




# Fandi A. Wiranata

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## RESEARCH INTERESTS

**Operating/Storage Systems** (Advance the reliability, performance, and scalability).

**Distributed/Cloud Systems** (Cloud and data-intensive processing systems; and memory & storage).

**Wireless Communication Networks** (R&D for LTE and 5G mobile communications networks).

**Machine Learning** (Systems and networks predictability).

## EDUCATION

2018 - School of Electrical Eng. and Informatics, **Institut Teknologi Bandung (ITB)**, Bandung, Indonesia.

Present Undergraduate in Telecommunication Engineering, GPA 3.59 out of 4.0.

## PUBLICATIONS

2020 **Fandi A. Wiranata**, Wervyan Shalannanda, Rahmat Mulyawan, and Trio Adiono. **Automation of Virtualized 5G Infrastructure Deployment Using Mosaic 5G Operator over Kubernetes Supporting Network Slicing** in the 14<sup>th</sup> International Conference on Telecommunication Systems, Services, and Applications (TSSA).

## TALKS

2020 **Automation of Virtualized 5G Infrastructure Deployment Using Mosaic 5G Operator over Kubernetes Supporting Network Slicing** in the 14<sup>th</sup> International Conf. on Telecommunication Systems, Services, and Applications (TSSA).

## EXPERIENCE

Feb 2021 - **Undergraduate Researcher at University of Chicago – US**

- Present
- Work with Prof. Haryadi S. Gunawi and his PhD students to conduct research on operating / storage systems and ML to achieve latency stable systems.
  - Remote working from Indonesia in GIK Lab.

Jan 2021 **AUN-KU Winter Courses at Kyoto University – Kyoto, Japan**

- Student Mobility Program toward Human Security Development (HSD) that's designed for undergraduate students to study the concept of HSD and Energy Science.
- As one of 35 selected students from 10 countries of the ASEAN Uni. Network (AUN).

Sep 2020 – **Internship at Xirka Silicon Technology Inc. – Bandung, Indonesia**

- Oct 2020
- Developed Virtualized 5G Infrastructure using OpenAirInterface (OAI) on Xirka resources. The Virtualized 5G Infrastructure also support Radio slicing.
  - Supervised by Prof. Trio Adiono.

Jul 2020 – **Research Internship at NTUST – Taipei, Taiwan**

- Aug 2020
- Worked on Mosaic5G Project to integrate Mosaic 5G with several platforms (OAI, Kubernetes, Elasticsearch, and Operator SDK) to create virtualized 5G infrastructure.
  - Supervised by Prof. Ray-Guang Cheng.

Jan 2020 – **Pre-Research Intern at NTUST – Bandung, Indonesia**

- Mar 2020
- This is a remote research mentorship program for talented International students in collaboration at BMW Lab, NTUST.
  - Focused on studying LTE and 5G Architecture and having weekly report and assignment that teach me to stay productive. Supervised by Prof. Ray-Guang Cheng.

Jun 2019 - **Telecommunications Student Association – ITB**

- Present
- Be the part of the highest executive organization at Telecommunications Engineering major who manage and run students.
  - I made exercise books to improve student academic.

Oct 2018 - **Syamsi Dhuha Foundation – Bandung, Indonesia**

- Present
- SDF is an NGO that care on lupus and low vision.
  - Managed and run the biggest World Lupus Day and World Sight Day celebrations in Indonesia.

## AWARDS

ITB	<b>Ganesha Award.</b> Contribute in developing science or technology that has an impact on ITB	2021
ITB	<b>Top 4 Outstanding Students at ITB</b>	2021
Faculty	The <b>Most Outstanding Student</b> of <b>School of Electrical Eng. and Informatics, ITB.</b>	2021
Major	The <b>Most Outstanding Student</b> of Telecommunication Engineering.	2021
Volunteer	<b>Best volunteer</b> at Syamsi Dhuha Foundation.	2020
Scholarship	<b>Granted scholarships for monthly expenses</b> from Syamsi Dhuha Foundation.	2020
Scholarship	<b>Granted a full scholarship for my tuition fees</b> during my study in Institut Teknologi Bandung. The details can be looked at the official website: <a href="http://www.itbuntutuksemua.com">www.itbuntutuksemua.com</a> .	2018

