Curriculum Vitae

TCHAWOU TCHUISSEU Eder Batista

Civil status and address

Date and place of birth: 06 December 1986, Maroua, Cameroon;

Marital status **:** Single without children;

Nationality **:** Cameroonian;

Professional status **:** PhD Student.

Professional addresses:

● Laboratory of Modelling and Simulation in Engineering Biomimetics and Prototypes (LaMSEBP: www.lamsebp.org);
Department of Physics, Faculty of Science, University of Yaoundé I, PO. Box 812 Yaoundé, Cameroon;

Electronic mail: batistaeder@yahoo.fr

Cameroon Tel: +237 96 32 20 92.

Current activity

March 2012 up to now

PhD thesis at University of Yaounde I, Yaounde, Cameroon.

Title of the PhD work : ”**Optimization of advection-diffusion models for patterns generation** ”;

Abstract: In this work, Biological and biochemical models such as Brusselator model which describe the autocatalytic oscillations ubiquitous in nature particularly in living organism; Gierer and Meinhardt model which is a biological model using an activator-substrate system to generate the pattern of lady Beetles. These models are modified for improving pigmentation and enhancing the generation of others new complex patterns and forms observed in biological and ecological systems, by adding special nonlinear terms and functions.

Promotors: Prof. Paul WOAFO and Dr. Samuel NOUBISSIÉ

January 2012 up to now

Member of OSA chapter of university of yaounde 1, under the supervision of Prof. Paul Woafo

February 2013 up to now

Vice-President of SPIE-Cameroon Student Chapter, under the supervision of Prof. Paul Woafo

March 2013 up to now

Member of Cameroon Physical Society (C.P.S)

Academic background

October 2005- December 2011

- **Master degree in Physics, December 2011**, (with grade: **Very Good**). *Diploma thesis* "**Conception of automatons which mimic skin pattern of animals**"

Abstract: In this work patterns observed in nature are mimic by using Turing model, in particular the simple BVAM model. Defined as a system of two coupled partial differential equations named reaction-diffusion equations. The conditions for generating patterns have been determined. We found numerically many complex patterns such as skin patterns of zebra and leopard. It is proposed a second automaton, conceived with analogical calculator which verifies the general Turing conditions.

- **Bachelor's Degree in Physics, September 2009**, (with grade: **Passable**)

October 2008- September 2009

- **High School Degree - Option Mathematics & Physical Sciences, 2005** at Lycée Général Leclerc, Yaounde, Cameroon.

Field of Research

- Biological Complex systems;
- Modeling and Simulation of Nonlinear partial differential equations;
- Nonlinear dynamics of electromechanical systems;
- Modeling and optimisation of Mechatronic Systems;

- Energy harvesting;

List of publications

Journal publications

1- **E.B. Tchawou Tchuisseu**, S. Noubissié and P. Woafo, "Effects of noise and localized perturbation on the Turing spatial patterns", submitted in Nonlinear Dynamic
2- **E.B. Tchawou Tchuisseu** and P. Woafo, "Effects of localized invasion and prey natality in a predator-prey system with Allee effect"
3- G.T. Oumbé Tékam, **E.B. Tchawou Tchuisseu**, C.A. Kitio Kwuimy, and P. Woafo, "Analysis of an electromechanical energy harvester system with geometry and ferroresonant nonlinearities", submitted in Nonlinear Dynamic.
4- **E.B. Tchawou Tchuisseu**, G.T. Oumbé Tékam, and P. Woafo, "analysis of an electromechanical energy harvester system under parametric excitation", submitted in Phys. Lett. A.
5- **E.B. Tchawou Tchuisseu** and P. Woafo, "Harvesting energy using a magnetic mass and a sliding behaviour" submitted Nonlinear Engineering.

Conferences

2011

1- **E.B. Tchawou Tchuisseu**, S. Noubissié and P. Woafo, "*Advection-Diffusion equation and colored patterns*" 2nd International Conference on "Low cost high physics and appropriate solutions to real life problems in developing countries" organised by Cameroon Physical Society (C.P.S.) in Yaounde I University, 6-8 December 2011. Oral presentation;

2012

2- **E.B. Tchawou Tchuisseu**, P.R. Nwagoum Tuwa, S. Noubissié and P. Woafo, "Logiciel de generation des motifs pour l'industrie de textile" Participant of 4th EG@ meeting on Training Research Innovation Development, 4-6 December 2012 in Polytechnic Yaoundé/ Formation-Recherche-Innovation-développement. Poster;

Computer science skills

Scientific programmation: Fortran, Matlab, Maple, C^{++};

Imaging softwares: Matlab, Scientific Work Place;

Operating systems: Windows;

Microsoft Office pack: Word, Powerpoint, Open Office, etc.

Languages

French (native), **English** (good).

Hobbies

Sport, travel, reading, cinema, listening to music and dance.

References

Pr. WOAFO Paul
Professor
Laboratory of Modelling and Simulation in Engineering Biomimetics and Prototypes (LaMSEPB: www.lamsebp.org);
Department of Physics
Faculty of Science, University of Yaoundé I,
PO. Box 812 Yaoundé, Cameroon;
Mobile:(237) 99.98.05.67
E-mail : pwoafo1@yahoo.fr

Dr. NOUBISSIE Samuel
Ph.D, member of Laboratory of Modelling and Simulation in Engineering Biomimetics and Prototypes (LaMSEPB: www.lamsebp.org);
Department of Civil Engineering
Fotso Victor University Institut-Bandjoun , University of Dschang,
Mobile:(237) 96.77.77.41
E-mail : snoubis@yahoo.fr