

Curriculum Vitae

PERSONAL INFORMATION



Pélérine TSOBGNI NYAWO

📍 Faculty of Sciences, Department of Physics, University of Buea, South West region, Cameroon

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Sex Female | Date of birth 12/02/1981 | Nationality Cameroonian

20 July 2021

EDUCATION AND TRAINING

September 2018

Assistant Lecturer, Department of physics, Faculty of science, University of Buea

August 2018-August 2020

Teaching Assisting at AIMS Cameroon

05 June 2014 – 24 August 2017

PhD in Theoretical Physics

University of Stellenbosch – South Africa

- Project title:
Driven nonequilibrium systems modeled with Markov processes
Supervisor: Prof. Hugo Touchette
Co-supervisor: Prof. Michael Kastner

02 September 2009 – 20 August 2010

Diploma In Condensed Matter Physics

Abdus Salam International Centre for Theoretical Physics Trieste-Italy.

- Main Subjects covered :
Symmetries electron bands and phonons, advanced quantum mechanics, statistical mechanics, advanced statistical mechanics, stochastic processes, many-body physics.
- Project title:
One and two-components charged bosons gas in 2D and 3D
Supervisors: Prof. Mikhail Kiselev, Prof. Alain Moïse Dikande

20 November 2006– 06 June 2008

Master's with thesis in Physics option: Mechanics

University of Yaoundé I – Cameroon

- Main subjects covered :
Non-linear excitations and coherent structures, dynamic and chaotic systems, modelling and control theory, numerical methods in mechanics, rheology of material at fluid state, non-linear dynamics of mechanical structures.
- Project title:
Kinematic multiplication of elementary steps on the surface of Helium crystal.
Supervisor: Prof. Timoléon Kofane.

05 October 2004 – 30 June 2006

Master's in Physics option: Mechanics

University of Yaoundé I – Cameroon

- Main subjects covered :
Non-relativistic quantum mechanics, network Dynamics, tensorial calculus, continuous mechanics, partial derivative equations, acoustics automatic systems.

09 October 2003 – 21 June 2004

Bachelor's degree in Physics

University of Yaoundé I – Cameroon

- Main subjects covered :
Vibration and phenomena of propagation, statistical thermodynamics, quantum mechanics, mathematics techniques for physics.

08 September 2000 **Baccalaureat of general secondary education in Mathematics and Sciences**
Government High School of Bandjoun – Cameroon

SCIENTIFIC PUBLICATIONS

- Pelerine Tsobgni Nyawo, H. Touchette, Large deviations of current for driven periodic diffusion Phys. Rev. E 94, 032101, 2016.
- Pelerine Tsobgni Nyawo, H. Touchette, A minimal model of dynamical phase transition Europhys. Lett. 116, 50009, 2016.
- Pelerine Tsobgni Nyawo and Hugo Touchette, Dynamical phase transition in drifted Brownian motion. Phys. Rev. E, 98:052103, 2018.

ACADEMIC EXPERIENCE

10 January 2017	<p>Centre of Excellence in Information and Communication Technologies (CETIC) Ecole National Supérieur Polytechnique of Yaounde-Cameroon</p>	Oral presentation
13 January 2017	<p>African Institute for Mathematical Sciences (AIMS) Limbe-Cameroon</p>	Oral presentation

22 August – 3 September 2016 **Beg Rohu Summer Shool on Concepts and Methods of Statistical Physics**
Saint-Pierre-Quiberon, France

- Lectures covered:
Fisher-KPP equations and applications
Statistics of rare events and large deviations
Selected topics in machine learning
Non-equilibrium statistical physics
Non-pertubative renormalization Group
- Short presentation given and poster presented

22 June – 3 July 2015 **Les Houches Doctoral Training in Statistical Physics**
Les Houches, France

- Main activities:
Quantum Statistical Mechanics
Non-equilibrium Statistical Mechanics
Thermal and Quantum Phase transitions
Disordered systems

20 May 20 – 14 June 2013 **Spring College on Physics of Complex System**
The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste-Italy

- Main activities:
Non-equilibrium statistical mechanics of bio-polymers
Nonlinear dynamics of ultracold atoms
Advanced methods of stochastic dynamics and thermodynamics
Machine learning, inference, optimization and control

