

CURRICULUM VITAE

Professor Aderemi Oluyomi Kuku

Ph.D, FAMS (USA), FTWAS, FAAS, FAS (Nig), FNMS, FMAN, FASI, OON, NNOM

I. Personal Details

Date of Birth: March 20, 1941
Marital Status: Married with four children
Nationality: Nigeria/USA
Sex: Male

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COUNTRY OF RESIDENCE----NIGERIA
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III. Positions held in the last 14 years

- (a) Member, Institute for Advanced Study
Princeton, NJ, USA. Sept. 2003-Aug. 2004
- (b) Visiting Research Professor, MSRI--
(Math. Sci. Research Inst) Berkeley, CA, USA. Aug-Dec, 2004
- (c) Visiting Professor, OSU (Ohio State Univ.)
Columbus, OH, USA 2005
- (d) Distinguished Visiting Professor, Miami
University, Oxford, OH, USA 2005 – 2006
- (e) Visiting Professor, Universitat Bielefeld,
Germany 2006
- (f) Visiting Professor, IHES, Paris, France 2006
- (g) Visiting Professor, Max Planck Inst.
Fur Mathematik, Bonn, Germany 2007

- (h) Distinguished Visiting Professor, National Mathematical Centre, Abuja, Nigeria, Summer 2007
- (i) Visiting Professor, The University of Iowa, Iowa-City, USA 2007-2008
- (j) Professor of Mathematics, Grambling State University, Grambling, LA 71245, USA 2008-2009
- (k) William W. S. Claytor Endowed Professor of Mathematics Grambling State University, Grambling, LA 71245, USA. 2009-2014
- (l) Distinguished Visiting Professor, National Mathematical Centre, Abuja, Nigeria. Summer 2008, 2009, 2010, 2011, 2012, 2013, 2014
- (m) Distinguished Visiting Professor of Mathematics, IMSP—Institut de Mathematiques et de Sciences Physique, PortoNovo, Benin Republic, Nov/Dec, 2015
- (n) Distinguished Professor of Mathematics, National Mathematical Centre, Abuja, Nigeria 2015 to date

IV. Educational Institutions Attended (University Education)

- 1. Makerere University College, Kampala, Uganda
(then under special relationship with the University of London) 1962-1965
- 2. University of Ibadan, Ibadan, Nigeria 1966-1971
- 3. Columbia University, New York City, USA (To write my Ph.D thesis)
(Thesis written as a Visiting Scholar from Nigeria under Prof. Hyman Bass). 1970-1971

V. Academic Qualification (with dates and granting bodies)

- 1. B. Sc (Special- Honours) Mathematics, University of London 1965
- 2. M. Sc. (Mathematics), University of Ibadan, Nigeria. 1968
(Dissertation written under Professor Joshua Leslie, then at the University of Ibadan).
- 3. Ph.D. (Mathematics), University of Ibadan, Nigeria 1971
(Thesis written under Professor Hyman Bass of Columbia University, New York as a Visiting Scholar from Nigeria)

VI. Scholarships, Grants,

African Scholarship programme of American Universities (ASPAU)- I declined this offer	1962
United States Agency for International Development (USAID) Scholarship tenable at Makerere University College, Kampala, Uganda – (then under special relationship with University of London.	1962-1965
Travel fellowship awarded by US department of State	1968
AFGRAD Fellowship .	1970-1971
Travel Award by “Deutsche Stiftung fur International Entwicklung”	1980,'84 & '86
Study Visit Award to Germany by the German Academic Exchange Services (DAAD)	1981
Canadian Research Council Grant	1982,1993
Third World Academic of Sciences (TWAS) Travel Grant	1993
Swedish Institute Research / Travel Grant	1993
Switzerland National Foundation Research Grant	1996
Clay Mathematics Institute Fellowship	2004 - 2005

VII. Honours, Distinctions and Memberships in Learned Societies

President, African academy of Sciences	2014-
Honorary President, African Mathematical Union (AMU)(for life)	1995-
President, African Mathematical Union	1986-1995
Fellow, TWAS,--The World Academy of Sciences--For the Advancement of Science in the Developing Countries	1989-
Fellow, African Academy of Sciences	1986-
Member, European Academy of Arts, Science & Humanities	1986-
Fellow, Nigerian Academy of Science (Academy Secretary Physical Sciences (1991-93)	1989-
Foundation Fellow, American Mathematical Society (AMS)	2012-
Fellow, Mathematical Association of Nigeria	1987-
Foreign Fellow, Mongolian Academy of Sciences	2005-
Distinguished Service and Achievement Award USA National Association of mathematician (NAM)	1993
Special Merit Award, Ogun State of Nigeria	1987
Member, International Mathematical Union Commission on Development and Exchange	1986-1994
Member, Mathematics Advisory Committee International Centre for Theoretical Physics (ICTP), Trieste, Italy.	1986-92
Vice-Chairman, First Congress of African Scientists, Brazzaville, Congo	1987

