CURRICULUM VITAE: Dr. Cham Julius Derghe University of Douala Cameroon

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EDUCATION

PhD in electrical engineering **(May 2025)**

Concentration area: Power electronics and control theory
Institution: University of Douala
Master of Engineering in Electrical power systems
Concentration area: Renewable energy systems **(January 2021)**
Institution: University of Buea
Master of Science in Electrical Engineering **(November 2020)**
Concentration area: Power electronics and control theory
Institution: University of Douala
Technical School Teacher's Diploma (DIPET 11) in Electrical power engineering, option: Electrotechnics **(July 2016)**
Institution: University of Bamenda

RESEARCH INTEREST AND APPLICATION AREAS

Research interest: The fields of power electronics, renewable energy systems, artificial intelligence, non-linear controllers, and optimization algorithms
Application Areas: Industry (smart manufacturing systems, transportation systems, renewable energy systems, critical events forecasting, performance assessment, communication networks), Electric vehicles, smart grids and autonomous systems.

RESEARCH EXPERIENCE

- **Currently working on performance analysis of control techniques applied to bidirectional DC-DC converters** (July 2025- Present)
- **Publishe the following articles:**
  - Accurate and optimal control of a bidirectional DC-DC converter: A robust adaptive approach enhanced by particle swarm optimization
  - PSO-adaptive sliding mode control of a bidirectional DC-DC converter with an improved reaching law
  - Robust adaptive integral sliding mode control of a half-bridge bidirectional DC-DC converter
  - Robust adaptive sliding mode control of a bidirectional DC-DC converter feeding a resistive and CPL based on PSO

Institution: University of Douala **(November 2024-June 2025)**

- **Defended a PhD thesis on Design of a robust controller for a bidirectional DC-DC converter.**

Institution: University of Douala (May 2025)

- **Defended a Master of Engineering thesis on Improving the life time of a photovoltaic system by effective service management**

Institution: University of Buea (January 2018-October 2021)

- **Defended a Master of Science thesis on Design of a robust controller for a bidirectional DC-DC converter**

Institution: University of Douala (January 2017-October 2020)

TEACHING EXPERIENCE

Course Instructor October 2015-Present

Ministry of Higher Education (Estuary academic institute Bafoussam)

- Develops lecture notes to meet the academic, intellectual, and social needs of students. Used a variety of teaching techniques to encourage student critical thinking and discussion in the following institutions :

Institution: College of Technology (University of Buea)

Courses: Electrical machines, Maintenance and repairs, Power electronics, control feedback systems etc.

Institution: **Institut Universitaire de la Côte (**Private Institution)

Courses: Control of electrical machines and drives

PROFESSIONAL DEVELOPMENT/TRAINING

- Work as an electrician

  Enterprise: WELL Service Douala.
- Internship: Construction and maintenance of MV/LV lines, domestic installations in CENELEC enterprise, Bamenda
- Professional teachers training college for technical education Institution: University of Bamenda

PROFESSIONAL SERVICES

- Maintenance of installation of electrical systems
- Design and conception of electrical systems

COMMUNITY /VOLUNTEER SERVICE

In Charge of academic mentoring of engineering students for end of study projects in private universities

Supervision of Undergraduate and Graduate Students

OFFICIAL LANGUAGES PROFICIENCY

English: Fluent –

French: Intermediate

REFERENCES

- Prof Boum (University of Douala)

Telephone: +237675014572; Email: boumat2002@yahoo.fr

- Professor Ndikum Eric (University of Bamenda)

Telephone: +237 675 179 166; ndikumeric@yahoo.com

- Dr Tchahou (University of Bamenda)

Telephone: +237677103754; Email: tchahoutchendjen@yahoo.fr