

HAFTU HILUF KAHSAY

RF/MMIC Design Engineer

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SUMMARY

- PhD researcher and RF/MMIC designer focused on Ka-band GaN power amplifiers and high-frequency circuit architectures. Proficient with ADS, Momentum, HFSS, and CST. Currently developing efficient, manufacturable mmWave circuits for space and communication systems.

EXPERIENCE

MMIC Designer

United Monolithic Semiconductors (UMS)

September 2023 – Ongoing Vilebon-sur-Yvette, France

- Designed and characterized a Ka-band (26 to 32 GHz) Class AB power amplifier
- Designed and characterized a Ka-band (28 to 32 GHz) Doherty power amplifier
- Ka-band Outphasing power amplifier design (circuit level); ongoing implementation
- Provided supervision and support for DC, S-parameter, large-signal, and linearity measurements, assisting technicians

PhD Candidate

XLIM research Institute

October 2022 – Ongoing Limoges, France

- Research on mmWave power amplifier design using GaN technologies for radiocommunication applications
- Designed Ka-band power amplifiers: transistor-level analysis, waveform engineering, harmonic balance simulations
- Developed custom source/load-pull simulation setups; studied conventional and advanced architectures
- Stability analysis of modulated signals

TECHNICAL SKILLS

- RF MMIC Design: Electrical Circuit simulation, Layout, EM simulation, characterization
- CAD Design tools: Keysight ADS (including Momentum for EM simulation), CST studio suite, Ansys HFSS, Cadence, LabView
- Basic hands-on experience with network analyzers, spectrum analyzers, and power meters for RF measurement setups
- Programming language: Python, Matlab

Complementary Experience

- MMIC Design Intern – XLIM Research Institute, France (Feb–Aug 2022)
- Assistant Lecturer – Bahir Dar University, Ethiopia (2019–2020)
- Operations and Maintenance Intern – Ethio Telecom, Ethiopia (2018)

EDUCATION

Ph.D. in High Frequency Electronics

University of Limoges

Sept 2022 – October 2025

Thesis title: Design of millimeter wave power amplifiers based on GaN technology for radiocommunication applications

M.Sc. in Erasmus Master on Innovative Microwave Electronics and Optics

University of Limoges, France and University of Brescia, Italy

Sept 2020 – August 2022

B.Sc. in Electrical Engineering

Bahir-dar University, Ethiopia

Sept 2014 – July 2019

LANGUAGES

- English (Fluent), French (Basic), Amharic (Native), and Tigrigna (Native)

HOBBIES

- Volleyball, running, hiking, cooking, exercising, and attending social gatherings for cultural and personal enrichment.

REFEREES

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