

An Editorial Note:

What kind of engineering and technology we are going to pursue?

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First and foremost, with the strong collaborative spirit between the Faculty of Engineering, Universitas Sebelas Maret, Indonesia, and the School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Thailand, we were finally able to vanquish the challenges and hurdles during the process of founding the Innovative Engineering and Sustainability Journal. We thank everyone who involved in the process, with all of the shortcomings and difficulties we faced. The journal was officially founded on September 14, 2021, and we are still improving everything, the web site, the appearance, the system, and the personnel. It shall not therefore be a complacency since we are not out of the wood yet and far from accomplishing our common goals in founding this collaborative international journal, which are to promote the cooperation between two higher education institutions of two countries, Indonesia and Thailand, particularly in research and education fields. The hardest tasks are not coming from the founding of a journal, rather to maintain the journal in constantly and timely publishing quality papers in a pathway to be indexed by scientifically and academically accepted institutions such as Scopus, Web of Knowledge, ASEAN Citation Index, Indonesia and Thailand National Citation Index in five to six years after very first publications of the Journal.

The journal itself contains three keywords: innovative, engineering and sustainability, as reflected by the name of the journal. The choice of the names was long contemplated to reflect the tasks and responsibilities of the two founding institutes. The innovative and engineering words were two common words that share the interests of both founding institutes. The sustainability word was added to reflect the additional task of Faculty of Engineering of UNS in promoting education in sustainability where architecture and urban planning programs are under this faculty. By this name we are eager to move forward bringing the innovation in engineering and technology, the engineering that promotes the anthropogenic sustainability, which is engineering for the purpose of social, environmental and economic sustainability to support the well-being of humanity. We place our dream in our research advancement as reflected in our publications as well as in our journal. In our humble opinion, the publication in our journal should be directed to, but not limited to the following science and technology perspectives:

Disruptive Technology:

As the name implies, disruptive technology is not following the traditional way of thinking. It is a pathway that interrupts and dislocates our convenient linear thinking. A disrupted way is an abrupt change of direction and orientation. The disruptive technology is for only innovators, out-of-the-box thinkers, risk takers, and the likes. Disruptive technology may include a technology that pops up without obvious predecessors, for example e-commerce and e-ride through small but powerful smartphone applications.

Internet of Things:

Internet can be used for almost everything. This perhaps the origin of the term of “internet of things”. We cannot imagine current virtual learning process enforced by the pandemic without the presence of internet. God has equipped us first with internet before He descends the corona virus. Thanks to inventors of the internet. The internet of things need support from other disciplines as well such as electrical and electronic engineering, biomedical engineering, mechanical engineering, instrumentation engineering, medical science, civil engineering and other fields of science and engineering, since internet is only back-bone and neural system. The synergistic interconnectivity among them would create the most powerful system ever created by mankind.

Big Data Science:

Data science has been in place since some decades ago along with the development of information technology and artificial intelligence. However, big data science emerges just recently with the support of ultra-high-speed computer processors and advance storage systems like solid-state discs. It would not be possible when the storage system is still depending on physical speed compared to electron speed, or with snail speed of processors. As the name infers, the big data science involves huge quantity of data, and having the characteristics of velocity, volume, value, variety and veracity (5V's) or sometimes added by visualization and value (7V's). The google smart assistant is an example of the combination of big data science and powerful algorithms, which helps us a lot in finding almost everything, and returns the results in only milli-seconds.

Future and Smart Materials:

The future and smart materials when they are readily available for use may perhaps change our life and our civilizations. The invention of, for example, graphene aerogel, which is lighter than air but stronger than steel, would be able to make our daily home appliances are unbreakable. This is good for sustainability of environment, but not good for the business, as the lifecycle of the appliances is almost eternity. The barriers to produce this future material *en-masse* are copyrights and patents, even though the forming material is abundant. Thus, this is our challenge to invent a future material that may change the civilization.

Nano Technology:

Nano technology is not a new topic, but still relevant for research arena since we do not fully understand the characteristics. If we were able to produce fully functional nano devices, we may be able to address and defeat the current pandemic by safeguarding the channels where the virus

entering our body, or fighting the viruses when they invaded the human body. It could also be used to fight the cancerous cells.

Green Technology:

Last but not least, this green technology is associated with sustainability. The green technology leaves no environmental footprint that may destroy the earth environment. This green technology may encompass many disciplines of science and engineering, and still a potential research arena in civil engineering, architecture, environmental science and engineering, geography and urban engineering.

The above subjects are some of expected publications in our infant journal but having big dreams. As Chief Editor of the journal, we strongly encourage and invite the potential authors, particularly from two founding institutions, to submit your works in our journal. It is the right time to empower the journal with sufficient fuel to soar. If it is not us, then who else will.

Let's move forward.