

**UNIVERSITY of DAYTON
VISION & FLIGHT SIMULATION
LABORATORY TOUR**

Tuesday, 27 June
6:30 – 8:00pm

Hosted by
The Vision Laboratory



Dr. Vijayan Asari
Director

<https://sites.google.com/a/udayton.edu/vasari1/>

Dr. Eddy Rojas, Dean of the School of Engineering at The University of Dayton is pleased to invite the delegates of the IMAGE 2017 Conference to a demonstration of University of Dayton's **Academic Engineering Flight Simulation Laboratory** and **The Vision Laboratory** on Tuesday, June 27, 2017 from 6:30pm-8:00pm. Refreshments will be provided by **The Vision Lab**.

The Vision Lab is a Center of Excellence that develops new algorithms and architectures for real-time applications in the areas of signal processing, image processing, computer vision, pattern recognition, artificial neural networks and bio-mimetic object-vision recognition. As leaders in innovation and algorithm development, UD Vision Lab specializes in object detection, recognition and tracking in wide area surveillance imagery captured by visible, infrared, thermal, LiDAR (Light Detection and Ranging), and EEG (Electroencephalograph) sensors. The research activities in Vision Lab also include development of novel algorithms for 3D scene creation and visualization from 2D video streams, automatic visibility improvement of images captured in various weather conditions, human identification, human action and activity recognition, and brain signal analysis for emotion recognition and brain machine interface. For additional information, please visit: www.visionlab.udayton.edu

The University of Dayton's Flight Simulation Laboratory contains a Merlin MP521 Academic Engineering, full motion, Flight Simulator with its newly updated, finely detailed visual display, which will be flown and demonstrated by a Test Pilot member of the Society of Experimental Test Pilots. The laboratory also houses a Merlin MP500-1 Flight Simulation Development System, and a Merlin MP-ATC Air Traffic Control System – these combined with the main simulator can all fly in the same airspace. Dr. Aaron Altman, lead aero design academic at UD stated 'Dayton is the first US university to use the GenesisRTX graphics, which will enable the

School of Engineering to keep pace with incoming student expectations for high-definition photo-realistic computer graphics. Providing a more realistic immersive environment allows the students to focus on learning the flight physics and design by hands-on flying.' The MP521 simulator, with its unique Flight Software, Excalibur, is a fully non-linear transonic realtime six degrees of freedom application. This enables students to experience the 'real world' of Aircraft Performance and Flight Test through manipulation of existing designs and creation of their own novel designs, which significantly maximizes their learning experience, and enhances their capability upon entry to Industry. For additional information, please visit:

<https://www.udayton.edu/engineering/research/merlin-flight-simulator-lab/capabilities.php>