### SYNOPSIS

Cooperative control is concerned with the methodology to combine the ability of multiple agents to perform a common task, in cases where a single agent is unable to perform the task. The complexity of such a system can cause issues in the process of control and stability analysis. To design a good method of controlling such a system, a hierarchical design methodology will be used. In such a case, every agent is modeled separately and in each agent the control algorithm can be hierarchical to reduce the complexity (Distribute the complexity and control tasks among the layers). In this webinar, the concepts of optimal control, hierarchical design, stability analysis and formation control of UAVs will be covered.

### ABOUT THE SPEAKER

Amin Mirakhorli received his Bachelor degree in Mechanical Engineering from University of Shahrood, Iran, in 2011, and his Master of Science in Mechanical Engineering from K. N. Toosi university in 2014. He is currently pursuing his PhD in Mechanical Engineering at UTSA since 2015. His research interest is in Controlling mechanical systems and robotics. He is also an entrepreneur and involved in commercialize some robotic related products.