Vice-Chairman, Scientific Committee, Organisation of African Unity (OAU)	1987
Member, Steering Committee, Pan-African Union for Science and Technology., Congo Brazaville.	1987-90
Member, Board of Trustees, Mathematical Association of Nigeria	1988-94
Dean, Postgraduate School, University of Ibadan	1986-1990
Chairman, Committee of Deans of Postgraduate Schools in Nigerian Universities	1987-1990
Chairman, UNESCO Committee of African Consultants Scientists, Dakar, Senegal	1987
Chairman, Science and Technology Committee, Pan-African Institute of International relation Geneva, Switzerland	1988-95
Vice-Chairman, Governing Council, International Centre for Mathematics and Physical Sciences, Porto-Novu, Benin Republic	1989
Member, UNESCO Advisory Committee of Expert Mathematicians	1987
Vice-President, Science Association of Nigeria	1983-1994
Member, Board of Directors, PRELUDE – Programme Recherches et Liaison Universite et Development Namur, Belgium	1990-1993
Member, Governing Council, Institute de Recherches Mathematiques (IRMA), Abidjan, Cote D'Ivoire	1993-97
Member, International Advisory Committee, International Village for Science and Technology Dar es Salaam, Tanzania	1990
Head, Department of mathematics, University of Ibadan	1983-1986
Academy Secretary, Physical Sciences, Nigeria Academy of Science	1991-1993
Associate Editor (Algebra) Journal of the Nigerian Mathematical Society	1984-
Member, Editorial Board, Journal of the Nigeria Mathematical Society	1984-90
Guest Editor, K-theory Journal	1989,2003
Member, Editorial Advisory Board, Afrika Matematika	1986 -1995
Life Member National Association of Mathematicians, USA	2010-
Member, Editorial Board, Nigerian Journal of Science	1977-1981
Honorary Citizenship, City of Huntsville, Alabama, USA	1968
Business Manager, Science Association of Nigeria	1978-1981
Member, American Mathematical Society	1971-
Member, London Mathematical Society	1995-
Member, Mathematical Association of America	1994-
Member, Nigerian Mathematical Society	1979-
Member, International Committee, American Mathematical Society	1993-98

Chairman, Mathematics Section, Science Association of Nigeria	1978-1981
Member of Council, Nigerian Mathematical Society	1985-1990
Member of Council, Mathematical Association of Nigeria	1987-1991
Reviewer, Mathematical Reviews	1991-
1997 Distinguished Visitor, South African Mathematics Society	1997
Traditional Royal Title---Otunba Ofiran of Ijebu-land (Nigeria)	1993
African Mathematical Union (AMU) medal	2000
Virginia Chatelain (Endowed) Lecture, Kansas State University, Manhattan, KS, USA	2007.
Member, International Advisory Committee, National Mathematical Centre, Abuja, Nigeria	2008-
Nigeria National Honours—OON (Officer of the Order of the Niger) awarded by the President, Federal Republic of Nigeria	2008-
Nigerian National Order of Merit – (NNOM)—the highest honour for Nigerian Academics—awarded by the President, Federal Republic of Nigeria.	2009.-
William W. S. Claytor Endowed Professor of Mathematics Grambling State University, Grambling, Louisiana, U.S.A.	2009.-2014
Fellow, African Scientific Institute, (ASI)	2010
International Conference on Algebraic K-theory and Its Applications in honor of my 70 th birthday organised by Nanjing University, Nanjing, China, March 17-21, 2011	2011.
Member, Editorial Board, American Journal of Mathematics and Statistics	2011
Editor, IMHOTEP--Journal African de Mathematiques Pures et Appliques	2012
Editor, Studies in Mathematical Sciences	2012
Editorial Adviser, South Pacific Journal of Pure and applied Mathematics	2012
Special Issue of the Journal of K-theory-(Published by Cambridge University Press, UK) Volume 12, No 1, 2013 in my honor as Proceedings of the International Conference on ‘Algebraic K-theory and its Applications’ held at Nanjing University China March 17-21, 2011 in honor of my 70 th birthday.	2013.
Foundation Fellow of the Nigerian Mathematical Society, (FNMS)	2015.-

VIII. Further Honors and Distinctions

A) Invitation by Universities/Research Institutes to give Colloquia and Seminar Lectures

I have given invited colloquium and seminar lectures at Universities/Research Centres in **Europe, USA, Canada, Asia, West Indies and Africa.** **USA:** University of California, Berkeley, 1992; Columbia University, New York, 1971, 1993; Cornell University, Ithaca, 1982, 1993; University of Chicago, Chicago, 1975, 82, 92, 2004; Dartmouth College, Hanover, New Hampshire, 1993, 2001, 2004; University of Illinois, Urbana-Champaign, 1975, 82; University of Iowa, Iowa City (2002, 2007); Institute for Advanced Study (IAS), Princeton, NJ, 2004; University of Michigan, Ann-Arbor, 1992; Michigan State University, East Lansing, 1992; Howard University, Washington DC, 1982, 94, 2003; Louisiana State University, Baton Rouge,

