

CURRICULUM VITAE

Professor **FRANIC IKECHUKWU OCHOR (FNMS, KSM)**

FAMILY

Date of Birth December 6, 1956

Place of Birth Obekwesu, Isiala Ngwa South LGA, Abia State, Nigeria

Citizenship Nigerian

Married to Lady Ahunna Cecilia Ochor

 State Coordinator

 National Health Insurance Scheme (NHIS)

 Enugu, Enugu State

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Children Two children

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 Nsukka, Enugu State

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EDUCATION

1985 - 1988 SISSA/ISAS, Trieste, Italy

1983 - 1985	University of Nigeria, Nsukka, Nigeria
1977 - 1981	University of Nigeria, Nsukka, Nigeria
1970 - 1974	Comm. Sec. Sch, Owerrinta, Abia State, Nigeria
1962 - 1970	St. Peter Claver's Sch., Umueleghele, Abia State, Nigeria

EDUCATIONAL QUALIFICATIONS

1988	Ph.D. (SISSA) - Mathematics
1986	M.Phil. (SISSA) - Mathematics
1985	M.Sc. (UNN) - Mathematics
1981	B.Sc (UNN) (First Class Honours) - Mathematics

ACADEMIC EXPERIENCE - TEACHING & RESEARCH

University of Nigeria, Nsukka, Nigeria

2003 - Date	Professor
1985 - 2003	Lecturer
1983 - 1985	Graduate Assistant

the Abdus Salam ICTP, Trieste, Italy

1995 - 1996	Visiting Scientist (On Sabbatical)
2001 - 2007	Regular Associate

International School For Advanced Studies, Trieste, Italy

2000 - 2001	Visiting Mathematician
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University of Uyo, Uyo, Nigeria

2002 - 2003	Professor (On Sabbatical)
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Ebonyi State University, Abakaliki, Nigeria

2006 - 2008	Adjunct Professor
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Ahmadu Bello University, Zaria, Nigeria

2010 - 2011 Professor (On Sabbatical)

Nnamdi Azikiwe University, Awka, Nigeria

2013 - Date Visiting Professor

ADMINISTRATIVE EXPERIENCE (UNIVERSITY OF NIGERIA, NSUKKA)

2001 – 2003 Acting Head, Department of Mathematics

2009 – 2010 Head, Department of Mathematics

2012 – 2013 Head, Department of Mathematics

1988 – Date Member and Chairman of various Committees at University of Nigeria, Nsukka

OTHER ADMINISTRATIVE EXPERIENCE

1994 – Date External Examiner at various times over this period for undergraduate and postgraduate degree examinations for various Universities at Ile-Ife, Ibadan, Enugu, Abuja, Uyo, Awka, Ilorin, Port Harcourt and Institut de Mathematiques Et de Sciences Physiques of Porto Novo, Benin Republic.

2003 – Date Member of NUC Accreditation team to various universities in Nigeria

OTHER DISTINCTIONS, APPOINTMENTS AND AWARDS

2016 - Nigerian Mathematical Society (Elected Fellow, May 2016)

2002 - 2002 International Mathematical Union (Commission for Exchange and Development) Award as a Visiting Scientist to the University of Udine, Italy and University of Trieste, Italy

1985 - 1988 International Centre for Theoretical Physics (ICTP) 1

1980 - 1981 Federal Government of Nigeria Undergraduate Merit Award;
Anambra State Faculty Prize for Excellence in Physical Sciences

RESEARCH GRANTS

- 1992 - 1996 Successfully completed an approved project initiated by me on “The qualitative theory of third order nonlinear differential equations.” The University of Nigeria funded the research.
- 1996 - 2002 Successful carried out and completed two research grants from the Third World Academy of Sciences (TWAS) titled “Solvability of some higher differential equations”

RESEARCH INTEREST

Nonlinear Analysis and Applications to Differential Equations; Nonlinear Boundary Value Problems for Differential Equations

Main Research Topics

Positive solutions of Ordinary Differential Equations and Systems; Variational methods; Nonlinear Functional Analysis and Applications to Differential Equations (Topological Methods; Fixed Point Index Theories; Positive Operators) Upper and lower solution techniques; Stability properties of Periodic Systems.

