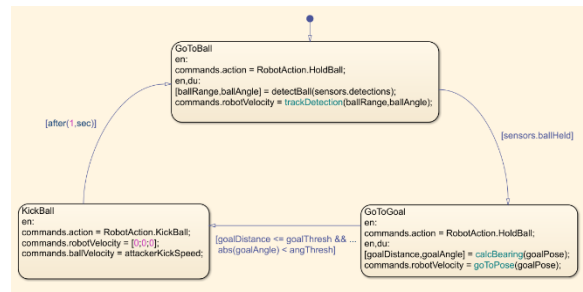
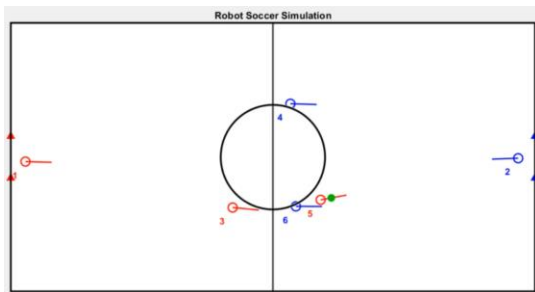
... and more!

New Robotics Arena Materials

Here are some new resources showing from our [MATLAB and Simulink Robotics Arena](#), showing all aspects of robotic system design.

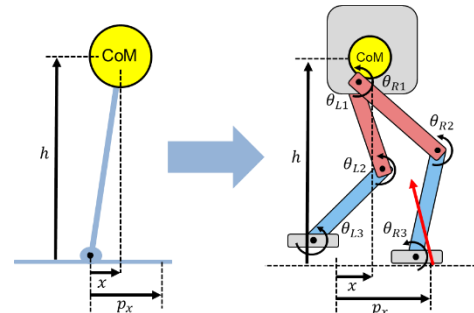
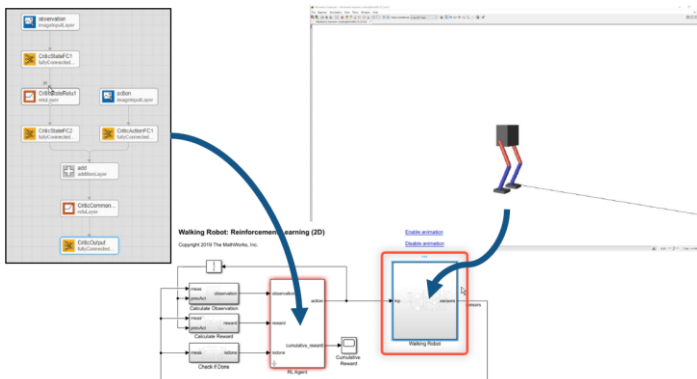
Programming Robot Soccer Behavior

We've released a [new video](#) on robotic soccer behavior modeling using state machines. This is included as part of our new [Mobile Robotics Simulation Toolbox](#) release.



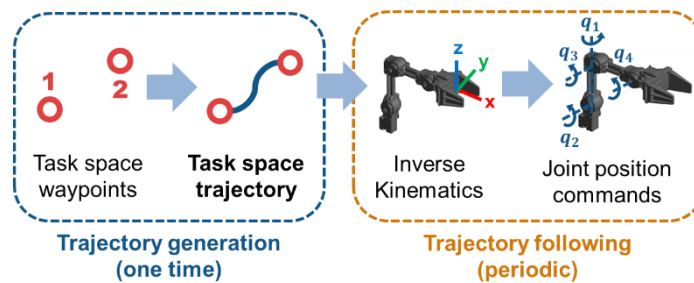
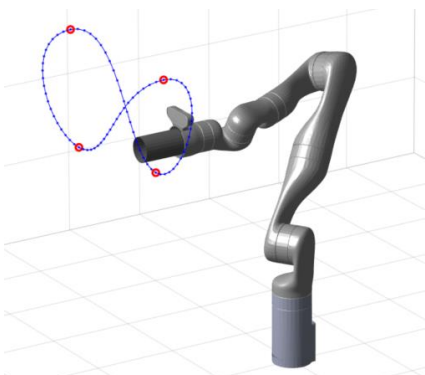
Walking Robot Control Updates

We have released some updates to our [walking robot examples](#), including [model-based planning and control](#) and [deep reinforcement learning](#). Look out for an upcoming blog post in the next weeks.



Trajectory Planning for Robot Manipulators

Check out MATLAB and Simulink examples for trajectory planning with a 7-DOF Kinova Gen3 robot arm model. The [files are available for download](#), and videos are coming soon.



RoboCup 2019 Event Updates

MathWorks will be at a few RoboCup events over the next few months. If you will be around, say “hi”! I will personally be at these 3 events.

RoboCup German Open

May 2-5 @ Magdeburg, Germany

European RoboCup@Home Education Challenge

May 23-26 @ Trieste, Italy [[Web page](#)]

RoboCup 2019

July 2-8 @ Sydney, Australia

We will also be conducting [RoboCup@Home Education Challenge](#) here!

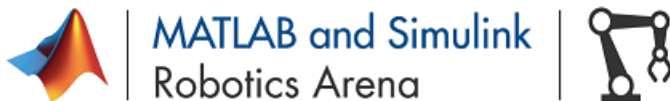
Talk to Us!

If you have any questions, reach us at roboticsarena@mathworks.com or on [Facebook](#).

Sincerely,

Sebastian Castro

Education Technical Evangelist – Robotics Student Competitions
MathWorks



Join the MATLAB and Simulink Robotics Arena : [Video Series](#) | [Facebook](#) | [Blog](#)

Access [video tutorials](#) to learn MATLAB and Simulink

Do you use ROS? [Get started with ROS, MATLAB, and Simulink](#)