List of Dissertation Abstract (Department of Information Media and Environment Sciences)

Name	Supervisor	Title	Abstract
Higashi Hirokuni	Okajima Katsunori	Effects of melanopsin stimulation on glare and color perception depending on presentation conditions	It has been believed that cones, a photoreceptor in the human eye, contribute to visual perception under photopic vision. However recently, it has been reported that not only cones but also melanopsin contribute to visual perception. Melanopsin was discovered in the early 2000s and is known as the third photoreceptor. In this study, we conducted visual experiments using a common white light, focusing on discomfort glare and color appearance, which are important factors in the design of lighting environments with light-emitting diodes. The results showed that the effects of melanopsin stimulation on discomfort glare and color appearance varied depending on the presentation conditions of visual stimuli: foveal vision, peripheral vision, and entire field of view.
Miyoshi Takanori	Tsutomu Matsumoto	Attack Detection and Dynamic Zoning for Control Systems using Security Units and Auxiliary Communication Channels	This thesis advances research aimed at strengthening the cybersecurity of Industrial Control Systems (ICS), comprehensively exploring everything from anomaly detection in response to cyberattacks to rapid response mechanisms. It focuses on the development of anomaly detection and dynamic zoning technologies for field networks, aiming for practical application in real control systems. The proposed system utilizes a hardware-based security system to achieve real-time threat detection and rapid response, enhancing the resilience of control systems. The research outcomes suggest the potential to significantly bolster ICS security measures, contributing to the reduction of security risks and economic losses.