

List of Dissertation Abstract (Department of Information Environment)

Name	Supervisor	Title	Abstract
Aamir Hussain Bokhari	Tsutomu MATSUMOTO	Combating Cyber Threats on Resource-Constrained IoT Devices: Attack Observations and Stealth Security	The Digital boom has harnessed its power into the Internet of Things (IoT). However, such connectivity has also brought the side effect of exploitation by unscrupulous agents. Factors like weaker security, resource constraints, lack of user awareness, and manufacturer priorities have made IoT an easy target. In this research, we first aim to increase security awareness by examining the dangers associated with IP cameras for achieving significant impact due to the popularity of IP cameras in our daily lives. Then, we look for a possible stealthy countermeasure addressing the unauthorized access issue and the challenges faced by resource-constraint IoT devices.
Kanou Yoshihisa	Nagao Tomoharu	A Study on Handling Facial Expression Continuity and Acquiring Facial Expression Features in Machine Learning	When dealing with facial expressions in machine learning, one-hot teacher signals such as emotion labels are commonly used. However, such teacher signals treat continuous facial expressions individually and prevent the model from learning that continuity. Therefore, in this study, we will consider a method that considers the continuity of facial expressions in machine learning. The subjects of this research are facial expression recognition from video and acquisition of facial expression features from a single image, and method proposals and effectiveness verification experiments are conducted for each.

