

Saidul Alam Chowdhury

saidul105@inu.ac.kr
saidul.cuet105@gmail.com
+82-10-4889-5944
web: saidul105.github.io

Analog RF Power Circuit Lab
Head: **Prof. Ahn Dukju**
Dept. of Electrical Engineering
Incheon National University,
South Korea

RESEARCH INTERESTS

Power Electronics

- Wireless Power Transfer
- Conducted EMI
- Soft-Switching Power Converters

RF/Analog Circuit Design

- Portable Devices, Electric Vehicle, Industrial Robots
- Biomedical Applications

EDUCATION

Feb. 2024 (Exp.)	Ph.D.	Incheon National University (INU) in Electrical Engineering Advisor: Prof. Ahn Dukju
Aug. 2021	M.S.	Incheon National University (INU) in Electrical Engineering Advisor: Prof. Ahn Dukju
Nov. 2017	B.Sc.	Chittagong University of Engineering and Technology (CUET) in Electrical and Electronic Engineering

EXPERIENCES

Sept. 2019 – Present	Incheon National University, Incheon, South Korea Graduate Research Assistant Analog RF Power Circuit Lab
Jan. 2018 – Aug. 2019	Pran-RFL Group, Dhaka, Bangladesh Assistant Engineer

PUBLICATIONS

Journals

1. **Saidul Alam Chowdhury**; Seong-Min Kim; Sang-Won Kim; Jungick Moon; In-Kui Cho; Dukju Ahn, "Reducing/Increasing Tuning Capacitor for Frequency-Modulated Spread-Spectrum Inductive Power Transfer," *IEEE Transactions on Power Electronics*, August 2023.
2. **Saidul Alam Chowdhury**; Seong-Min Kim; Sang-Won Kim; Jungick Moon; In-Kui Cho; Dukju Ahn, "Automatic Tuning Resonant Capacitor to Fix the Bidirectional Detuning With ZVS in Wireless Power Transfer," *IEEE Transactions on Industrial Electronics*, July 2023.
3. **Saidul Alam Chowdhury**; Sang-Won Kim; Seong-Min Kim; Jungick Moon; In-Kui Cho; Dukju Ahn, "Automatic Tuning Receiver for Improved Efficiency and EMI Suppression in Spread-Spectrum Wireless Power Transfer," *IEEE Transactions on Industrial Electronics*, March 2022.

Conferences

1. **Saidul Alam Chowdhury**; Dukju Ahn, "Self-Tuning LCC Receiver for Improved Efficiency and EMI Mitigation in Spread-Spectrum Wireless Power Transfer," *2023 IEEE Wireless Power Technology Conference and Expo (WPTCE)*.
2. **Saidul Alam Chowdhury**; Dukju Ahn; Seong-Min Kim; Sang-Won Kim; Jungick Moon; In-Kui Cho, "Automatic Resonance Tuning Receiver for Spread-Spectrum EMI Suppression," *Korean Electrical Society Conference Proceedings*, 2022.
3. Dukju Ahn; **Saidul Alam Chowdhury**, "Resonant Inverter with Self-Calibration of Coil Inductance Detuning," *EAPPC & BEAMS 2022, Abstract No.A20220427-0719*.
4. **Saidul Alam Chowdhury**; Om Prakash Bose; Quazi Delwar Hossain, "Design of a Two Stage CMOS Operational Amplifier in 100nm Technology with Low Offset Voltage," *2018 International Conference on Innovations in Science, Engineering and Technology (ICISSET)*.

Patents

1. **Saidul Alam Chowdhury**, Dukju Ahn "Wireless charging receiving device and method capable of adjusting resonant frequency," Korea Patent application, 2023.
2. Sang-Won Kim, Gwangzeen Ko, Seong-Min Kim, Jungick Moon, Jehoon Yun, In-Kui Cho, **Saidul Alam Chowdhury**, Shahid Ali Khan, Dukju Ahn "How to tune an arbitrarily adjustable resonant capacitor," United States Patent application, PR20220099US, 2022.

FUNDED PROJECTS

- **Institute of Information & communications Technology Planning & Evaluation (IITP)**
Funded by Korea government (MSIT) (**Grant Number**: 2022-0-00452)
Development of 3.3kW cluster wireless charging technologies for robot.
- **Electronics and Telecommunications Research Institute (ETRI)**
(**Grant Number**: 23ZH1140)
Study on 3D Communication Technology for Hyper-Connectivity.
- **Institute of Information and Communications Technology Planning and Evaluation**
Funded by Korea government (**Grant Number**: IITP2020-0-00618)
Development of commercialization technology for ultrasmall high efficiency wireless charging for 1 kW class robot.

SKILLS

Software	LTspice, PSIM, ADS, Diptrace, Code Composer Studio, Ansys Maxwell-3D, Matlab, Microsoft Visio
HARDWARE	Power Converters, PID Controller, PLL Control, PCB Fabrication, WBG Switching Devices, Microcontroller (TMS320F28335), Sensors, RF Coils, Measurement Instruments: EHP-200A EMF Analyzer, Vector Network Analyzer, Digital LCR meter, Oscilloscope

AWARDS & SCHOLARSHIPS

Sep. 2021	Full Scholarship for Ph.D., Incheon National University
Sep. 2019	Full Scholarship for masters, Incheon National University

REFERENCES

Prof. Ahn Dukju (Ph.D. Advisor)
Dept. of Electrical Engineering
Incheon National University (INU), South Korea
dahn2@inu.ac.kr
+82-32-835-8767