

Optobots – Optics with Robotics

Anand Asundi, Huang Chongtian, Zhong Hongtao and Lin Yeyang

The tremendous growth in optics and photonics has lead to novel imaging devices which can provide unique vision capabilities to robots apart from the traditional cameras. Some of these systems are provided as part of an OpticsKit intended to develop interest in students from as early as primary schools. In this presentation, we will showcase with demonstrations some of these new technologies and upcoming advances in these areas.

Bundle Price
order now
\$899 for
\$808

For students of all ages
OpticsKit
Fun with optics
— Optics and Photonics Society of Singapore —
<http://www.opssg.org/OpticsKit>
OpticsKit@opssg.org

OptoSens \$299

Education Outcomes

- Sensing
- Optical Imaging
- Principle of RGB Camera

Applications

- Driverless Car
- Body Volume Index
- Colour-depth of Mapping

OptoVR/AR \$299

Education Outcomes

- Principles of Human Vision
- Principles of 3D Display
- VR/AR Concepts

Applications

- VR/AR Movies/games
- VR/AR Conferences
- MR/AR Medical Treatments

Optobot \$299

Education Outcomes

- Concept of Colour
- Mechantronics/Robotics
- Robotics

Applications

- Object Tracking
- Robot Football Match
- Safety Guard Robots

About authors

Anand Asundi is Professor in the School of Mechanical and Aerospace Engineering at Nanyang Technological University, working in the area of Optical Engineering. He has a spin-off company, d'Optron Pte Ltd, which is developing in-line precision measurement instruments and using AI for rapid decision making.

Huang Chongtian is M.Eng student working in the field of AI for 3D Machine Vision.

Lin Yeyang is a Final Year Project student who worked on marketing strategies for the OpticsKit as his project.

Zhong Hongtao will be starting his undergraduate studies this fall and working on the OpticsKit in his sparetime.