

ICECREAM

International Conference on Engineering, Construction, Renewable Energy, and Advanced Materials



Enhancing Sustainable Technology Towards Society 5.0

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**WELCOMING REMARK
HEAD OF THE COMMITTEE ICE CREAM 2021**

السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ



The honorable,
the chancellor or the representative of UMJ
Dean of Engineering Faculty of UMJ
all of the keynote speaker and panelist
All of reviewer of SEMNASTEK and ICECREAM 2021
all of guest, presenter and participant of this event.
The last but not least, all of the committee of SEMNASTEK and
ICECREAM 2021 who have work really hard.

I am Yeptadian Sari, It's my great pleasure to welcome you to Seminar
Nasional Sains dan Teknologi or SEMNASTEK 2021 and The First

International Conference on Engineering, Construction, Renewable Energy and Advanced Materials or
we can call it The first ICECREAM.

Ladies and gentlemen,

In bringing this conference into reality, we envision every human in this world being solid and intense
for their own life, even though pandemic attack our social life. Then here we are, in the SEMNASTEK
2021 and The First ICECREAM bring "Enhancing Sustainable Technology towards Society 5.0" as our
theme.

There are about seven countries that give their contribution in this conference as presenters, participant,
even panelist and reviewer. They are Indonesia, Singapore, Argentina, United Kingdom, Malaysia,
India and Dutch. It's really an honor for us.

We are fortunate to have the support from some sponsors. Thank you for architecture department of
Universitas Muhammadiyah Jakarta, Bank Syariah Indonesia, MR Group and PT. Rahmat Perdana
Adhimetal.

It's an honor to us to receive the contribution from all of panelist that join this event today.

Thank you to all of reviewers that made time to reviewed bunch of article, presenters and participants
who are being the backbone of this event.

This conference is the result of the hard work, support, and dedication of a number of parties. I will not
be able to stand here, in front of all of you today, if not because of all of organizing committee who
have been with me since the very beginning.

The committee has been working throughout the year to propose sessions, review a record of
submissions, answer queries, arrange the schedule, even response to the last minute request, thank you
so much for your hard work.

وَالسَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ

Jakarta, Desember 2021

Fakultas Teknik Universitas Muhammadiyah Jakarta
Head Of Comm

signed

Yeptadian Sari, S.T., M.

WELCOMING REMARK
RECTOR OF UNIVERSITAS MUHAMMADIYAH JAKARTA

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1st International Conference on Engineering, Construction, Renewable Energy, and Advance Materials (ICECREAM), entitled: “Enhancing Sustainable Technology Towards Society 5.0” which was held by the Faculty of Engineering, Universitas Muhammadiyah Jakarta is an important event to discuss and resolve the construction issues, renewable energy and advance materials.

Increasing the use of renewable energy has the important role in reducing carbon emissions to overcome the crisis. Reducing carbon emissions is crucial in preventing the impact of climate change, which is increasingly threatening the lives of living things on this earth.

Utilization of water as electrical energy in Indonesia can also be a solution in reducing carbon emissions. Currently, climate change and the COVID-19 pandemic are the biggest threats to the lives of all living things in the world. This crisis can only be handled jointly by all parties with our concern for the environment.

Renewable energy originating from natural resources that can replenish itself within a certain period of time without depleting the earth's resources, such as solar, wind, water, and even geothermal energy should be maximized in order to preserve the environment.

The development of the era of the industrial revolution 4.0 certainly has an impact on the world of education. The era of the industrial revolution 4.0 has changed the way we think about technology and education. The development of soft skills and transversal skills, as well as invisible skills that are useful in many work situations such as interpersonal skills, cohabitation, the ability to become global-minded citizens, and media and information literacy – are inevitable to be developed.

The industrial revolution 4.0 in the world of education has proven that the knowledge possessed can be replaced by technology, while the application of soft skills and hard skills possessed by every student cannot be replaced by technology. For this reason, competency-based education is needed, understanding and utilizing IoT (*Internet of Things*), utilizing virtual or augmented reality and using and utilizing AI (*Artificial Intelligence*).