- 03 September – 09 September 2012 **Flow Summer Schools on Numericals Methods**
KTH Mechanics, SE-100 44 Stockholm - Sweden
- Main activities:
 - Spectral element method for flow simulation
 - Immersed boundary methods
 - Direct numerical simulations of multiphase flow
- 02 July – 06 July 2012 **Advanced Course on Stochastic Methods in Fluid Mechanics**
International Centre for Mechanical Sciences, Palazzo del Torso/Piazza Garibaldi, 18/ 33100 Udine Italy, WWW.cism.it.
- Main activities:
 - Polydispersed two- phase flow
 - Lagrangian stochastic approaches for two-phase flow
 - Dynamical Indicators for chaotic systems
 - The PDF approach for Modelling dispersed particle flows
- 13 May – 08 June 8 2012 **International School on the physics of Complex Systems**
SISSA- International School for Advanced Studies, 34136Trieste-Italy.
- Main activities:
 - Ecological modelling
 - Inference in computer science and systems biology
 - Random matrices
 - Statistical field theory applied to soft matter
 - Statistical physics and hydrodynamics
- 12 March – 30 April 2012 **Interschip on Droplet Deformation**
Department of Applied Physics of Eindhoven University of Technology, group Turbulence and Vortex Dynamics from Professor F. Toschi
- Main activities:
 - Computed the centre of mass and the moment of inertia of the droplet in motion
 - Analysed the trajectory, the correlation function between the different axes of the droplet in motion, the correlation of the velocity gradient inside and around the droplet
 - Relationship between the eigenvalue of the strain tensors and the Inertia tensors

CONFERENCE ATTENDED

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| 03 – 07 July 2017 | SAIP (South Africa Institute of Physics)
Stellenbosch, South Africa | Oral presentation |
| 25 – 29 July 2016 | Conference on Long-Range-Interacting Many Body Systems
International Centre of Theoretical Physics (ICTP), Trieste-Italy | Poster presented |
| 18 – 22 July 2016 | STATPHYS Conference
Lyon, France | Poster presented |
| 04 – 8 July 2016 | SAIP (South Africa Institute of Physics)
Cape Town, South Africa | Poster presented |

- 03 – 14 November 2014 **Workshop on Large Deviations in Statistical Physics.**
National Institute of Theoretical physics (NITHeP) Stellenbosch, South Africa
- 14 – 18 February 2011 **Multiscale fluid dynamics with lattice Boltzmann method .**
Lorentz Center, Leiden, Netherlands
- 05 – 09 July 2010 **Workshop on Emergence of New States of Matter in Magnetic Systems and Beyond**
International Centre of Theoretical Physics (ICTP), Trieste-Italy
- 21 – 25 June 2010 **Workshop on Dynamics of Strongly Correlated Quantum Systems**
International Centre of Theoretical Physics (ICTP), Trieste-Italy
- 07 – 11 July 2008 **First Yaounde International College on Novel materials and technologies and their impact on energy environment and sustainable development**
University of Yaounde-Cameroon

AWARDS

- Prize for the best PhD presentation in Theoretical and Computational Physics at the SAIP conference (South Africa Institute of Physics).
- German Scholarship (DAAD) for three years studies of PhD at the University of Stellenbosch.

Work Experience

- Tutor for first year students in Biophysics and third years physics students in Electromagnetism courses from 2015-2017 at the University of Stellenbosch in South Africa
- Assist in monitoring experiment work for first year Engineering physics from 2015-2017 at the University of Stellenbosch in South Africa
- Tutor for Computational labs for the first National Institute for Theoretical Physics (NiTheP) Winter School on Computational Physics (2015)
- For the entrepreneurship training entitled YES (African young Entrepreneur) program, Drawing up a business plan: Feasibility Study (Market Study, Development and Production Plans, Financial Aspect, Funding, Legal Aspects and Legislation, management) and the Entrepreneurial Process.
- Brand Girl MTN Group PROMOTE 2008 At Yaounde-Cameroon.
- Pigiste at CAMTEL (Cameroon Society of Telecommunication) from 2007-2009.

PERSONAL SKILLS

Programming languages Used to Programming in Fortran, C, Mathematica, Matlab. Latex Proficient with Microsoft Office programmes, LINUX.

Analytical skills Sampling methods, Monte carlo simulations, spectral methodssimulations of ordinary and stochastic differential equations, statistics, probability theory, large deviation theory.

Mother tongue(s) French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C2
Italian	B2	B2	B1	B1	B2
German	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages

REFEREES

- Prof. Hugo Touchette**

National Institute for theoretical Physics (NITheP)
Department of Physics
Stellenbosch University
Stellenbosch 7600
South Africa
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- Prof. Timol  on Kofane**

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- Prof. Mikhail Kiselev**

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for Theoretical Physics (ICTP)
Strada Costiera 11, 34151 Trieste, Italy
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- Prof. Alain Moise Dikande**

Head of physics Department
Faculty of science University of Buea
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