KEY REFEREED ACADEMIC PUBLICATIONS

(With F. Zanolin) Positive solutions for two-point BVP's: Existence and multiplicity results; **Nonlinear Analysis TMA.**, 9(1989), 1329 – 1338.

(With F. Zanolin) On the solvability of a two-point BVP between the first eigenvalues; **Differential and Integral Equations**, 3(1990), 571 – 588.

On the principal eigenvalue for two-point BVPs in Compactly Generated Ordered Banach Spaces; **J. Nigerian Math. Soc.**, 9(1991), 49 – 58

Some remarks on the solvability of the nonlinear two-point boundary value problems; **J. Nigerian Math. Soc.**, 10(1992), 83 – 98

(With R. Manasevich and F. Zanolin) Positive solutions for the one-dimensional p -Laplacian; **Differential and Integral Equations**, 8(1995), 213 – 222

Solvability of a three-point boundary value problem below the first eigenvalue; **Rend. 1st Mat. Univ. Trieste**, XXIX(1997), 55 – 61

A note on the existence of infinitely many radially symmetric solutions of a quasilinear elliptic problem; **Dynamics of Conds And Impulsive Systems**, 4(1998), 227 – 239

On the existence and uniqueness result for a system of nonlinear Volterra equations; **J. Nigerian Math. Soc.**, 19(2000), 21 – 26

(With P. Omari and F. Zanolin) Multiplicity of positive solutions of a quasilinear elliptic problem in a ball; **Advances in Differential Equations**, 5(2000), 1545 – 1570

A note on the existence of solutions of nonlinear two-point boundary value problems; **J. Nigerian Math. Soc.**, 20(2001), 19 – 28

(With P. Omari) Stability properties of periodic solutions of a Duffing equation in the presence of lower and upper solutions; **Applied Math. and Comput**, 135(2003), 417 – 490.

Existence of solutions for 3rd order bvp when only the asymptotic behaviour of the potential is known; **J. Nigerian Math. Soc.**, 22(2003), 1 – 8

(With P. Omari) Singularly perturbed higher order periodic boundary value problems; **J. Math. Anal. Appl**, 289/2(2004), 639 – 649

(With R. Bestman) On hydromagnetic channel flow induced by tooth pulses; **Techn. Rep.** No. IC/88/10, ICTP, Trieste, Italy

The Methods and Applications of Optimal Control Theory (Edited by A. N. Eke): **NMC Lecture Note Series** (1999)

(With C. Chidume) Foundations of Mathematical Analysis ICTP, Trieste, Italy. (2003)

Ordinary Differential Equations – A First Course University of Nigeria, Nsukka (2009)

(With A. O. Animalu and B. A. Ezekoye) Biography of Emeritus Prof. James O. C. Ezeilo – A World Class Mathematician and Administrator **Snapp Press Ltd** Enugu (2010)

Foundation Postgraduate Course Notes in Ordinary Differential Equations (Collated by Afuwape, A. U.): **NMC Lecture Note Series I**; (2013)

20. Foundation Postgraduate Course Notes in Ordinary Differential Equations (Collated by Afuwape, A. U.): **NMC Lecture Note Series 2** (2014)

The influence of J. O. C. Ezeilo on Mathematics (1930 -2013); **J. Nigerian Math Soc.**, 33(2014), 1 - 2

(With A. U. Afuwape) Review of selected publications of Professor J. O. C. Ezeilo; **J. Nigerian Math. Soc.**, 33(2014), 3 - 10

PROFESSIONAL ACCOMPLISHMENT

Have supervised and mentored tens of postgraduate students both within and outside my host institution.

Have refereed papers for 5 journals of high repute.

CONFERENCES AND SEMINARS ATTENDED

6th Annual Conference of the Nigerian Mathematical Society, Obafemi Awolowo University, Ile Ife, Nigeria (1985)

Summer School on Calculus of Variations, Montecatini, Italy (1986).

France – Quebec Symposium on Nonlinear Applied Analysis, Perpignan, France (19 87)

10th International Conference on Ordinary and Partial Differential Equations, Dundee, Scotland (1988)

Topical Meeting of Variational problems in Analysis, Trieste, Italy (1989)

11th Annual Conference of the Nigerian Mathematical Society, Federal University of Technology, Owerri, Nigeria (1990)

Second College on Variational problems in Analysis, Trieste, Italy (1990).

