



CONFERENCE PROCEEDINGS



*The 5th Faculty of Industrial Technology
International Congress (FoITIC) 2025*

"Technological Integration and Sustainable Performance in Green Industry 4.0"

INTERNATIONAL CONFERENCE

**September 17-18, 2025,
Institut Teknologi Nasional (Itenas) Bandung - Indonesia**

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Seminar Information

Theme : “Technological Integration and Sustainable Performance in Green Industry 4.0”

Date : 17–18 September 2025

Place : Institut Teknologi Nasional Bandung, Indonesia (Hybrid)

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Dr. Joanna Wiacek	[Institut Agrophysics, Polish of Academy Sciences - Poland]
Prof. Monika Bozikova	[Slovak University of Agriculture in Nitra – Slovak Republic]

Keynote & Invited Speakers

Prof. Dominic C. Y. Foo, Ph.D	[University of Nottingham Malaysia Campus]
Prof. István Farkas	[Hungarian University of Agriculture and Life Sciences, Hungary]
Prof. Satish Kumar, Ph.D	[National Institute of Technology Jamshedpur, India]
Dr. R. Budiraharjo, S.S., MT.	[Institut Teknologi Nasional Bandung, Indonesia]
Dr. Korhan Cengiz	[Biruni University, Turki]
Dr. Judhi Prasetyo, FHEA., MSc.	[Middlesex University Dubai, UEA]
Prof. Maurizio De Lucia	[University of Florence, Italia]
Prof. RNDr. Monika Bozikova, Ph.D	[Slovak University of Agriculture and Life Sciences, Slovakia]
Dr. R. Cahyadi Nugraha S., S.T., M.T.	[Institut Teknologi Nasional Bandung, Indonesia]

OPENING REMARK

Assalamualaikum wr. wb.

Ladies and gentlemen, esteemed colleagues, distinguished guests,
and beloved students,

Welcome to the 5th Faculty of Industrial Technology International Congress (FoITIC) 2025, proudly hosted by Institut Teknologi Nasional (Itenas), Bandung, Indonesia. It is a great honor to have you join us for this esteemed gathering, as we unite across disciplines to delve into the theme:

“Technological Integration and Sustainable Performance in Green Industry 4.0”.

Scheduled from 17 to 18 September 2025, FoITIC 2025 invites academics, researchers, engineers, government officials, corporate representatives, and students to come together in synergy. Over these two days, we will explore how innovative technologies can be integrated effectively to enhance sustainability and drive performance in the era of Green Industry 4.0. This congress is designed as a vibrant multidisciplinary platform where participants can present their research contributions, share insights, and ignite collaborative engagement. It is our hope that FoITIC 2025 will spark new ideas and partnerships toward a cleaner and more resilient industrial future. We extend our heartfelt gratitude to our keynote speakers, invited presenters, and every participant who brings your passion and expertise to this conference. We also deeply appreciate the dedication of the organizing committee in orchestrating FoITIC 2025—paving the way for meaningful academic discourse and innovation.

Let us seize this opportunity to engage in fruitful dialogues, inspire one another, and forge enduring connections that will propel ICT and green industrial transformation forward. Thank you for your participation—let’s embark on this journey together at FoITIC 2025.

Wassalamualaikum wr. Wb.

Rector of Itenas
Prof. Meilinda Nurbanasari, Ph.D.



OPENING REMARK



Assalamualaikum wr. wb.

Good morning, ladies and gentlemen,

It is my great honor to welcome you to the 5th Faculty of Industrial Technology International Congress (FoITIC) 2025, hosted by Institut Teknologi Nasional (Itenas), Bandung, Indonesia. This year's theme, "Technological Integration and Sustainable Performance in Green Industry 4.0", reflects our shared commitment to innovation and sustainability.

FoITIC 2025 covers a broad range of topics, including

- Process Integration and Optimization for Sustainability
- Electrification and Energy Systems,
- Artificial Intelligence, Monitoring, and Control,
- Green Manufacturing and Industry 4.0,
- Telecommunications and Networking,
- Environmental Management and Pollution Control, and
- Eco-Friendly Materials and Green Technology.

We are privileged to be joined by distinguished Keynote Speakers from Malaysia, Hungary, India, and Indonesia, as well as Invited Speakers from Turkey, the United Arab Emirates, Italy, Slovakia, and Indonesia. Their expertise will enrich our knowledge and perspectives.

On behalf of Itenas, I would like to express my deepest gratitude to all speakers, authors, and participants. Special appreciation also goes to our partner universities abroad—Hungarian University of Agriculture and Life Sciences, National Institute of Technology, India, Slovak University of Agriculture and Life Sciences, Czech University of Life Sciences Prague, and the Polish Academy of Sciences—for their invaluable support and contributions to this congress.

Wassalamualaikum wr. wb.

Dean of the Faculty of Industrial Technology
Jono Suhartono, S.T., M.T., Ph.D.

OPENING REMARK

Assalamualaikum wr. wb.



It is my great pleasure to welcome you to the 5th Faculty of Industrial Technology International Congress (FoITIC) 2025, organized by Institut Teknologi Nasional (Itenas), Bandung, Indonesia. We gather here under the theme “Technological Integration and Sustainable Performance in Green Industry 4.0”, a theme that highlights the vital role of innovation and collaboration in shaping a sustainable industrial future.

This year, we are privileged to hear from a distinguished lineup of Keynote Speakers:

- Prof. Dominic C. Y. Foo, Ph.D. – University of Nottingham Malaysia Campus (Malaysia)
- Prof. István Farkas – Hungarian University of Agriculture and Life Sciences (Hungary)
- Prof. Satish Kumar, Ph.D. – National Institute of Technology (India)
- Dr. R. Budiraharjo, S.S., M.T. – Institut Teknologi Nasional Bandung (Indonesia)

We are also honored to welcome our Invited Speakers:

- Korhan Cengiz, Ph.D. – Biruni University (Turkey)
- Dr. Judhi Prasetyo, FHEA., MSc. – Middlesex University Dubai (United Arab Emirates)
- Prof. Maurizio De Lucia – University of Florence (Italy)
- Prof. RNDr. Monika Bozikova, Ph.D. – Slovak University of Agriculture and Life Sciences (Slovakia)
- Dr. R. Cahyadi Nugraha Sanudi, S.T., M.T. – Institut Teknologi Nasional Bandung (Indonesia)

This year’s congress proudly features more than 50 scientific papers submitted by international and domestic participants from Slovakia, Hungary, the United Kingdom, India, Taiwan, and Indonesia. These contributions demonstrate the global reach of FoITIC 2025 and its role as a platform for multidisciplinary and interdisciplinary collaboration.

Wassalamualaikum wr. Wb.

Chairman of FOITIC 2025

Dr. Vibianti Dwi Pratiwi, S.T., M.T.

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