



ISBN : 978-1-7281-3016-3

# PROCEEDINGS OF



<http://icaiti.org>

# ICAITI 2019

2<sup>nd</sup> INTERNATIONAL CONFERENCE  
ON APPLIED INFORMATION  
TECHNOLOGY AND INNOVATION

September 21-22, 2019  
in Bali, Indonesia

Organized by  
Department of Information Technology  
Politeknik Negeri Padang

Theme :  
Exploring the Future Technology of Applied  
Information Technology and Innovation



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## **Welcome Message by the General Chair**



Assalamu'alaykum wrwb,

On behalf of the technical program committee (TPC), we warmly welcome you to the 2nd International Conference on Applied Information Technology and Innovation (ICAITI 2019) in Padang, Indonesia. The committee has organized exciting technical program for 2nd ICAITI with conference theme “Exploring the future technology of Applied Information Technology and Innovation”. 2nd ICAITI is the international conference organized by Politeknik Negeri Padang. As an International conference, ICAITI provides excellent platform in sharing the idea and experiences, exchange information and explore collaboration among researchers, engineers, practitioners and scholars in the field of information technology, communications, and electrical engineering.

All 120 submitted papers throughout the world went through a rigorous review process and each paper was evaluated by independent reviewers in accordance with standard blind review process. Based on the result of process, 54 papers have been selected, which constitute the acceptance rate of 45.00%. 2nd ICAITI also features world-class keynote/plenary speeches and distinguish-invited speakers that reflect the current research and development trends in the aforementioned fields.

We are deeply indebted to all of our TPC members as well as our reviewers, who volunteered a considerable amount of their time and expertise to ensure a fair, rigorous, and timely review process. We are very much appreciate our keynote and invited speakers who will share their expertise in this conference. Last but not least, our sincere gratitude should be given to all authors for submitting their work to 2nd ICAITI 2019, which has allowed us to assemble a high quality technical program.

Welcome to Bali and enjoy a wonderful experience in paradise island!

With best regards

Rahmat Hidayat, ST., M.Sc. IT

General Chair

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**Welcome Speech  
from The Director of Politeknik Negeri  
Padang**



Assalamu'alaikum wr. wb,

Good morning ladies and gentlemen, our dear honorary guests and speakers.

On behalf of Politeknik Negeri Padang, I am pleased to welcome all participants to the 2<sup>nd</sup> Conference on Applied Information Technology and Innovation (ICAITI) in Bali. We have successfully conducted the 1<sup>st</sup> ICAITI in our hometown in Padang last year, and this year event brings ICAITI to a new horizon in Bali.

As the host, Politeknik Negeri Padang is pleased to conduct the 2<sup>nd</sup> International Conference on Applied Information Technology and Innovation (ICAITI) 2019. As a leading higher vocational educational institution in Indonesia, Politeknik Negeri Padang strengthens its international reputation to achieve long term vision as a higher vocational education in South East Asia. This international event is part of our strategic plans toward that vision which also to strengthen our cooperation with national and international universities. We are now in the era of Industrial Revolution 4.0 where the use of information technology has penetrated every sector. Hence, by conducting this conference, we would like to gather best researchers in this field to share their knowledge and invention to the world, and to gain new perspective and plans for future research and international collaboration. This conference will be an annual event, so I would like to encourage participants to inform our fellow researchers and scholars to mark this event in their calendar. Last but not least, I also encourage our guests to enjoy the beauty of our nation and its hospitality as shown in Bali.

Warm Regards,

Surfa Yondri  
Director of Politeknik Negeri Padang

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