



Universitas Gadjah Mada  
INDONESIA

# EYE TRACKING WORKING GROUP

Department of Electrical Engineering  
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Faculty of Engineering

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Eye Tracking WG



## Research Area 1:

Gaze-based interaction in 3D space

We are developing an eye tracking system for real-time interaction in 3D environment. The system aims to provide alternative human-computer interface for disabled as well as elder community.



## Research Area 4:

Measuring cognitive load during interactive applications

Interactive and online applications bring significant impact on decision making. Eye tracking is used as a tool to investigate human behavior on interactive software. Our goal is providing interactive application with minimum working load.



## Research Area 2:

Investigating balance disorders based on eye movements data

We are building hardware and software to investigate vertigo and other balance disorders through eye movements recording. The system aims to support medical diagnosis and real-time visualization



## Research Area 5:

Observing user experience on web-based applications

User experience plays vital role on providing accessible interface for various ranges of users. Eye tracking has been used as a primary tool to investigate how users respond to various web interfaces.

# EYE TRACKING APPLICATIONS FOR SMART AND HEALTHY LIFE



## Research Area 3:

Intelligent eye tracking applications for gaze interaction in public space

Machine learning technology is the workhorse for this important research area. We are looking for the best algorithm to provide seamless gaze-based interaction to control interactive content in public space.



## Research Area 6:

Investigating biomedical side effects of virtual reality applications

Cybersickness is an important safety issue in virtual reality applications. To provide more user-friendly VR contents, this safety issue should be addressed properly. Eye tracking is used as a diagnostic tool to investigate cybersickness in VR applications.

## HARDWARE

Tobii EyeX Controller, Gaze Point GP3, The EyeTribe, Sony PS3 Eye Camera, Microsoft Kinect, Nvidia 3D Vision, Oculus Rift, Leap Motion, Polar V800 Smartwatch

## PROGRAMMING LANGUAGE

C++/C#, Python, Java

## SOFTWARE

OGAMA, SPSS, Matlab, Rapidminer

