

Bariq S. Firmansyah

Ahmad Yani Rd, Trenggalek, East Java 66316, Indonesia

PERSONAL INFORMATION

Institution	Institut Teknologi Bandung (ITB)
Department	Telecommunication Engineering, School of Electrical Engineering and Informatics (STEI)
Email	barigsufif@gmail.com 18116004@std.stei.itb.ac.id
WhatsApp	+62-858-7253-3834
Current Standing	Graduated in April 2021
PhD Applications Plan	Apply PhD in December 2021 with the expectation to start PhD in September 2022

GIK RESEARCH

Advisors	Monisha Ghosh and Muhammad Iqbal Rochman from The University of Chicago
Research Areas	Wireless Communications: 5G mmWave, Spectrum Coexistence
Research Description	Spectrum sharing in the unlicensed bands is becoming increasingly relevant as licensed cellular services plan to deploy services in these bands, raising challenging questions of fair coexistence. Another area of spectrum sharing of interest is that of sharing in the DSRC band. Another area of research is mmWave transmission for 5G cellular systems in particular the trade-off between equalization and beamforming.

EDUCATION

2021	B.S. in Telecommunications Engineering Institut Teknologi Bandung, Indonesia GPA: 3.76/4.0 (Rank: 1 st /31)
Spring 2019	Erasmus+ Exchange Program in Electronics and Information Technology Warsaw University of Technology, Poland

PUBLICATION

1. Muhammad Iqbal Rochman, Arvind Narayanan, Ahmad Hassan, **Bariq Firmansyah**, Vanlin Sathya, Monisha Ghosh, Zhi-Li Zhang, Feng Qian, "A Comparative Measurement Study of Commercial 5G mmWave Deployments", submitted to Proc. IEEE INFOCOM 2022.
2. Ray-Guang Cheng, Chi-Ming Yang, **Bariq S. Firmansyah**, Ruki Harwahyu, "Uplink OFDMA-based Random Access Mechanism with Bursty Arrivals for IEEE 802.11ax Systems", submitted to IEEE Networking Letters, June 2021.

EXPERIENCE

Sept 2020 - Present	Remote Student Researcher @ GIK Lab. , Bandung, Indonesia Advisor: Monisha Ghosh; Mentor: Muhammad Iqbal Rochman <ul style="list-style-type: none">• GIK Lab is a remote research program that gives Indonesian student opportunities to conduct research with a university professor in The United States.• Do research on 5G mmWave and wireless coexistence in the unlicensed bands.
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- Sept 2020 – Dec 2020* **Undergraduate Student Researcher @ Institut Teknologi Bandung.**, Indonesia
 Advisor: Irma Zakia
- Design a graph-based clustering and pilot assignment for scalable cell-free massive MIMO system.
 - Achieve a 56% increase in 95%-likely per-user SE when the number of UE is massive.
- Jul 2020 - Aug 2020* **Remote Research Intern @ National Taiwan U. of Science and Tech.**, Taipei, Taiwan
 Advisor: Ray-Guang Cheng; Mentor: Lu-Ching Chiang
- Work on random access for IEEE 802.11ax (Wi-Fi Generation 6).
 - Simulate and derive an accurate analytical model of Uplink OFDMA random access with bursty arrival.
- Jul 2019 - Sept 2019* **Network Engineer Intern @ Inmarsat Indonesia.**, Batam, Indonesia
 Mentor: Muhammad Shidqon
- Inmarsat is a British satellite telecommunications company, offering global mobile services.
 - Develop API client application to troubleshoot client problems in Inmarsat's machine-to-machine service.

TEACHING ASSISTANTSHIP

Fall 2019 ET3105: Discrete-Time Signal Processing, @ Institut Teknologi Bandung

SKILLS

Programming	MATLAB, Java, C, C++, Python, NS-3
Hardware	USRP, Arduino, Raspberry Pi, DSK TMS320C6713
Language	English, Indonesian (Native)

AWARDS

<i>Apr 2021</i>	Cum Laude Distinction
<i>Oct 2019</i>	Sakura Science Exchange Program Scholarship
<i>Feb 2019</i>	Erasmus+ International Credit Mobility Scholarship
<i>Feb 2019</i>	Telecommunications Engineering Most Outstanding Student Award (3 rd winner)
<i>Jul 2017</i>	Ministry of Education Scholarship