2012; University of Oklahoma, Norman, (Karcher Lecturer) 1982, North-western University, Evanston, 1975, 1982; North Dakota State University. Fargo, 1994; Kansas State University, Manhattan, (Virginia Chatelain Endowed Lecture) 2007; Ohio State University, Columbus, 2003, 2005; Penn State University, University Park 1993, 2004; Rutgers University, New Brunswick, NJ, 2004; State University of New York, Binghamton 1993; University of Wisconsin, Madison, 1992; New Mexico State University. Las Cruces. 1996; University of Texas at San Antonio, (2006), Miami University, Oxford, OH, 2005; Atlanta University Centre, 1993, Yale University, New Haven, 1993. **Germany:** Universities of Bielefeld, 1978, 80, 81, 84, 90, 94, 97; Munster, 1981, Perdabour, 1980; Max-Planck Institute für Mathematik, Bonn, 1994, 2007, **France:** Université Louis Pasteur, Strasbourg, 1998; Université Paris VII, Paris 1998; **Poland:** University of Poznan, Banach Centre, Warsaw, 2002; **Sweden:** Universities of Goteborg, Uppsala, Lund; Mittag-Leffler Inst. Stockholm – all in 1993. **United Kingdom:** Universities of Warwick, 1982, London, 1981; Sussex, 1995; Edinburgh, 1995; **Holland:** University of Nijmegen, 1994, **Russia:** Moscow State University, 2005; **Switzerland:** University of Lausanne, 1996; **Slovenia:** University of Ljubljana, 1999. **Canada:** Queen's University Kingston Ontario, 1982, 1993, University of Western Ontario, London, Ontario, 2001; **Hong Kong:** University of Hong Kong, 1993; **Italy:** University di Genova 1996; University di Trieste, 1998, SISSA, Trieste, 1998, **Singapore:** University of Singapore, 1985, **China:** Institute of Maths/Systems Science, Chinese Academy of Science, Beijing, 1993; East China Normal University Shanghai, 1993; Northwestern Polytechnical University of Xian, 2002; Nanjing University, 2002; Tongji University, Shanghai, 2002; **India:** Indian Statistical Institute, Delhi, 2002; **Mexico,** Instituto de Matematicas, Unidad Morella, (2005); **Argentina University of Buenos Aires (2013); Iran:** Sheriff University of Technology, Tehran, 2000; **West Indies:** University of West Indies at Kingston, Jamaica, 1993; **Papua New Guinea:** University of Technology, LAE. 2013. **West/Central/East Africa:** Universities of Abidjan, Cote d'Ivoire, 1986, 1987, 90, 95; Dakar, Senegal, 1987, 89; Ouagadougou, Burkina Faso, 1997; Yaoundé, Cameroon, 1990, 92; Brazzaville, Congo, 1987, 89; Nairobi, Kenya, 1986, 91; **and Nigeria-** Several Universities and National Mathematical Centre (NMC) 2007-2016. **South Africa:** Universities of Cape Town, Port Elizabeth, Stellenbosch, Pretoria;, University of Natal, Pietermaritzburg; University of Witwatersrand, Johannesburg; University of Western Cape, Bellville, University of the North, Pietersburg; University of the Free State, Bloemfontein; Rand Afrikaans University, Johannesburg, Rhodes University, Grahamstown. – all in 1997.. Univ of Pretoria also in 2015.

B) Special Invited Addresses by Mathematical Societies

1. **Joint American Mathematical Society (AMS); Canadian Mathematical Society, (CMS); Mathematical Society of America (MAA), and USA National Association of Mathematicians (NAM); - invited Address, Vancouver, 1993**
2. **Hong Kong Mathematics Society Annual Lecture 1993**
3. **Address at the 125th Anniversary Celebrations of the Finish Mathematics Society, Helsinki, Finland, December, 1993.**
- 4) **NAM (USA National Associations of Mathematicians) Claytor-Woodward invited address given at the Joint Mathematics Meetings, Boston, Massachusetts, USA, January 2012.**

IX. Details of Positions Held At University Level

a) Positions held in Nigeria

1. Assistant Lecturer in Mathematics, University of Ife,	1965-1967
2. Lecturer in Mathematics, University of Ife	1967-1968
3. Lecturer in Mathematics, University of Ibadan	1968-1976
4. Senior Lecturer in Mathematics, University of Ibadan	1976-1980
5. Sub-Dean (Postgraduate) Faculty of Science University of Ibadan	1978-1980
6. Reader in Mathematics, University of Ibadan	1980-1982
7. Full Professor of Mathematics, University of Ibadan	1982-2002
8. Head, Dept. of Mathematics, University of Ibadan	1983-1986
9. Dean, Postgraduate School University of Ibadan	1986-1990
10. Chairman, Committee of Deans of Postgraduate School in Nigerian Universities	1987-1990

b) Permanent Positions held outside Nigeria

Full Professor of Mathematics, International Centre for Theoretical Physics (ICTP) Trieste, Italy (A United Nations Research Centre in Mathematics and Physics under UNESCO).	1995-2003
(Note: I had to retire in 2003 at the UNESCO mandatory age of 62)	

c) Visiting Positions Outside Nigeria

11. Visiting Scholar, Columbia University, New York, USA	1970-1971
12. Visiting Assistant Professor, Columbia university New York, USA	1971
13. Post-Doctoral Visitor, University of Chicago, Chicago, USA	1974-1975
14. Visiting Professor, Univ. Bielefeld, Germany, Summer 1980; Fall 1981; Summer 1985; Fall 1990; Summer 1994, Fall 2006.	
15. Visiting Professor, University of Illinois at Urbana – Champaign, USA, Second Semester	1982
16. Visiting Professor, Queen's University, Kingston Ontario, Canada Summer 1993 Summer	1982
17. Visiting Research Professor, Mathematical Sciences Research Institute (MSRI), Berkeley, California, USA. Fall	1992
18. Visiting Professor, Cornell University, Ithaca, New York, USA Spring Semester	1993
19. Visiting Professor, University of Hong Kong (Summer)	1993
20. Visiting Professor, Institute of Mathematics/Systems Science, Chinese Academy of Sciences, Beijing, China (Summer)	1993
21. Visiting Professor, Chalmers University of Technology and the University of Goteborg, Goteborg, Sweden (Fall)	1993

22. Visiting Professor, Mittag-Leffler Institute, Stockholm, Sweden	1993
23. Visiting Professor, Howard University, Washington DC, USA, Spring Semester	1994
24. Visiting Professor, Max-Planck Institute fur Mathematik, Bonn, Germany	1994, 2007
25. Member, Institute for Advanced Study, Princeton, NJ, USA	2003-2004
27 Visiting Research Professor, MSRI—Mathematical Sciences Research Institute, Berkeley, CA	Fall, 2004
28 Visiting Professor, Ohio-State Univ. Columbus, OH 43210	2005
29 Visiting Professor, African Institute for Math Sciences, (AIMS) Capetown, South Africa.	2005
30. Distinguished Visiting Professor, Miami University, Oxford, OH, USA	2005-2006
31 Visiting Professor, IHES (Institut Des Hautes Etudes Scientifique, Paris, France,	2006
32 Visiting Professor, University of Iowa, Iowa City, USA	2007-2008

X. Some Highlights of Administrative and organizational Experience

As Head of the department of Mathematics, University of Ibadan, 1983-1986, I caused our undergraduate and post graduate programmes to be overhauled and initiated postgraduate programmes in industrial mathematics. etc.

