



Department of Materials Science and Engineering
Faculty of Engineering
University of Moratuwa



**MATERIALS ENGINEERING SYMPOSIUM
ON INNOVATIONS FOR INDUSTRY 2020**
TOWARDS SMART SOCIETY THROUGH INNOVATIVE MATERIALS

Materials Engineering Symposium on Innovations for Industry (MESII-2020) is being organized for the third time by the Department of Materials Science and Engineering of University of Moratuwa. The main objective of this event is to facilitate the industry to recognize and gain awareness on the research activities carried out by the final year undergraduates of the Department as well as provide an opportunity to get a comprehensive understanding about the activities and facilities of the Department.

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Message from the Vice Chancellor



It is with great pleasure that I pen these few lines in view of the Materials Engineering Symposium on Innovations MESII 2020 to be held shortly.

The conference is organized by the Department of Materials Science and Engineering for the 3rd consecutive year.

Transforming societies is enabled through Industrial Revolutions. In this pursuit, Materials Science and Engineering plays a key stake towards a smart society through innovative materials. Nurturing young inquiring minds to catalyze the revolutionary industries is one of the main objectives of establishing the Materials Science and Engineering undergraduate degree programme and incorporating it in the Faculty of Engineering. Design project which is a mandatory module carries a significant number of credits for graduating requirement as a further justification.

This year the projects were aligned with the theme 'Towards a Smart Society through Innovative Materials'. As in the previous conferences, training and other skills developed by the students through the opportunity of participation at this event too will help them in their future professional careers.

While sending out best wishes for a fruitful conference, let me congratulate all who have contributed immensely towards the success of the conference.

Prof. K. Kapila C. K. Perera
Vice-Chancellor
University of Moratuwa

Message from the Dean



At the outset let me congratulate the Department of Material Science and Engineering for successfully organising the Materials Engineering Symposium on Innovations for Industry (MESII) for the third time in succession during this year. As the Dean of the Faculty of Engineering, I am glad to witness the Department providing an opportunity for its undergraduates to present their research findings to a wider audience consisting of both academia and industry. This symposium aims to showcase their creativity and innovativeness highlighted through the final year project work carried out within the Department.

The symposium also encourages the department industry interaction in the context of research. The Materials Science and Engineering Department could fine-tune their future pathways in the applied research sector through the exposure and feedback received by the industry. Further, it has been a long felt need that the students seeking university admission to engineering be properly educated on the scope and the opportunities available in the field of Materials Engineering in order to equip them with better choices for their future career plans. The poster session organised in parallel with the symposium will help address this issue too.

Motivating engineering graduates to be job creators rather than job seekers is one of our priorities in the undergraduate programmes of the Faculty of Engineering. The Faculty recognises that research skills, rather than being limited to postgraduate students, serve to enhance independence, self reliance and innovativeness of its undergraduates too. This symposium will hence add value to the already highly acclaimed degree of engineering earned by the undergraduate students of the Faculty.

I wish all the very best for the success of the event and do hope that its benefits will have a lasting effect on the next generation of Materials Engineers produced by the Department.

Prof. N. Wickramarachchi
Dean, Faculty of Engineering
University of Moratuwa.
27 February 2020

Message from the Head of the Department



The Department of Materials Science and Engineering together with the Society of Materials Engineering Students is organizing the Materials Engineering Symposium on Innovations for Industry (MESII) for the third time. This was the initiative of one of our young academics Dr. Mrs. Asha Galhenage which had a two-fold objective initially; showcasing the research capabilities of our undergraduates, and enhancing industry-department interactions. However, from last year, our focus expanded towards creating awareness among the students of physical science stream of GCE (A/L) about the field of Materials Science and Engineering and the research & innovations happening in the department. This year too we have invited more than 100 GCE (A/L) students from various schools to participate in the event. In addition there are customized activities organized especially focusing on them.

Dr. Aravinda Abeyagunawardane, another young academic who recently joined the department has taken over the baton from Dr. Mrs. Asha Galhenage as the principal organizer and program chair of MESII for this year. I take this opportunity to congratulate him for his efforts and commitment shown in organizing and coordinating an important event like this. I also wish to express my sincere gratitude to all the academic and non-academic staff of the department who supported and helped Dr. Aravinda in successfully organizing this symposium. I am also very thankful for all the students who dedicated their valuable time to be instrumental in this event as the members of the Society of Materials Engineering Students.

Finally I wish to congratulate all the young researchers who will be presenting their papers and posters today.

Mr. V. Sivahar
Head/Department of Materials Science and Engineering
University of Moratuwa

Message from the Program Chair



It is with great pleasure to welcome you to our third annual event; "Materials Engineering Symposium on Innovations for Industry 2020" (MESII 2020) with the association of Society of Materials Science and Engineering (SOMES). The symposium is comprised of poster session and technical presentation session. As the program chair and the final year undergraduate project co-ordinator, I strongly believe the symposium will provide enhanced outlook of the research activities that we carry out in the Department of Materials Science and Engineering, University of Moratuwa; to cater the current technological demand in Sri Lanka while sustaining the knowledge and attitudes of our graduates.

Materials Science and Engineering is a well distinguished area in many developed countries as it is the core field in both design and manufacturing. The Department of Materials Science and Engineering, is the only national institution currently catering to this demand in the aspect of education as well as in materials research in Sri Lanka.

The symposium theme is "Towards Smart Society through Innovative Materials"; as on the par with current world trend. The department strongly believe to ascend the journey aligned with ongoing technology through research and development activities with major Sri Lankan Industries. MESII 2020 accompanies the output of the research work carried out by our undergraduates and postgraduates, with major local industries. The objective of the symposium is the awareness of these activities / facilities available in the department. In parallel with the technical sessions, we host a short workshop for the second time on the theme of "Recognizing the Rewarding Trends in Engineering" for Advanced Level school students studying in physical science stream.

I strongly believe as the program chair that, this event will be effective to you in gathering new knowledge in Materials World and as industrialists, to collaborate with us to advance for the betterment of your organization and ultimately Sri Lanka.

I take this opportunity to thank everyone who helped and supported to make this symbolic event a success; and hope the time spent in MESII 2020 is worthwhile and exciting. As the program chair I hope you will continue to support future MESII events for the betterment of every aspect.

Dr AAG Aravinda Abeygunawardane
Program Chair
MESII 2020