Advanced Core for Energetics, Hiroshima University Vol. 89

HU-ACE NEWS LETTER

Advanced Core for Energetics, Hiroshima University

Vol.89
2024.5

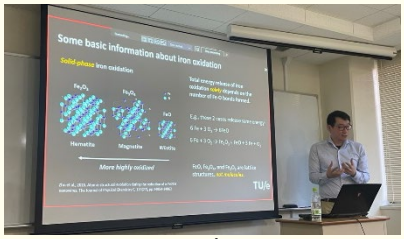
Activities of the Core

May. 9, 2024	The 135th, 136th Mechanical Systems Seminar (co-organized by HU-ACE)
May. 22, 2024	The 7th Geo-seminar (organized by HU-ACE)
May. 23, 2024	The 91st HU-ACE Steering Committee Meeting The 114th Hiroshima University Biomass Evening Seminar (co-organized by HU-ACE)
May. 24, 2024	The 140th HU-ACE Seminar (organized by HU-ACE)

135th,136th Mechanical Systems Seminar （137th, 138th HU-ACE Seminar)

On May 9, 2024, the 135th and 136th Mechanical Systems Seminars (the 137th and 138th HU-ACE Seminars) were held in a hybrid format, attracting over 40 participants both in-person and online. These seminars featured lectures by researchers collaborating with Associate Professor Kim, a member of the HU-ACE.

Dr. XiaoCheng Mi from Eindhoven University of Technology (Eindhoven, The Netherlands) delivered a presentation titled "Combustion of Iron Powder: From Fundamental to Applications," discussing the concept of energy systems utilizing iron powder and the current state of advanced technological development. Dr. Yali Tang, also from Eindhoven University of Technology, gave a lecture titled "Green Ironmaking Technological Development: An Integrated Experimental and Numerical Approach," sharing the latest insights on green steel aimed at achieving carbon neutrality. The prospects for future international collaborative research are exciting.



Dr. XiaoCheng Mi

Dr. Yali Tang

Related Events

The 8th International Symposium on Fuels and Energy (ISFE2024) is scheduled on July 1-2, 2024.
We are calling for abstracts until June 14. Details can be found here. https://symposium2024.isfe.hiroshima-u.ac.jp/

We have constructed a roadmap for the development of energy utilization technologies leading up to 2050 and an integration scenario called the “Hiroshima Scenario”. Please feel free to share your thoughts with us.
https://hu-ace.hiroshima-u.ac.jp/wp/wp-content/uploads/2022/10/220921-brochure.pdf

Research consultation and joint research are welcome.

Issued by Advanced Core for Energetics, Hiroshima University
HU-ACE Secretariat, URA Division, Office of Research and Academia-Government-Community Collaboration, Hiroshima University 1-3-2 Kagamiyama, Higashi-Hiroshima, 739-8511 Japan
E-mail: hu-ace-info@ml.hiroshima-u.ac.jp, tel:+81-82-424-4425, URL: https://hu-ace.hiroshima-u.ac.jp/en/

HU-ACE NEWS LETTER Advanced Core for Energetics, Hiroshima University Vol. 89

Research Topics

No. 52

Development of a new mobility-oriented city with an agglomeration of Places for Social Exchange

- Achieving a 15-minute city through mobility redesign -

Akimasa FUJIWARA

Professor, Graduate School of Advanced Science and Engineering

Research fields: Transportation Planning, Urban Engineering

Keywords: Mobility-Oriented Development, Platooning Autonomous BRT

Abstract

Background

Taking Higashi-Hiroshima City, a university town with a high concentration of intelligence, as an example of how to overcome the common problems of rural areas, such as low birth rate, aging population, population outflow, labor shortage, and unstable demand for mobility, we aim to develop "a new mobility-oriented city where places of exchange are concentrated" as the ideal urban space and mobility services. The goal of the project is to realize a 15-minute city by redesigning mobility.

Methods

Instead of the transit-oriented development (TOD) proposed in the 20th century, we advocate the concept of "New Mobility Oriented City Development (MOD)", which is an infrastructure system (data infrastructure, community infrastructure, infrastructure facilities, etc.) that combines various transportation systems such as automated BRT, terminal ride-sharing services. This project will create a platform to realize a society with a positive circular economy that leads to the accumulation of start-up companies and community development NPOs by creating opportunities for exchanges between citizens and people from different industries here and there with a positive circular economy.

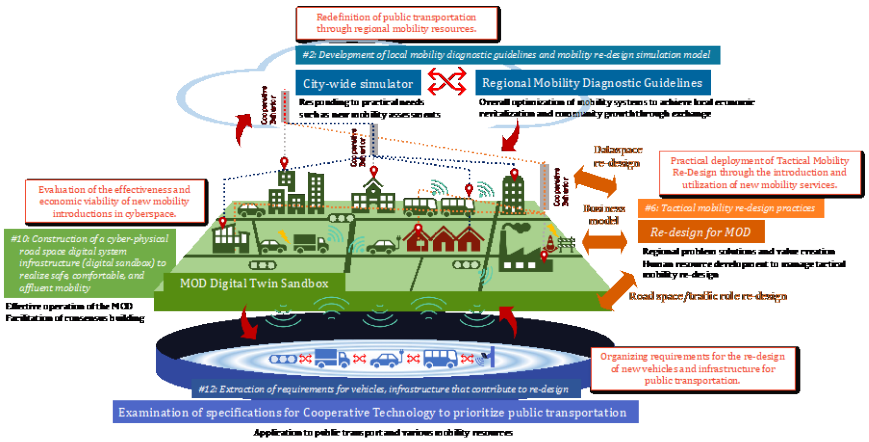
Project Team

Technology development phase: Development of a citywide simulator by Hiroshima University and Vital Leads Co., Ltd.

Technology development phase: Extraction of specifications for infrastructure coordination technology by University of Tokyo

Verification phase: Implementation of digital twin sandbox by Hiroshima University and Pacific Consultants Co., Ltd.

Re-design phase: Development of citywide simulator by Kure National College of Technology and Hiroshima University



Creating a Mobility-Oriented City through Redesign, Agglomeration for Exchange

This research has been adopted by the "Strategic Innovation Program (SIP) Phase 3: Building a Smart Mobility Platform" and will be conducted as a five-year research project from FY2023 to FY2027.