As Dean of Postgraduate School, University of Ibadan 1986-1990, I was responsible for the organisation, coordination and improvement of postgraduate training and research throughout the University. In this capacity. I initiated various new programmes, succeeded in generating more funds for the school, created a “Forum for interdisciplinary Discourse” streamlined the regulations of the school, improved the format of presentation of results, etc. The Postgraduate School had over four thousand graduate students, 1030 academic staff—spread over nine faculties, one college and three Institutes, with Ph.D programs in all faculties as well as Master’s degree programs –both academic and professional. I was the Chairman of the Board of the School consisting of all Deans of faculties, all Heads of Departments, all Sub-Deans Post-Graduate in the faculties and all Faculty Representatives.

As Chairman of the Committee of Deans of Postgraduate Schools in Nigerian Universities for three years (1987-1990), I spearheaded the harmonization of standards and quality of programs, as well as overall improvement of postgraduate education and research in Nigerian Universities.

As President of the African Mathematical Union (AMU) for nine years, (1986-1995), I was responsible for organizing and coordinating various mathematical activities all over the continent of Africa. During my tenure, I created four Commissions- AMU Commission on Mathematics Education, AMU Commission on Pan-African Mathematics Olympiad, AMU Commission on History of Mathematics in Africa, and AMU Commission on Women in Mathematics in Africa. I also created a Pan-African Mathematical Sciences Network involving sixteen selected Universities/Research Centres in Africa with the aim of enhancing graduate training and research as well as co-operation North – South and -South. I also generated funds from various sources to organize subregional and regional activities .

I was a Vice-Chairman of the First Congress of African Scientists, which, in 1987, created the Pan-African Union for Science and Technology and I have since made several contributions

to the development of Science and Technology all over Africa.

As a member of the International Mathematical Union Commission on Development and Exchange for eight years (1986-1994), I made contributions on the development and exchanges in mathematical research in the developing countries, and other parts of the world.

At the International Congress on Mathematics Education in Quebec, Canada in 1992, I was the organizer of the sessions on “Undergraduate Mathematics Education for Specialists, Future Researchers and Mathematics teachers” Also, at the International Congress of Mathematics Education at Seville, Spain, in July 1996; I was co-organiser of a working Group on “International Cooperation in Mathematics Education.

I have organized or co-organised several International Conferences/School Symposia/Congresses, e.g. I have been:

1. Chairman, Organising Committee, International Workshop on group Representation and its Applications, Ibadan, Nigeria 1981
2. Chairman, Organising Committee, International Symposium on Mathematical Modelling, Ibadan, Nigeria, 1984
3. Chairman, Organising Committee, Second Pan-African congress of Mathematicians, Jos, Nigeria, 1986
4. Chairman, Organising Committee, International School/Symposium on Algebraic K-theory and its Applications, Ibadan, Nigeria, 1987
5. Vice-Chairman, Organising Committee, First Congress of African Scientists, Brazzaville, Congo, 1987
6. Chairman, Organising Committee, Foundation Postgraduate courses in Algebra, (organised for National Mathematical Centre, Abuja) Ibadan, Nigeria, 1987
7. Chairman, Organising Committee, International Symposium on Current Research Trends in Mathematics, Computer Science and Mathematics, Physics, Arusha, Tanzania, September, 1989
8. Chairman, Organising Committee, Second Foundation Postgraduate Courses in Algebra, National Mathematical Centre, Abuja Nigeria, June, 1992.
9. Chairman, Organising Committee, Third Pan-African Congress of Mathematicians, Nairobi, Kenya, August, 1991.
10. Organiser, Sessions on Undergraduate Mathematics Education for Specialists, Future Researchers, and Mathematics Teachers, at the International Congress on Maths Education Quebec, Canada, August, 1992.
11. Chairman, Organising Committee, International Symposium on “Mathematics Education in African for the twenty first century: Cairo, Egypt, September, 1992
12. Chairman, Organising Committee, International Symposium on “Current Research Trends in Mathematics, Computer Science and Mathematics Physics”, Port-Novo, Republic of Benin, January, 1993, Ibadan, Nigeria, January 1994
13. Chairman, Organising Committee, Fourth Pan-African Congress of Mathematics, Ifrane, Morocco, September, 1995
14. Co-organiser, Working Group on “International Cooperation on Mathematics Education” at the Eight International Congress on Mathematics Education, Seville, Spain, July, 1996.
15. Local Organiser, ICTP School on “Numerical Simulation of Partial Differential Equations, September, 1996
16. Director, ICTP Workshop/Symposium on “Algebraic K-theory and Applications” held in September, 1997.

17. Member, Scientific Committee, International Conference on “Quantum Field Theory, Non-Commutative Geometry and Quantum Probability”, Trieste, March 2001.
18. Member, Scientific Committee, Workshop on Algebraic Geometry and Strings - K-theory, Derived Categories and Strings, Genova, Italy, June 18-21, 2002.
19. Director, ICTP School and Conference on "Algebraic K-theory and its Applications", August 2002.
20. Organiser: International conference on “Algebraic K-theory and its Applications”, Safi, Morocco, July 25-30, 2004.
21. Co-organiser, International Workshop on “Representation theory in Geometry and Physics” IMSP, PortoNovo, Benin Republic, August 1-17, 2005.
22. Director, School and Conference on ‘Algebraic K-theory and its Applications’ ICTP, Trieste, Italy, May 14 to June 1, 2007.
23. Organizer, Workshop on “Introduction to Index Theory via K-theory and C*-Algebras with application to physics” at the National Mathematical Center (NMC) Abuja, Nigeria, June 27 to July 7, 2011.
24. I was the chief organizer of a three week (May 3-20, 2016) AAS-AMU International Symposium on Current Research Trends in the Mathematical Sciences and Applications together with a pre-symposium School hosted by The National Mathematical Centre, Abuja, Nigeria.

