

Brown Bag Seminar No. 121

2023

11.22 (wed.) 12:10 ~ 12:50

12:10-12:15

◆ Introduction

12:15-12:40

◆ Seminar
(Presentation)

12:40-12:50

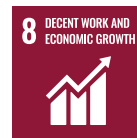
◆ Q&A

Online
(Zoom)Scan here for
Registrationhttps://temdec-med-kyushu-u-ac-jp.zoom.us/webinar/register/WN_kxaxNGc3QWK7_KHOLrFyuA

Supported by Kyushu University, Q-AOS & TEMDEC

Creating bridges between the digital and physical realms with 3D vision

Chair: Assoc. Prof. Kim SCHUMACHER (Research Futures Coordinator of Q-AOS)



Key Words

3D and 4D capture

digital humans

generative AI

intelligent machines

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Diego Thomas is associate professor of Graduate School of Information Science and Electrical Engineering (ISEE), Kyushu University. He received his master's degree in Informatics and Applied Mathematics from the Ecole Nationale Supérieure d'Informatique et de Mathématiques Appliquées de Grenoble (ENSIMAG), France in 2008. He received his Ph.D. from the Graduate University for Advanced Studies (SOKENDAI), Japan in 2012. He was a post-doc researcher at the National Institute of Informatics (Tokyo, Japan) from April 2012 to March 2015. From April 2015 to March 2017, he was a JSPS post-doc researcher at the University of Kyushu (Fukuoka, Japan). From April 2017 to November 2022, he was assistant professor of Graduate School of Information Science and Electrical Engineering (ISEE), Kyushu University. His research interests are related to 3D Vision and Computer Graphics: 3D and 4D capture, digital humans and AR/VR. He has published more than 50 research papers in top-tier conferences and journals and has reviewed more than 100 papers for various top-tier international conferences and journals. He was the local chair of 3DV 2020. His research work has been supported by Japan Society for the Promotion of Science (JSPS), JST, Kyushu University and international companies, including Microsoft, Huawei and Panasonic.

In this seminar, we will be sharing our experience in 3D vision research and our vision for the future of this field. Our modern societies strongly rely on machines to survive. These machines treat information in the digital world but interact with humans in the physical world. To bridge the gap between the digital and physical realms, we have dedicated our efforts to the creation of new AI-based 3D vision models. Our research has been centered on the task of capturing and modeling the human body, as this is fundamental for enhancing human-machine interactions. Leveraging generative AI, which learns from vast collections of images and videos, we have been able to gain insights into human body shapes, deformations, and semantic interactions within various scenes. This research represents a significant step toward the development of Large 3D Vision Models, which are essential for advancing machines toward greater autonomy and intelligence. During this seminar, we will present the latest innovations in the creation of digital and autonomous human avatars, showcasing how these advancements are shaping the future of human-machine interactions.