## COMPETITIONS

On-going	Asia-Pacific	<b>Indonesia representative for Huawei - ICT Competition</b> in December	2021
1 <sup>st</sup> Place	National	<b>Huawei - ICT Competition at Cloud Track</b> , won USD2500. Next, representing Indonesia's Cloud team for <b>Regional Asia-Pacific</b> .	2020
3 <sup>rd</sup> Place	Regional	<b>Huawei - ICT Competition Preliminary Stage at Cloud Track.</b> Representing ITB's Cloud Team for <b>National level</b> .	2020
3 <sup>rd</sup> Place	National	<b>Paper Writing Competition</b> at State University of Surabaya. We built a <b>reactor</b> to improve pollution filtration which include <b>monitoring systems</b> .	2020
1 <sup>st</sup> Place	International	<b>Sustainability Drives Innovation at University of Malaya, Malaysia.</b> We created a green paddle efficiency design to improve the performance of boat.	2020
3 <sup>rd</sup> Place	International	<b>Idea Competition (Hackathon)</b> at ITB. We built an IoT system to solve the garbage problem by Integrating Eco-Friendly Trash Can and GoTrash App.	2019
1 <sup>st</sup> Place	National	<b>Essay Writing Competition</b> at ITB. We initiated a system to optimize waste that is <b>Integrated Waste Quality Monitoring System</b> .	2019
1 <sup>st</sup> Place	National	<b>Industrial Engineering Scientific Fest</b> at U. of Singaperbangsa Karawang.	2019
4 <sup>th</sup> Place	National	<b>Industrial Engineering Scientific Fest</b> at U. of Singaperbangsa Karawang. We initiate the use of snails as aggressive periodontitis prevention materials.	2019
Semifinalist	National	<b>Paper Writing Competition</b> at Indonesian Institute of Sciences ( <b>LIPI</b> ). Top 20 out of 3500 papers in social and behavioral sciences topic.	2017
Finalist	National	<b>Industrial Automation and Robotic Competition</b> at Institut Teknologi Sepuluh Nopember (ITS).	2016
Finalist	National	<b>Paper Writing Competition</b> at Indonesian Institute of Sciences ( <b>LIPI</b> ). We built a tool to optimize industry's air pollution <b>filtration</b> using Ca(OH) <sub>2</sub> .	2016
1 <sup>st</sup> Place	National	<b>Paper Writing Competition</b> at State Polytechnic of Malang. We built a tool that utilize gravity and gear optimization to create <b>renewable electricity</b> .	2015

## RESEARCH PROJECTS

<b>IONet</b> for I/O Performance Prediction (Supervised by Prof. Haryadi S. Gunawi).	2021
<b>CORTX</b> : Improve the performance of <b>Cortx-motr &amp; S3-Server</b> (Supervised by Prof. Haryadi S. Gunawi).	2021
<b>SherpaNet</b> : Blind Assistance Systems based on <b>Deep Conv. Neural Network</b> (Final Project at ITB).	2021
<b>Mosaic 5G</b> : Developed virtualized <b>5G</b> infrastructure (in collaboration with Xirka Silicon Technology Inc.).	2020

## PROFESSIONAL SERVICES

<b>Testbed</b> : Open Air Interface (OAI) and Mosaic-5G (Afiliation : NTUST-Taiwan and EURECOM).	2020
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## SKILL CERTIFICATION

<b>Cloud Computing</b>	<b>HCIA - Cloud Computing</b> from <b>Huawei</b> . Capable of collaborating in the deployment and O&M of cloud computing with virtualization technology.	2020
<b>Cloud Service</b>	<b>HCIA - Cloud Service</b> from <b>Huawei</b> , have mastered cutting-edge knowledge and skills of public cloud and are proficient in using Huawei cloud service products.	2020
<b>Artificial Int. (AI)</b>	<b>HCIA - AI</b> from <b>Huawei</b> . Capable of using AI, ML/DL and other technologies to achieve the design, development and innovation of AI products and solutions.	2020

## TEACHING ASSISTANT

ET2103	<b>Electric Circuit Course</b> at <b>ITB</b> .	2020
	<ul style="list-style-type: none"><li>Given 2 hours/week to do in-class teaching about the fundamentals of electric circuit for 2<sup>nd</sup>-year students. I must spend ~10 hours/week for the TA-related tasks.</li><li>Under Dr. Eng. Achmad Munir.</li></ul>	
EL1200	<b>Introduction to Circuit Analysis Course</b> at <b>ITB</b> .	2020
	<ul style="list-style-type: none"><li>Given 2 hours/week to do in-class teaching about the basic concepts of electric circuits for 1<sup>st</sup>-year students. I must spend ~10 hours/week for the TA-related tasks.</li><li>Under Dr. Eng. Achmad Munir.</li></ul>	

## PERSONAL PROJECTS

<b>Design and Optimization</b> of Slotted Microstrip Antenna for 3.8-4.0 GHz Application.	2020
LoVi: Assistance System for <b>Low Vision</b> with Distance and Voice Alerts Using <b>Deep Learning</b> .	2020
<b>Smart Parking System</b> : Monitor and Control the Parking Lot.	2019

## TECHNICAL SKILLS

<b>ML/AI</b>	<b>Tensorflow</b> and <b>Keras</b> .
<b>Database</b>	Familiar with <b>Hive</b> and <b>MySQL</b> .
<b>Cloud Computing</b>	<b>Chameleon Cloud</b> , <b>Huawei-Cloud</b> , and <b>Huawei Fusion-Compute</b>
<b>OS</b>	<b>Hacking</b> Linux kernel
<b>DevOps</b>	Experienced in projects using <b>Kubernetes</b> and <b>Docker</b>
<b>Networking</b>	<b>Routing &amp; Switching</b> , <b>Open Air Interface (OAI)</b> , and <b>Mosaic-5G</b> .
<b>IoT</b>	Worked in projects using <b>Arduino</b> and <b>NodeMCU</b> .
<b>PL</b>	<b>C</b> , <b>Python</b> , <b>Haskell</b> , and <b>Go</b> .

## REFERENCES

<b>Haryadi S. Gunawi</b>	Associate Professor, Computer Science, University of Chicago haryadi@cs.uchicago.edu
<b>Ray-Guang Cheng</b>	Distinguished Professor, Electronic and Computer Engineering, NTUST-Taiwan crg@mail.ntust.edu.tw
<b>Trio Adiono</b>	Professor and head of University Center of Excellence on Microelectronics, ITB adiono@stei.itb.ac.id

I declare the details stated to be true and complete.  
(CV updated on September 29, 2021)