



International Society of Automation
Cleveland Section

Setting the Standard for Automation™

JANUARY PROGRAM

Wednesday, January 15, 2025

Social: 5:30 – 6:00 PM

Dinner: 6:00 – 7:00 PM

Program: 7:00 – 8:00 PM

Understanding Machine Learning Through Applications in Sensing and Control

Timothy Franke, Parker Hannifin

About the Topic:

Machine learning is a field of techniques that has significantly grown in capability lately. These general tools are finding applications across many fields, including increasingly in controls. But these methods require a shift in thinking from traditional control system design. Rather than relying on analytic derivations or manual tuning, these algorithms are defined through data sets—and therefore require a change in how we think about designing these systems.

In this talk, we will dive directly into the question of how data can be used to specify algorithms. Various problems from control engineering will be used as illustrative examples and machine learning algorithms will be trained to solve them—with key concepts introduced along the way. By showing the full process of how these algorithms are developed, participants will gain an understanding of how data can be used to specify algorithms. These examples will serve as tools for thinking to help prepare you to successfully understand and apply these methods as they make further inroads to our industry.

Speaker's Bio:



Timothy Franke is a Principal Controls Engineer at Parker Hannifin where he works in product development for the area of electrification of hydraulic systems. Prior to his current role, he was a Solutions Architect for Parker's Internet of Things initiative where he specialized in data analytics and algorithm development for processing sensor data from physical systems.

Timothy earned his PhD in Systems and Control Engineering from Case Western Reserve University.

ISA Cleveland Section Agenda

Social: 5:30 – 6:00 PM

Welcome: 6:00 – 6:05 PM

Dinner: 6:05 – 7:00 PM

Program: 7:00 – 8:00 PM

PDH: 1 Technical Development Hour (PDH) will be given to those attending in person.

Location: Tavolo 72 and Microsoft Teams

Tavolo 72 is located in the lower level of the Crowne Plaza Hotel

7230 Engle Road

Middleburg Heights, 44130.

Phone 440-243-4040

Cost: Dinner: Individual Checks from Menu.

Menu: Chicken, Vegetarian, Fish or Other with Soup or Salad

Meeting Recording: For archival purposes, this program may be recorded and be made available for later viewing.

Reservations: Please submit your reservation using our [online registration link](#). Your reservation must be in **no later than 5:00 PM on Monday, January 13, 2024.**