## Proceeding of 2<sup>nd</sup> International Conference on Science, Technology and Interdisciplinary Research 2016

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Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM) Universitas Lampung

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### **PREFACE**

Dear colleagues and friends,

Greetings from Bandar Lampung!

Following the successful of our inaugural series in 2015, we cordially present The 2<sup>nd</sup> International Conference on Science, Technology, and Interdisciplinary Research (IC-STAR) 2016 took place in Bandar Lampung, the capital city of Lampung Province, Indonesia, on August 22 till 25, 2016. IC-STAR is an interdisciplinary international conference covering research and technological development in the field of engineering, life and applied sciences, medical and biomedical engineering, and agriculture engineering and food sciences.

This year we received 181 submissions from authors that submitted their work in the conference. The submission was divided into regular full papers, short papers (work in progress), extended abstracts, and posters. After the double blinded peer-review process, the scientific committee of IC-STAR 2016 accepted and hosted 112 original research papers for oral presentation, and 8 posters. Due to inattentive reason, conclusively, the official IC-STAR abstract proceeding included 81 papers and 8 posters.

During the conference, 5 distinguish keynote speakers gave their speech and presentation of their state-of-the art works in the 2 keynote sessions. In addition, 14 parallel sessions were held in order to advance and contribute to specific research areas in the field of arranged sections. The parallel sessions composed into 44 paper contributions and 5 posters in Engineering section, 7 contributions in Agriculture and Food Sciences, 12 contributions in Medical and Biomedical Engineering, 18 contributions in Life and Applied Sciences.

IC-STAR 2016, in its inaugural arrangement, aims at creating a forum for further discussion on interdisciplinary fields of interest between academia, researchers, and their counterparts in government and industrial sectors. The objectives were to disseminate and discuss the advancements in understanding of Science, Technology and Interdisciplinary Research and their innovations. Also to gather stakeholders from academia, research institutes and industries for sharing their innovative and sustainable ideas, collaboration and networking opportunities. Therefore, the call for paper was addressed to scholars and/or professionals in the relevant fields. Furthermore, papers focused on issues of education were also welcomed along with papers regarding the science and engineering as long as the disciplines were intersected each other.

We would like to thanks the Faculty of Engineering, University of Lampung, who hosted the conference, also all members of committees, institutional partners, affiliated journals, sponsors, and ladies and gentlemen of authors and participants who have been contributed in the IC-STAR 2016.

See you again in IC-STAR 2017

Dr. Ing. Ardian Ulvan
IC-STAR 2016 Conference Chair

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#### ERGONOMIC CHAIR DESIGN USING BAMBOO LAMINATION TECHNIC

#### Hari Nugraha Ranudinata<sup>1,a</sup>, Ismail Alif Siregar, Taufiq Panji Wisesa

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**Abstract.** The use of bamboo for furniture in Indonesia like chairs uses bamboo that is still in its cylindrical form, which are then put together into the form of a chair. This results in a design that is masiff and square, uncomfortable and unergonomic. Furniture products design must be designed with an ergonomic aproach so that it may be comfortable for the end users, one of the alternative to this is by using lamination technic in the process. This technic can be applied in the manufacturing of a more ergonomic and anatomically correct for the end user. It can also result in a more aesthetically pleasing and more inovative design.

Keywords: Bamboo, Furniture, Ergonomicl, Design.