

## Preface

The 2<sup>nd</sup> International Conference on Computer, Science, Engineering, and Technology (ICComSET-2019), provides an excellent international forum for sharing knowledge and results in theory, methodology and applications of Computer, Science, Engineering and Technology in theoretical and practical aspects. The conference aims to provide a platform to the researchers and practitioners from both academia as well as industry to meet and share cutting-edge development. The 2<sup>nd</sup> ICComSET-2019 is organized by Universitas Muhammadiyah Tasikmalaya and Universitas Muhammadiyah Tangerang. The 2<sup>nd</sup> ICComSET-2019 secretariat has received more than 300 submissions from 6 countries: Malaysia, Algeria, Iraq, Ukraine, India, and Indonesia. The program held in Allium Hotel Tangerang, and supported by several universities as Co-Host, including Universitas Muhammadiyah Tapanuli Selatan, Universitas Jenderal Achmad Yani, Universitas Muhammadiyah Kudus, STIKES Muhammadiyah Klaten, Universitas Muhammadiyah Sukabumi, STKIP Muhammadiyah Sampit, Universitas Langlangbuana, and Universitas Widyatama.

Each paper has been reviewed by the program committee which consisted of more than 300 scientists from more than 6 countries. The conference program consists of 2 keynote speakers (60 min), 5 Invited speakers (150 min), 5 parallel sessions, one poster session, and six round tables.

We would like to thank the scientific committee, and reviewers, as well as the committee of the Universitas Muhammadiyah Tasikmalaya, Universitas Muhammadiyah Tangerang, and Co-Host who have participated in the success of this event so that this event can be held as planned. We also conveyed to the Rector of Universitas Muhammadiyah Tasikmalaya who had supported this event both in terms of finance and other supporting facilities.

### General Chair

Dr. Mujiarto, S.T., M.T.

### The Editors

Prof. Dr. Sundarapandian Vaidyanathan

Prof. Dr. Mustafa Bin Mamat

Prof. Dr. Chang-Hua Lien

Assoc. Prof. Dr. Turnad Lenggo Ginta

Dr. Mujiarto, S.T.,M.T.

Aceng Sambas, M.Sc.



### CONFERENCE PHOTOGRAPH





## **Program Committee**

### **Advisory Board:**

- Prof. Dr. Asari Djohar, M.Pd. (Universitas Pendidikan Indonesia)
- Prof. Sudrajat Supian (Universitas Padjadjaran)
- Prof. Dr. Mustafa Bin Mamat (Universiti Sultan Zaenal Abidin, Malaysia)
- Prof. Dr. Aripin, M.Sc., Universitas Siliwangi, Indonesia
- Prof. Dr. Wahyu Widada, Universitas Bengkulu, Indonesia
- Prof. Dr. Sundarapandian Vaidyanathan, Vel Tech University, India
- Prof. Lincoln Arsyad, Ph.D. (Universitas Gajah Mada)
- Muhammad Sayuti, Ph.D., (Universitas Ahmad Dahlan)
- Assoc. Prof. Dr. Fatma Susilawati (Universiti Sultan Zaenal Abidin, Malaysia)
- Dr. Achmad Qonit, AD (Universitas Muhammadiyah Tasikmalaya)
- Dr. Achmad Badawi (Universitas Muhammadiyah Tangerang)
- Dr. Mujiarto, ST.,MT. (Universitas Muhammadiyah Tasikmalaya)
- Dr. Ahmad Amarullah (Universitas Muhammadiyah Tangerang)
- Dr. M. Bay Masruri (Universitas Muhammadiyah Tangerang)
- Dr. Desri Arwen (Universitas Muhammadiyah Tangerang)
- Dr. Janner Simarmata, M.Kom. (Universitas Negeri Medan)
- Dr. Waspada Kurniadi (Universitas Muhammadiyah Tasikmalaya)
- Dr. Sukono (Universitas Padjadjaran)
- Ikhlusul Amal, Ph.D. (Lembaga Ilmu Pengetahuan Indonesia)
- Ir. Sardjito, Ph.D. (Universitas Muhammadiyah Surakarta)
- Dr. Muhammad Imam Muttaqijn (Universitas Muhammadiyah Tangerang)

### **Scientific Committee:**

- Prof. Dr. Asari Djohar, Universitas Pendidikan Indonesia, Indonesia
- Prof. Sudrajat Supian, Universitas Padjadjaran, Indonesia
- Prof. Dr. Aripin, M.Sc., Universitas Siliwangi, Indonesia
- Prof. Dr. Mustafa Bin Mamat, Universiti Sultan Zainal Abidin, Malaysia
- Prof. Dr. Sundarapandian Vaidyanathan, Vel Tech University, India
- Prof. Dr. Wahyu Widada, Universitas Bengkulu, Indonesia
- Dr. Turnad Lenggo Ginta, Universiti Teknologi Petronas, Malaysia
- Ir. Sardjito, Ph.D., Universitas Muhammadiyah Surakarta, Indonesia

Dr. Sukono, Universitas Padjadjaran, Indonesia

Dr. Eng. Agus Setiawan, Universitas Pendidikan Indonesia, Indonesia

Dr. Wagiran, Universitas Negeri Yogyakarta, Indonesia

Mohammad Adam Jerusalem, Ph.D., Universitas Negeri Yogyakarta, Indonesia

Dr. Ana, Universitas Pendidikan Indonesia, Indonesia

Dr. Ade Gafar Abdullah, Universitas Pendidikan Indonesia, Indonesia

Dr. Mumu Komaro, Universitas Pendidikan Indonesi, Indonesia

Dr. Iwa Kuntadi, Universitas Pendidikan Indonesi, Indonesia

Dr. Janner Simarmata, Universitas Negeri Medan

Mada Sanjaya WS, Ph.D., Universitas Islam Negeri Sunan Gunung Jati, Indonesia

### **Organizing Committee**

#### **Conference Chair:**

Dr. Mujiarto, S.T.,M.T. – Universitas Muhammadiyah Tasikmalaya

#### **Co Conference Chair:**

Aceng Sambas, M.Sc. (Universitas Muhammadiyah Tasikmalaya)

#### **Members:**

Dr. Muhammad Imam Muttaqijn – Universitas Muhammadiyah Tangerang

Milah Nurkamilah, M.Sc.- Universitas Muhammadiyah Tasikmalaya)

Rissa Nuryuniarti, MH.Kes, S.S.T.- Universitas Muhammadiyah Tasikmalaya

Anggia Suci Pratiwi, M.Pd.- Universitas Muhammadiyah Tasikmalaya

Budi Hendrawan, M.Pd. – Universitas Muhammadiyah Tasikmalaya

Taofik Muhammad, M.Kom., – Universitas Muhammadiyah Tasikmalaya

Ir. Muhammad Taufiq, M.Kom., – Universitas Muhammadiyah Tasikmalaya

Siti Asriah Immawati, S.E., M.M. – Universitas Muhammadiyah Tangerang

Eki Bay Haki Rahman, M.I.KOM., – Universitas Muhammadiyah Tangerang

Amiludin, S.H., M.H. – Universitas Muhammadiyah Tangerang

Dadang, S.E., M.M. – Universitas Muhammadiyah Tangerang