UMJ was committed to play an active role in popularizing the development of Science and Technology in the field of education. It is hoped that by increasing public knowledge, we will be able to get support in increasing community participation in the development of Science and Technology in Indonesia. On behalf of UMJ, I would like to express my gratitude to the dean, vices dean, and all committee for initiating the ICECREAM event. Hopefully, ICECREAM can be fruitful and has the benefits for the development of Science and Technology for Indonesian people.

وَالسَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ

Universitas Muhammadiyah Jakarta
Rector,

signed

Dr. Ma'mun Murod, M.Si

**WELCOMING REMARK DEAN
FACULTY OF ENGINEERING UNIVERSITAS MUHAMMADIYAH JAKARTA**

السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ



Alhamdulillah, In the name of Allah, the Most Beneficent and the Most Merciful. May peace, mercy, and blessings of Allah be upon us. Sholawat and Salam may always be given to our beloved Prophet Muhammad SAW (peace be upon him), along with his family, friends and followers who are istiqamah, in shaa Allah including all of us, aamiin yaa rabbal 'aalamiin.

Today's pandemic condition has driven many sectors to be more creative and innovative in order to carry out various activities and planned programs, including the Faculty of Engineering, Universitas Muhammadiyah Jakarta (FT UMJ). One of our events is the 1st International Conference on Engineering, Construction, Renewable Energy, and Advanced Materials (ICECREAM) 2021. Alhamdulillah, all the committee and participants involved are in good health, still productive and creative, allowing the event to proceed successfully.

The pandemic conditions have accelerated digital transformation and new technologies which will definitely have an impact on methods, models, ways of interacting and collaborating with other people/parties. The impact that occurs can of course be positive, but it can also be negative. In order to minimize this negative impact, the 1st ICECREAM event in 2021 carries a theme related to Era Society 5.0, namely: "Enhancing Sustainable Technology Towards Society 5.0".

The Era of Society 5.0 is an updated resolution in anticipation of the disruptive turmoil due to the Industrial Revolution Era 4.0 which causes complex and ambiguous transformation uncertainty, or better known as VUCA (volatility, uncertainty, complexity and ambiguity). It is feared that this turmoil can erode the values of humanity which are progressively being degraded. Innovation and technology have proven to be the best way to solve many previously unsolvable problems. However, we must not allow technological progress to bring negative impacts for society and the environment. Therefore, 1st ICECREAM in line with the goals carried by Era Society 5.0, which is more oriented to the humanist side, or in this circumstance, human resources (HR).

In facing the era of Society 5.0, educational institutions have a very important role in improving the quality of human resources. To counteract the challenges of the Industrial Revolution 4.0 which is still ongoing and Society 5.0 which will soon come, life skills are needed, known as 4C (Creativity, Critical Thinking, Communication, Collaboration). In addition, the competencies that are expected to be possessed by educators and students are the 6 Basic Literacy skills (numeric literacy, scientific literacy, information literacy, financial literacy, cultural literacy and citizenship).

We hope that this event would achieve its goal of providing an effective forum for academics (including students), researchers, and practitioners to advance knowledge, research, and technology, so that they can produce useful outcomes for the development of creative and innovative science, research and technology.

Finally, we would like to express our deepest gratitude to the presenters and participants, Keynote

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Speakers, Reviewers, Vice Deans, Heads of Study Programs in FT UMJ, Advisory Board, Organizing Committee, as well as institutions, companies, and volunteers who directly and indirectly support the success of this event, including the sponsors namely: Architecture Study Program FT UMJ, Bank Syariah Indonesia, MR Group and PT PT Rachmat Perdana Adhimetal (RPA). Although we have tried our best to be professional, on behalf of the Faculty of Engineering UMJ, we sincerely apologize for any inconvenience occurred before, during, or after the event.

وَلَسَّلَامٌ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ

Jakarta, December 2021

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signed

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