

**HU-ACE NEWS LETTER**

Advanced Core for Energetics, Hiroshima University

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2021.10**Activities of the Core**

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| Oct. 2, 2021     | Prof. Nishida gave a keynote speech "Improvement of Thermal Efficiency of Gas Engine Fueled with Methane / CO2 Biogas by Hydrogen Addition" at "The 3rd ICATECH (International Conference on Advanced Engineering and Technology) 2021" held online. |
| Oct. 14, 2021    | The 96th Hiroshima University Biomass Evening Seminar (co-organized)   |
| Oct. 14, 2021    | The 64th HU-ACE Steering Committee Meeting.  |
| Oct. 17-21, 2021 | Prof. Matsumura gave a plenary lecture at ICOPE-2021.  |

**We are co-organizing the Biomass Premium Evening Seminar**

There is one thing good about COVID-19, which is that everyone can now use online conference systems. Previously, it was not easy to hold an online conference, but now anyone can use Zoom, Teams, or Webex. Making the most out of this situation, Biomass Premium Evening Seminars where top researchers in the field of biomass give a lecture, have been taking place, and we are one of the co-organizers. Previous lecturers include Dr. Shin-ya Yokoyama, The University of Tokyo, who has led biomass research in Japan; Dr. Akihiko Kondo, Kobe University, who is the top researcher on microorganisms; Dr. Makoto Watanabe, University of Tsukuba, who is working internationally in the field of microalgae; and Dr. Masahiro Samejima, The University of Tokyo, who knows Japanese forestry management better than anyone. The next lecturer at the seminar in March will be Dr. Hiroyuki Yano, Kyoto University, who is the authority of cellulose nanofiber. If you are interested in this topic, could you join the seminar, please? The details can be found on the following webpage.  
<http://i-aeu.sakura.ne.jp/220302premium/>



Dr. Shin-ya Yokoyama



Dr. Akihiko Kondo



Dr. Makoto Watanabe



Dr. Masahiro Samejima



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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/>

# Member Introduction

## Toshiyuki Arima

Coordinator for Industry-Academia Collaboration  
Academia-Government-Industry Collaboration Division

**Research Field** : The entire field of advanced science and engineering research  
**Keyword** : Coordinator for Industry-Academia Collaboration



### Abstract

I have been appointed as a coordinator for Industry-Academia Collaboration, Academia-Government-Industry Collaboration Division, Office of Research and Academic-Government-Community Collaboration, Hiroshima University, as of February 1, 2022. I will support and cooperate with the research promotion of each department in cooperation with the URA Division, Intellectual Property Division, and Support Division. First of all, I will be responsible for assisting faculty members in the search for university research seeds and the needs of companies, then, joint research with companies, and acquisition of external funding, including national projects. As I mentioned in the background section, I have been involved in promoting the use of industrial technologies in a wide range of fields such as digital, mechanical, chemical, biotechnology, and energy, and I am now in charge of the entire field of advanced science and engineering research.

#### Background, Aspirations

When I was a university student, I conducted basic research on the energy balance of plankton in lakes and the material cycle of terrestrial ecosystems. After graduating from university, I joined the Chugoku Electric Power Co. in the middle of the so-called "century of oil". I took a break from my research life to work on electricity demand forecasting, group business management, and in the power generation fuel procurement department, I engaged in receiving fossil fuels from Australia and the Middle East. I was also involved in the design of a new type of ocean-going coal carrier, the launch of Qatar LNG, and worked at a thermal power plant. After that, I was seconded to the Chugoku Economic Federation, where I worked with people from the automobile, heavy industry, telecommunications, and banking sectors to revitalize industry in the region, focusing on promoting the advancement and utilization of industrial technology through industry-academia-government collaboration. We have been working on various themes such as the creation of digital innovation, promotion of industrial robot utilization, support for the launch of joint industry-academia research on membrane separation technology, and support for research on the utilization of biomass. In recent years, the debate on the issue of global warming has reached a fever pitch.

In addition to an urgency about global warming itself, the risk that the materials and machinery industries, which are the source of the region's competitiveness, will be exposed to strict laws and regulations both at home and abroad is severely growing. Therefore, the Chugoku Economic Federation established the Carbon Neutral Promotion Council in November last year. In order to prevent global warming, it is important to decarbonize the energy sector in particular, and I believe that it is essential to develop and gather new technologies. I am convinced that the Advanced Core for Energetics is the best place to aim for carbon neutrality, as it is an initiative to bring together a variety of cutting-edge technologies from within the university and work together to solve problems. Although I am only a small part of the team, I would like to use my experience and connections with industry to support the creation of research results and social implementation by each professor.

#### Education, Career

1983 Bachelor: University of Tsukuba  
1985 Master: Hiroshima University  
1985 The Chugoku Electric Power Co., Inc.  
2014 Chugoku Economic Federation  
2022 Coordinator at Hiroshima University  
(other 1994-1995)  
The Institute of Energy Economics, Japan