

R. TINDJONG

SUMMARY CURRICULUM VITAE

PERSONAL DETAILS

Name: Rodrigue Tindjong
Citizenship: Cameroonian
Position: Research Associate, Lancaster University
Address: Department of Physics, Lancaster University, Lancaster LA1 4YB, UK
Tel: +44 (0) 1524 592278
Fax: +44 (0) 1524 844037
E-mails: r.tindjong@lancaster.ac.uk or rtindjong@yahoo.fr

EDUCATION

1994-1998 University of Yaoundé I: BSc in Physics.
1998-2001 University of Yaoundé I: MSc in Physics, thesis on *Stability and Characteristics of Bunched Modes in Coupled Josephson Transmission lines*.
2002-2006 Lancaster University: PhD in Physics, thesis on *A Self-Consistent Approach to the Simulation of Ionic Motion in Open Ion Channels*

EMPLOYMENT

04/07-10/07 Postdoctoral Research Associate, Lancaster University, UK. Advisors: Prof. P.V.E. McClintock and Dr. D.G. Luchinsky
11/07-03/08 Honorary Research Assistant, Lancaster University, Physics Department

TEACHING EXPERIENCE

2003-2006 Postgraduate Teaching Assistant, Physics Department, Lancaster University. My duties consisted of preparing and giving one hour seminar per week in Classical Mechanics as well as answering at students questions. Marking students weekly homework.
2001-2002 Postgraduate teaching assistant Physics Department, University of Yaoundé I. My duties involved preparation of two hours seminar per week in Electrostatics, answering questions as well as taking part in grading exams.

SCIENTIFIC INTERESTS

My research interests lie in the area of nonlinear dynamics systems. The emphasis is on understanding complex systems using both analytical methods and numerical experiments. I am particularly interested at the study of the functions from structure of ion channels, which are natural nanotubes in cellular membranes that control a vast range of biological functions in health and disease.

As a multidisciplinary research, it brings together Biophysicists and Physicists. Continuous theory was used to solve the problem of access resistance to the channel analytically. Combining Poisson's equation to determine the electrostatic potential energy and Langevin equation to determine ions trajectories through Brownian dynamics simulations, it was shown that ion channel can be seen as electrostatic amplifiers of charge fluctuations

COMPUTER SKILLS

1. Software: MS OFFICE, MAPLE, LATEX
2. Programming languages: C++, MATLAB, PASCAL, HTML(basic),
3. Operating systems: WINDOWS, MS DOS, LINUX (basics)

CONFERENCES GENERAL

Participation in several international conferences and workshops –

- International conference on noise and Fluctuations: Tokyo , Japan September 2007 (Oral).
- SPIE the international society for optical engineering, May 2007, Florence, Italy (Invited paper).
- Electrostatics 2007: St Catherine's College, Oxford , UK March 2007 (Oral).

- Constructive role of Noise in Complex Systems: Max-Planck, Dresden 2006 (Oral).
- International conference on noise and Fluctuations: Salamanca , Spain 2005 (Oral).
- Institute of Physics: Physics 2005 - A century after Einstein, Warwick, UK (Poster).
- Biophysics annual meeting, Long beach, California, February, 2005.
- SPIE the international society for optical engineering 2004, Canary Island, Spain (Oral).
- INTAS workshop, December 2003, Ljubljana, Slovenia (Oral).
- INTAS workshop, April 2003, Pisa, Italy (Poster).

PUBLICATIONS

1. R Tindjong, A Applegate, R S Eisenberg, I Kh Kaufman, D G Luchinsky and P V E McClintock, “Ionic current through an open channel: a low-dimensional model of coupling with vibrations in the wall”, in D Abbott et al. ed. *Fluctuations and Noise in Biological, Biophysical and Biomedical Systems II*, SPIE, Bellingham, 2004, pp 338–344.
2. R Tindjong, R S Eisenberg, I Kh Kaufman, D G Luchinsky and P V E McClintock, “Brownian dynamics simulations of ionic current through an open channel”, in T. González et al. ed. *Noise and Fluctuations, ICNF 2005*, AIP, Melville, New York, 2005, pp 563–565.
3. R Tindjong, *A Self-Consistent Approach to the Simulation of Ionic Motion in Open Ion Channels*, PhD thesis, Lancaster University, 2006 (unpublished).
4. D G Luchinsky, R Tindjong, I Kaufman, P V E McClintock and R S Eisenberg, “Ionic channels as electrostatic amplifiers of charge fluctuations”, *Proc. Electrostatics 2007*, in press.
5. D G Luchinsky, R Tindjong, P V E McClintock, I K Kaufman, R S Eisenberg, “On selectivity and gating of ionic channels”, Invited Paper for international conference on *Noise and Fluctuation in Biological, Biophysical, and Biomedical Systems*, Florence, May 2007, Proceedings of SPIE Vol. 6602, in press.
6. D G Luchinsky, R Tindjong, P V E McClintock, I K Kaufman, R S Eisenberg, “Self-consistent analytical solution for the current and access resistance in open ionic channels”, oral presentation for international conference on *Noise and Fluctuation in Biological, Biophysical, and Biomedical Systems*, Florence, May 2007, Proceedings of SPIE Vol. 6602, in press.
7. R Tindjong, D G Luchinsky, P V E McClintock, I Kh Kaufman and R S Eisenberg, “Effect of charge fluctuations on the permeation of ions through biological ion channels”, in M. Tacano et al. ed. *Noise and Fluctuations, ICNF 2007*, AIP vol. 922, Melville, New York, 2007, pp 647–650.
8. D G Luchinsky, R Tindjong, I Kaufman, P V E McClintock and R S Eisenberg, “Self-consistent solution of the Poisson and Nernst-Planck equations in the bulk and in an ion channel”, in preparation for *Phys. Rev. E*.

REFEREES

Available on request.