XI. Some Other Miscellaneous Information including Teaching ,Mentoring and Research Experience

- i) I have served as External Examiners to various Universities including: University of Benin, Obafemi Awolowo University, Ahmadu Bello University, Ogun State University - all in Nigeria; University of Yaoundé, Cameroon; University of Abidjan, Cote D’Ivoire; Fourth Bay College and Njala University College, Sierra Leone, University of West Indies, Kingston, Jamaica.
- ii) By now, I have taught the major areas of fundamental mathematics: Pre-Calculus, Calculus, Abstract Algebra, Linear algebra, Real Analysis, Complex Analysis, Geometry and Topology and Operations Research. I have written a book "Abstract Algebra" suitable for honours undergraduate and beginning graduate students. I have also taught graduate courses on various topics including: Algebraic K-theory, Commutative Algebra, Algebraic Topology, Algebraic Number Theory, Homological Algebra, Category Theory, Algebraic Geometry, Differential Geometry and Representation Theory and Non-commutative Geometry. My most recent research book “Representation Theory and Higher algebraic K-theory” xxvii + 442 page published in 2007 by Chapman and Hall is suitable for use by Researchers in the field and giving advanced graduate course in the field. By now, I have about 50 years of University teaching and research experience.
- iii) In the USA, I have taught undergraduate and graduate courses at Columbia University, New York (Summer School) (1971); University of Illinois, Urbana Champaign (Jan.-May, 1982); Cornell University, Ithaca (Jan.-May, 1993); Howard University, Washington DC (Jan.-May, 1994)., Miami University, Oxford, Ohio, (2005-2006), the University of Iowa, Iowa City, (2007-2008). and at the Grambling State University, Grambling, LA,
- iv) I have supervised nine M.Sc/MPhil research projects, two Ph.D’s and seven ICTP Diploma projects. (Note: ICTP Diplomas are equivalent to M.Sc/M.Phil) . I also supervised and mentored many Post-Docs and Mathematicians (see pages 28/29, 42-44 of this CV) from Nigeria, Africa, China, India, Latin America and all over the world during my nine-year

tenure as a Professor of Mathematics at the International Centre for Theoretical Physics (ICTP) Trieste, Italy (See pages 37-44 of this CV). I have also mentored informally numerous Post-Graduate Students, post-Docs and mathematicians at the National Mathematical Centre, Abuja, University of Iowa, IMSP—Institut de Mathematiques et de sciences Physique, PortoNovo, Benin Republic.

v) I have served on interview panels to appoint Mathematics Staff to various Universities and Polytechnics in Nigeria.

vi) I have rendered numerous services on Boards and Committees at the University of Ibadan, including Appointments and promotions Committee, Development Committee, Committee of Deans, Publications Committee etc. I served almost continuously as a member of University of Ibadan Senate from 1976 to 1994.

XII. Major International Conferences Attended (With Papers Read)

1. USA National Science Foundation Conference on Class Groups of Orders and Group-rings held at Northfield, USA, July 1975. **Invited Paper Read:** Whitehead groups of orders in p-adic algebras
2. Summer meeting of the American Mathematical Society held at Kalamazoo, Michigan USA, August 1975.
3. International Conference on Algebraic K-theory held at Mathematisches Forschungsinstitut, Oberwolfach, Germany, July 1976. **Invited Paper Read:** Some finiteness results in the K-theory of orders in p-adic algebras.
4. International Conference on Algebraic K-theory held at Northwestern University, Evanston, Illinois, USA, January 1976. **Invited Paper Read:** G_n of finite rings and SK_n of Orders.
5. International Conference on “Orders and their Applications” held at Mathematisches Forschungsinstitut, Oberwolfach, Germany, August 1980. **Invited Paper Read:** SG_n of Orders and Group-Rings.
6. International Conference on Algebraic K-theory held at Mathematisches Forschungsinstitut, Oberwolfach, Germany, July 1980. **Invited Paper Read:** A convenient setting for Equivariant Higher Algebraic K-theory.
7. The 93rd meeting of the American Mathematical Society together with Emmy Noether Symposium held at Bryn Mawr College, Pennsylvania, USA. March 16-19, 1982, **Invited Paper Read:** The Cartan map for equivariant higher Algebraic K-groups.
8. Annual Conference of the Canadian Mathematical Society held at Carleton University, Ottawa, Canada, June 1992.
9. International Conference on “Algebraic K-theory, Geometry and Number Theory”, at Universitat Bielefeld, Germany, July 26-31, 1982. **Invited Paper Read:** “Equivariant K-theory and the Co homology of profinite groups”.
10. American Mathematical society Summer Research Conference on “Applications of Algebraic K-theory to Algebraic Geometry”, at University of Colorado at Boulder, Colorado, USA: June 1983. **Invited Paper Read:** K-theory of Group-rings of finite groups over maximal orders in division algebras.
11. Conference of Directors (Heads) of Mathematics Institutes in African Universities held at Yaoundé, Cameroon, September 26-30, 1983.
12. International Conference on Algebraic K-theory held at Mathematisches Forschungsinstitut,

