

the
PRESIDENT'S MESSAGE

COSTAM – the Way ahead



**“As you start to walk on
the way, the way
appears.”**

The objectives of the Confederation are among other things to bring together the resources of member associations for the advancement of science and technology and to promote effective utilization of science and technology for human welfare and national development. A cliché but nevertheless there is a need to really embark on these with respect to the

challenges in schools and in higher learning institutions (IHLs). The former is in terms of STEM pedagogy. The latter on inter and multi-disciplinary research in the current digital era. The outputs of these two should be well received by the industry but do they have the competencies of the 21st. Century in the work place? STEM workers appear to require higher-order thinking skills, such as Critical Thinking, Complex Problem Solving, and Judgment and Decision Making.

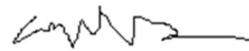
Specifically, they are required to solve problems using skills of Mathematics and Science. STEM workers need to use logic and reasoning to identify the strengths and weaknesses of alternative solutions.

STEM has been implemented in the Malaysian schools since 2017. The Government has introduced the 60:40 (Science: Non-Science) policy in 1967 but remained at 44: 56 in 2019. STEM education is a lesson that integrates the four components of STEM which are needed in the professional world. Alas, our nation is at IR2 or so whereas the neighboring countries have achieved IR5 stage already. Of course, our challenges are made-up of many fronts.

However, we must solve the correct problems though. One without a doubt is the education of our children. We should tackle the core, the teachers. COSTAM should pool together the resources of member associations to raise the competency level of our teachers through our own certification programme. Competence is developed and consolidated through active utilization of diverse learning opportunities moderated by individual characteristics, the affective domain.

The next station in this journey is to integrate two or more disciplines into a coherent whole (interdisciplinary) for problem solving and innovation. In IHLs the focus should be less on current occupational skills but more on those fundamental areas of science and engineering that at least likely to be affected by technological changes. The jobs in the future without exaggerating, are not even present now. Students molded by STEM educators who have integrated the four components in STEM will be a perfect fit for such endeavors in IHLs. The academics will further guide and mentor such students. It helps if he/she is firm as a disciplinarian and caring as well, one with the affective attributes. The research interest by the academics can range from identifying and applying innovative approaches to design better materials from less, using a combination of high-performance computing, advanced experimental testing and new manufacturing techniques. The multi-disciplinary approach in research is enhanced further by data methods, such as AI and ML (machine learning) enabling academics of different disciplines working independently on the same problem thus rapidly extending the frontiers.

In concluding, it does appear that the journey is endless. Hence, wherever we are, let us savour the moments and walk together towards the same destination. As someone said, "as you start to walk on the way, the way appears."



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38th. Annual General Meeting in session (24th. September, 2022)



Election Session



Elected Members of the Executive Committee Member (Exco.) 2022/24

No.	Position	Name	Organisation
1.	President	Prof. Dr. Ir. Ruslan Hassan, FASc.	TAM
2.	Deputy-President	Dato' Dr. Yew Chong Hooi	IKM
3.	Vice-President	Dato' Dr. Vellayan Subramaniam	MSA
4.	Vice-President	Prof. Dr. Abd. Rahman Milan	PGM
5.	Hon. Secretary	Dr. Stephen Wong Kam Sum	MSSA
6.	Assistant Hon. Secretary	Dr. Koh Kar Chai	MMA
7.	Treasurer	Ts. Joel Lim Soon Yeen	TAM
8.	Ordinary Committee Member	Dr. Sam Mohan	MSPTM
9.	Ordinary Committee Member	Dr. Yeap Gim Ean	MMA
10.	Ordinary Committee Member	Ms. Wee Hui Beh	MSA
11.	Ordinary Committee Member	Dr. Mohammed Rizman	MSMS
12.	Ordinary Committee Member	Prof. Lee Chien Sing	MINDS
13.	Ordinary Committee Member	Ir. Dr. Aidil Chee Tahir	IEM

Appointed

1.	Auditor	Dr. Muhammad Firdaus Sulaiman	MSSS
2.	Auditor	Mr. Tan Boon Kong	GSM