12th Annual Conference of the Nigerian Mathematical Society, University of Port Harcourt, Port Harcourt, Nigeria (1991)

Summer School on Dynamical Systems, Trieste, Italy (1991).

13th Annual Conference of the Nigerian Mathematical Society, Nigerian Defense Academy, Kaduna, Nigeria (1992)

Workshop on Dynamical Systems, Trieste, Italy (1992).

14th Annual Conference of the Nigerian Mathematical Society, University of Nigeria, Nsukka , Nigeria (1993) (**Organizing Secretary**)

Foundation Postgraduate Course on Leray Schauder Degree Methods in Nonlinear Boundary Value Problems, National Mathematical Centre, Abuja, Nigeria (1993) (**Resource Person**)

15th Annual Conference of the Nigerian Mathematical Society, University of Nigeria, Nsukka, Nigeria (1994) (**Organizing Secretary**)

Workshop on Variational and Local Methods in the Study of Hamiltonian Systems, Trieste, Italy (1994).

16th Annual Conference of the Nigerian Mathematical Society, Obafemi Awolowo University, Ile Ife, Nigeria (1995)

First School on Nonlinear Analysis with Applications to Differential Equations, Trieste, Italy (1996)

International School (Second Session) on Differential Equations and Calculus of Variations, Trieste, Italy (1996)

Second School on Nonlinear Functional Analysis with Applications to Differential Equations, Trieste, Italy (1997)

Third School on Nonlinear Functional Analysis with Applications to Differential Equations, Trieste, Italy (1998)

Foundation Postgraduate Course on the Methods of Optimal Control Theory, National Mathematical Centre, Abuja, Nigeria (1999) (**Resource Person**)

18th Annual Conference of the Nigerian Mathematical Society, University of Calabar, Nigeria (1999)

Research Oriented Course on Ordinary Differential Equations, National Mathematical Centre, Abuja, Nigeria (2000) (**Resource Person**)

19th Annual Conference of the Nigerian Mathematical Society, University of Agriculture, Abeokuta, Nigeria (2000)

20th Annual Conference of the Nigerian Mathematical Society, University of Jos, Nigeria (2001)

21st Annual Conference of the Nigerian Mathematical Society, Federal University of Technology, Yola, Nigeria (2002)

22nd Annual Conference of the Nigerian Mathematical Society, Ladoké Akintola University of Technology, Ogbomosho, Nigeria (2003)

23rd Annual Conference of the Nigerian Mathematical Society, Ebonyi State University, Abakaliki, Nigeria (2004)

24th Annual Conference of the Nigerian Mathematical Society, Olabisi Onabanjo University of Technology, Ago Iwoye, Nigeria (2005)

25th Annual Conference of the Nigerian Mathematical Society, University of Uyo, Nigeria (2006)

27th Annual Conference of the Nigerian Mathematical Society, University of Port Harcourt, Nigeria (2008)

28th Annual Conference of the Nigerian Mathematical Society, University of Ilorin, Nigeria (2009)

29th Annual Conference of the Nigerian Mathematical Society, Lagos State University, Nigeria (2010)

30th Annual Conference of the Nigerian Mathematical Society, Federal University of Technology, Minna, Nigeria (2011)

31st Annual Conference of the Nigerian Mathematical Society, Ahmadu Bello University, Zaria, Nigeria (2012)

32nd Annual Conference of the Nigerian Mathematical Society, Obafemi Awolowo University, Ile Ife, Nigeria (2013)

33rd Annual Conference of the Nigerian Mathematical Society, African University of Science & Technology, Abuja, Nigeria (2014)

35th Annual Conference of the Nigerian Mathematical Society, Federal University of Technology, Minna, Nigeria (2016)

CONTRIBUTION TO KNOWLEDGE

My research has been on the following areas of Mathematics:

Nonlinear ordinary and partial differential equations;

Positive solutions of Ordinary Differential Equations and Systems;

Variational methods for the solvability of Systems of Equations;

Nonlinear Functional Analysis and Applications to Differential Equations (Topological Methods; Fixed Point Index Theories; Positive Operators) and

Upper and lower solution techniques; Stability properties of Periodic Systems.

MEMBERSHIP OF PROFESSIONAL BODIES:

Nigerian Mathematical Society
(**Secretary** 1995 – 2011 and **Ex-officio Member**, 2011 – 2013)

American Mathematical Society