- Oberwolfach, Germany May 17 – June 2, 1984. **Invited Paper Read:** K_n and SK_n of integral group-rings and orders.
13. International Conference on Orders and their applications held at Mathematisches Forschungsinstitut, Oberwolfach, Germany, June 3-9, 1984
 14. Singapore Topology Conference, National University of Singapore, June 10-15, 1985. **Invited papers read:** Higher K-theory of groups-rings and orders in Algebra over number fields.
 15. Second Pan African Congress of the African Mathematical Union University of Jos, Nigeria, March 23-29, 1986. Invited paper read: Mathematical Research in Africa: Problems and Prospects.
 16. International Congress of Mathematicians, University of California, Berkeley, August, 3-19, 1986.
 17. International Symposium on Group Theory and its Applications, University of Abidjan, Cote D'Ivoire, July 1986. **I gave four invited lectures** on “Axiomatic Representation of Finite groups.
 18. Southern Africa Mathematical Science Association (SAMSA) Symposium on Mathematics and Mathematics Education, University of Lesotho, Lesotho, December 1986. **Invited Paper Read:** Some recent developments in Algebraic K-theory.
 19. International Symposium on Algebra and Algebraic Geometry, University of Abidjan, Cote D'Ivoire, December 29-January 10, 1987. **I gave four invited lectures** on Algebraic K-theory.
 20. USA-Japan Seminar on Applications of Algebraic K-theory to Algebraic Number theory and topology, East –West Centres, Honolulu, Hawaii, USA, January 12-16, 1987.
 21. ICMI Symposium on Mathematics as a Service Subject, International Centres for Mechanical Science, Udine, Italy, April 4-10, 1987. **Invited Paper Read:** Mathematics and Computer Science Education in African. Yamousoukro, Cote D'Ivoire. **Invited Paper Read:** Mathematics as a service subject - The African Experience.
 22. International Symposium on re-structuring Mathematics and Computer Science Education in African. Yamousoukro, Cote D'Ivoire. **Invited Paper Read:** The status and preparation of mathematics researchers and teachers in Africa.
 23. First Congress of African Scientists, Brazzaville, Congo, June 25-30, 1987. **Invited paper read:** Mobilisation and Production of Basic Scientists for the Development of Africa.
 24. Societe Mathematique de France Colloquium on “Mathematics a Venier” Paris, December 9-11, 1987, **Invited Paper Read:** Co-operation in Mathematics Between France and African countries.
 25. African Academy of Sciences (AAS) Conference on the Networking of the African Scientific Organizations.
 26. International Conference on ‘Orders and their Applications’, May 29-June 4, 1988, **Invited Paper Read:** Some finiteness results in the higher K-theory of group-rings and orders in algebras over number fields.
 27. International conference on ‘Algebraic K-theory’ Mathematisches Forschungsinstitut, Oberwolfach, Germany, June 5-11, 1988. **Invited Paper Read:** Higher K-theory of integral Group-rings and orders.
 28. Sixth Congress of the International Commission on Mathematics Education (ICME-6), Budapest, Hungary, July 27–August 3, 1988. I was part of special panel constituted to discuss the future of ICMI.
 29. Centenary celebrations of the America Mathematics Society, Providence, Rhode Island, USA,

August 8-12, 1988

30. Second Pan-African congress of Professors World Peace Academy (PWPA), Yaoundé, Cameroon, November 30 – December 4, 1988 **Paper Read as Invited Plenary Lecturer:** Mathematical Sciences and African Development.
31. Commonwealth Science Council Workshop on Commercialization and Evaluation on Research and Development.
32. IDRC conference on human resources development and strengthening of research capacities for West and Central Africa: Dakar, Senegal, April 5-8, 1989.
33. Europe-Africa Encounter – Conference on North-south Interdependence and solidarity; Porto Novo, Republic of Benin August 1989.
34. International Symposium on Current Research Trends in Mathematics, Computer Science and Mathematics Education Arusha, Tanzania, September 11-16, 1987. **Invited Plenary Paper Read:** on Equivariant Higher Algebraic K- theory.
35. African academy of Sciences Conference on Networking of African Scientific Organization (NASO), Nairobi, Kenya, October 2-5, 1989. **Invited Paper Read:** The role of Mathematical Sciences in the Industrial Development of Africa.
36. European Academy Conference on Science, Culture and the Health of the World: Geneva, Switzerland, October 10-14, 89.
37. Twenty-fifth anniversary Conference of International Centre for Theoretical Physics (ICTP), Trieste, Italy, October 31 – November 3, 1989.
38. 2nd congress of African scientists, Accra, Ghana, January 19 – February 2, 1990. I was one of the organizers of this congress.
39. International Congress of Mathematicians, Kyoto, Japan, August 20-28, 1990. **Paper Read:** Some finiteness results in the Higher K- theory of orders and group- rings.
40. Third world Academy of Science general Conference, Caracas, Venezuela, October 27-30, 1990.
41. 'Prelude' – Programme Recherche et liaison Université et Développement – Congress on 'Scientific Networks' Namur, Belgium, November, 1990. **Invited Paper Read:** Networks' in the context of New European Relationships and North – South Co- Development.
42. Third Pan- African Congress of Mathematicians, Nairobi, Kenya, August 20-28, 1991. I was Chairman of the International Committee, which organized the Congress. **Invited Paper Read:** Algebraic K- theory and other Mathematical Sciences.
43. Preparatory Conference for the First PAN- African Congress of Peoples and States, Dakar, Senegal, March 25-30, 1992. **Invited Paper Read:** Science and Technology Integration of Africa: a matter of survival.
44. International Conference on Commutative Algebra, Fes, Morocco, April 20-25, 1992. 1992. K-theory of polynomial rings orders and group-rings. (**Invited Paper**)
45. UNESCO Workshop on the Writing of structured texts for African Universities, Nairobi, Kenya, June 8-11, 1992.
46. First European Congress of Mathematics, Paris, France, July 3-10, 1992. I participated in a Round-Table on Co-operation of European Mathematical Society with Developing Countries.
47. Seventh international Congress of Mathematics Education, Quebec, Canada, August 16-23, 1992. **I Organised a session on** 'Undergraduate Mathematics Education for Specialists, Future Researchers and Mathematics Teachers'.
48. Advanced Workshop on Arithmetic Algebraic Geometry, ICTP, Trieste, Italy, August 31 to

