

DL Talk at the Universitas Pendidikan Indonesia (UPI)

Presented by:

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1. From IEEE SMC DL Talk to Academic Exchange

The Distinguished Lecturer (DL) talk was given on June 15. I really appreciate the warm invitation by Dr. Didin Wahyudin, Prof. in the Faculty of Engineering and Industrial Education, Universitas Pendidikan Indonesia (UPI), and the Student Chapter of UPI, ID Chapter IEEE Indonesia Section, STB17661 – Universitas Pendidikan Indonesia. The weather on that date was quite good compared to the heavy rains a few days ago. The on-site audience included more than 10 professors and 36 students. The activity was attended by a total of 46 participants onsite and some on virtual through Zoom, consisting of FPTI UPI faculty leadership, Dean, FPTI UPI, Vice Dean for Education and Quality Assurance, Vice Dean for Resources and General Affairs, Vice Dean for Student Affairs and Partnerships, lecturers, and students. They all felt quite satisfied on my presentation. After my talk, there were great discussions and interactions with participating scholars after the presentation. Many participants, especially from students, asked questions, and I answered them in detail one by one. In this report, the author will detail the experience of being invited to give a speech and discuss the collaboration between SMCS and Universitas Pendidikan Indonesia (UPI), as well as his personal experience of participation and related suggestions.

2. Topic of DL Talk

The speech was scheduled to start at 10:00am on June 15, 2026 in the Meeting Room 2, 4th Floor, FPTI UPI Building, Bandung, Indonesia. Since most audience were students, I decided to focus some materials in my talk about AI applications in industry and LLMs. The announced topic to the public about my talk was “AIoT and LLMs in Industry and Aquaculture Applications”. The abstract of my talk was given below.

The integration of artificial intelligence (AI) and the internet of things (IoT), known as artificial intelligence of things (AIoT), is driving significant advancements in the industry/aquaculture, offering solutions to longstanding challenges related to operational efficiency, sustainability, and productivity. With the advent of powerful GPU, AI-related research or AI-based applications have sprouted in every corner of the world. Originating from pure network connectivity, the Internet of Things (IoT) has become a structure that can collect every piece of data from physical devices, daily activities, images, or videos into a data reservoir. As a result, tons of data are automatically generated into an enterprise database in a single day. This creates research opportunities on integrating AI, IoT, big data, and LLMs to improve the quality of industrial production, agriculture or net-cage aquaculture.

IoT sensors deployed across industry/aquaculture systems continuously track critical parameters such as temperature, humidity, and workers' behavior. AI algorithms process these data streams to provide predictive insights into working environment management, operations detection, etc. This talk will address the latest research studies in AIoT and LLMs within the industry/aquaculture, focusing on real-time environmental monitoring, data-driven decision-making, and automation. This talk will also highlight future directions for AIoT in industry/aquaculture, emphasizing the potential for hybrid AI models, improved scalability for large-scale operations, and sustainable resource management.

3. Laboratory and Campus Tour

In his presentation, Prof. Huang explained how Artificial Intelligence of Things (AIoT) and Large Language Models (LLMs) can be applied in real-world industrial and aquaculture settings, from improving production efficiency to monitoring cultivation environments, while opening perspectives on cross-disciplinary research opportunities for participants across academic backgrounds.

The session ran interactively under the moderator's guidance. The Q&A segment was lively, with participants keen to explore the application of AIoT and LLM within the context of research and industry in Indonesia.

The activity served as a platform for knowledge exchange in artificial intelligence while strengthening collaboration between Indonesia and Taiwan under the IEEE umbrella. Through the presence of an international expert and alumni active abroad, the Electrical Engineering Education and Electrical Engineering Study Program of FPTI UPI reaffirmed its commitment to advancing global research collaboration and accelerating the development of AI-based technology, while opening opportunities for further cooperation between FPTI UPI and Taipei Tech in the future.

In addition to the open lecture held at UPI, Prof. Huang also conducted a campus visitation to Politeknik Negeri Bandung on Monday afternoon, June 15, 2026, from 13:30 to 16:00. The visit was hosted by Dini Rahmawati in the Department of Electrical Engineering, Electronics Engineering/Control Systems Study Program, with expertise in Instrumentation and Control Systems.

The visitation offered an opportunity to tour Polban's facilities and learn more about its academic programs in Electrical Engineering, particularly in instrumentation and control systems, rounding out Prof. Huang's broader visit to Indonesia.

4. Conclusion

Overall, this open lecture successfully achieved its objective of introducing the practical application of Artificial Intelligence of Things (AIoT) and Large Language Models (LLMs) in industrial and aquaculture contexts to the FPTI UPI academic community. The active participation of 46 attendees and some virtual audience, comprising faculty leadership, lecturers, and students, reflects strong institutional interest in emerging technologies and their cross-disciplinary applications. Beyond the technical content delivered, the activity reinforced UPI's ongoing academic partnership with Taipei Tech and IEEE, and is expected to serve as a foundation for further collaborative initiatives, including joint research, student exchange, and future guest lectures involving international scholars. This was complemented by an accompanying campus visitation to Politeknik Negeri Bandung, which rounded out Prof. Huang's broader visit to Indonesia.

References

1. https://www.instagram.com/p/DZ_jGVymIp_/?igsh=MWhkbGVozWliOWFtZA==
2. <https://fpti.upi.edu/post-detail/1565-kuliah-umum-ieee-smc-distinguished-lecturer-bahas-penerapan-aiot-dan-llm-di-fpti-upi>

5. Photos

The relevant photos taken during this speech are shown in Figure 1 to Figure 7.



Fig. 1. The author gave a speech on June 15, 2026 in the Universitas Pendidikan Indonesia (UPI).



Fig. 2. Group photo with student participants from UPI.



Fig. 3. Group photo with FPTI faculty, staff, and student participants.



Fig. 4. Presentation of a plaque of appreciation.



Fig. 5. Presentation of a token of appreciation.



Fig. 6. Official event poster.



Fig. 7. Publicized through the official FPTI UPI Instagram account.