- September 4, 1992. **I chaired a round-Table on the Status** of Mathematics in the Third World.
49. African Mathematical Union Symposium on Mathematics Education in Africa for 21st Century, Cairo, Egypt; September 5-10 1992. **I was Chairman of the Organizing Committee for this Symposium.**
 50. Third World Academy of Science (TWAS) General Conference, Kuwait, November 24-28, 1992.
 51. International Symposium on ‘Current Research Trends in Mathematics, Computer Science and Mathematical Physics’ Port Novo, Benin Republic, January 1993. **Invited Paper Read:** Some Recent Developments in the K-theory of group-rings and orders in algebras.
 52. Annual Meeting of the American Association for the Advancement of Science (AAAS), Boston, USA, February 1993. **I gave an Invited talk on** ‘Capacity Building and Human Resources for accelerated Development of Science and Technology in Africa.
 53. ‘Math Fest. 93’. Atlanta University Centre, Atlanta, Georgia, USA; March 18-20, 1993. **I gave an invited address Entitled** ‘Mathematics as a Universal Language.’
 54. International Conference on Algebraic K-theory, Mathematisches Forschungsinstitut, Oberwolfach, Germany; June 27 – July 3, 1993. **I gave an invited Lecture titled;** Higher K-theory of Modules over finite EI categories.
 55. UNESCO Conference on Science and Technology for the year 2000 and Beyond, Paris, France, July 5-10, 1993.
 56. Joint American Mathematical Society (AMS). Canadian Mathematical Society (CMS), Mathematical Association of America (MAA)., Meeting, university of British Columbia, CMS, MAA, USA national Association of Mathematicians (NAM). **Invited address titled:** Mathematical Research and Education in Africa –Problems and Prospects.
 57. Tenth Anniversary meeting of the Third World Academy of Science, ICTP Trieste, Italy; October 31 – November 5, 1993.
 58. One hundred and twenty fifth (125th) Anniversary Celebration of the Finnish Mathematical Society, University of Helsinki, Finland; December 1-2 `1993. **I gave an invited Address on** Mathematics as a Universal Language’.
 59. International Symposium on Current Research Trends in Mathematics, Computer Science and Mathematical Physics, University of Ibadan, Nigeria; January 17-21, 1994. **I gave an invited Lecture on** K-theory of Modules over ‘EI categories.
 60. International Conference on ‘Algebraic K-theory and Arithmetic’ Fields Institute, Waterloo, Canada, February 28- March 3, 1994.
 61. International Conference on Algebraic K-theory and connections with Algebraic Groups – Universitat Bielefeld July 20-24, 1994. **Invited Paper Read:** Higher K- theory of orders Groupings and Modules over EI-categories.
 62. International Workshop on Cyclic Homology – Trento, Italy, July 18-22, 1994.
 63. International Congress of Mathematicians, Zurich, Switzerland, August 1- 10 1994.
 64. International Workshop on the future of Mathematics communication, MSRI, Berkeley, California, USA, **Invited Paper Read:** Electronic Communications in Africa: situation Report. November 30 – December 3, 1994
 65. ICMII Conference on International Collaboration on Education Monash University Melbourne, Australia, April 19-24, 1995. **Paper Read:** Mathematics Education in Africa in relation to other continents.

66. International Conference on Commutative Algebra, University of Fes. Morocco. June 5-10, 1995 **Invited Paper Read:** K-theory of Polynomial extensions.
67. 50th Anniversary Celebrations of UNESCO, ICMS, Edinburgh, UK, Nov. 95.
68. Fourth AMU Pan-African congress of Mathematicians, Ifrane, Morocco. **Invited Paper Read:** Higher Class Groups of orders and groupings
69. 10th Anniversary celebrations of the African Academy of science, Nairobi, Kenya, Dec., 1995.
70. Great Lakes K-theory conferences, Fields Institute, Toronto Canada, March 1-3, 1996. **Invited Paper Read:** Higher Class Groups of orders and groupings
71. International Conference on K-theory, Maths Inst., Oberwolfach, Germany, June 10- 15, 1996. **Invited Paper Read:** Equivariant K-theory for compact Lie Group actions.
72. 8th International Congress on Mathematics Education on Mathematics Education, Seville Spain, July 13-21, 1996. I co-organised a Working Group on International cooperation on Mathematics Education.
73. Second European Congress of Mathematics, July 21-28, 1996.
74. African Mathematical Union Workshop in Algebra, University of Ouagadougou, Burkina Faso, April 21-25, 1997. **Invited Lecture:** Equivariant Higher K-theory for Compact Lie Groups actions.
75. Joint AMS-SAMS-LMS meeting, University of Pretoria, South Africa, June 25-28, 1997. With Eric Friedlander, I co-organized a Special Session on "Algebraic K-theory". **Invited Lecture:** Higher Class Groups of Orders and Integral Groupings.
76. AMS summer Research Conference, University of Seattle, Washington USA. July 12-25, 1997. **Invited Lecture:** Higher Class Groups and Continuous K-theory of p-adic orders.
77. ICTP Workshop/ Symposium on Algebraic K-theory and its application, Trieste, Italy, Sep. 1-19, 1997. **I was a Director** as well as Local organizer of the Workshop/Symposium.
78. Workshop on Algebraic K-Theory, Université Paris, VII, France. **Invited Lecture:** Non-Commutative Chern characters of compact Lie group C-algebra.
79. Great Lakes Algebraic K-Theory meeting and Annual AMS meeting, University of Illinois, Urbana-Champaign. March, 1998.
80. International Congress of Mathematicians, Berlin, Germany. August 18-27, 1998.
81. 10th General meeting of TWAS, Trieste, Italy. December 9-10, 1998.
82. International Workshop on Stable Homotopy and Algebraic K-theory. Universitaat Bielefeld, Germany. February 10-15, 1999.
83. International Conference on Non-Commutative Algebras, CIRM, Université Luminy, May 21-25, 1999.
84. International Conference on 'Algebraic K-Theory', Mathematisches Forschungsinstitut Oberwolfach, Germany, September 26 - October 2, 1999. **Invited Lecture:** Non-Commutative Chern characters of compact Lie group C*-algebras and compact quantum groups.
85. EXCITE (European Science Centres) Annual Conference, Prague, Czech Republic, November 18-20, 2000. **Invited Lecture:** North-South cooperation for global literacy and numeracy.
86. TWAS General Conference and AFRISTEC Meeting, Dakar, Senegal. November 21-26, 1999.
87. 5th AMU Pan-African Congress of Mathematicians, University of Western Cape, Cape Town, South Africa. **Invited Plenary Lecture:** Chern characters in non-commutative geometry.

88. International Workshop on Arakelov Geometry, Université Montpellier II, France. May 26-27, 2000.
89. TWAS General Meeting, Teheran, Iran. October 21-26, 2000.
90. First Pan-African Symposium of Mathematics Olympiads, Tunis, Tunisia. November 1-6, 2000. **Invited Plenary Lecture:** Mathematical sciences and other sciences.
91. Science Institute group (SIG)/African Academy of Sciences (AAS) meeting on "Millennium Science Initiatives in Africa", Nairobi, Kenya. November 14-16, 2000. **Invited Lecture:** Mathematical Sciences vis-à-vis basic sciences in Africa.
92. International Conference on "Recent Advances in the Mathematical Sciences" --- To celebrate the 50th Anniversary of the Indian Institute of Technology, (IIT), Kharagpur, India. December 20-22, 2000. **Invited Keynote Address:** Continuous Cohomology and Higher K-Theory of exact categories.
93. International Conference on "Geometric Analysis and Index Theory", Trieste, Italy, March 18-24, 2001. **Invited lecture:** Equivariant Hopf-algebra KK and Index theories.
94. International Conference on "Quantum Field Theory, Non-Commutative Geometry and Quantum Probability", March 26-29, 2001. I was a member of the Scientific Committee for this meeting.
95. Great Lakes K-theory Conference, Evanston, Illinois, USA, April 20-22, 2001
96. High-Dimensional Manifold Topology, Workshop Conference, Trieste, Italy, May 21 - June 8, 2001.
97. International Conference on "Topology and its Applications". Nordfjordeid, Norway, August 6-10, 2001. **Invited lecture:** Profinite and continuous higher K-theory of exact categories, schemes, orders and group rings.
98. International Workshop on "Mathematics for Development of Africa". Arusha, Tanzania, Nov. 19-21, 2001. **Invited paper read:** Mathematics and the development of Africa - The way forward.
99. Expert group meeting on Millennium Science Initiative (MSI) Institutes in Africa, Kampala, Uganda, Jan.
100. The Conference on Algebraic Topology, Northwestern University, Evanston, Illinois. USA. March 24-28, 2002.
101. Workshop on K-theory, Derived Categories and Strings, Geneva, Italy, June 18-21, 2002. (I was a member of the Scientific Committee).
102. Workshop on Stratifications of Moduli Spaces, Warsaw, Poland, May 14-19, 2002. **Invited lecture:** Profinite and continuous higher K-theory of exact categories, schemes, orders and group rings.
103. School and Conference on Algebraic K-theory and its Applications (in honour of H. Bass), in Trieste, Italy, July 8-16, 2002. **I gave six invited lectures** on "K-theory and Representation Theory".
104. Conference on Algebraic K-theory and its Applications, July 22-26, 2002. **I gave an invited lecture** on "Profinite and continuous higher K-theory of exact categories, schemes and orders".
105. International Conference on "Algebraic K-theory". Mathematisches Forschungsinstitut Oberwolfach, Germany, August 4-10, 2002.
106. International Congress of Mathematicians, Beijing, China. August 18-26, 2002.
107. Workshop on "Enriched Structures and Stable Homotopy", Cambridge, United Kingdom. September 8-19, 2002.

108. Conference on "K-theory and Arithmetics", Cambridge, United Kingdom. September 30 - October 4, 2002.
109. TWAS 8th General Conference and 13th General Meeting, New Delhi, India. October 19-24, 2002.
110. G-77 High Level Conference on Science and Technology, Dubai, UAE. October 25-26, 2002.
111. TWAS 9th General Conference and 14th General Meeting, Beijing, China, October 16-20, 2003
112. International Workshop on "Geometric Methods in Representation Theory", University Warwick, Coventry, United Kingdom, March 28-April 4, 2004. **Invited lecture:** "K-theory and Periodic Cyclic Homology of Some Quantum Algebras."
113. International Workshop on "Hopf Algebras", University of Wales at Swansea June 24-26, 2004. **Invited lecture:** A complete formulation of Baum-Connes Conjecture for the action of discrete quantum groups.
114. International Conference on "Algebraic K-Theory and its applications, Safi, Morocco, July 25-30, 2004. I co-organized this conference and also gave an invited lecture on "A complete formulation of Baum-Connes conjecture for the action of discrete quantum groups".
115. International Conference on "Topology, Analyses and Application to Physics" at Moscow State University, Russia, Feb. 13-20, 2005. **Invited paper read:** "A complete formulation of the Baum-Connes conjecture for the action of discrete quantum groups".
116. International Workshop on Algebraic K and L-theory of infinite groups, Edinburgh, UK, June 27-July 1, 2005. I gave an invited lecture titled: "Higher K-theory of virtually infinite cyclic groups".
117. International Workshop on "Representation Theory in Geometry and Physics", IMSP, Porto-Novo, Benin Republic, August 1-17, 2005. I was a co-organiser of the Workshop.
118. International conference on "Algebraic K-theory". Mathematisches Forschungsinstitut, Oberwolfach, Germany. July, 2006.
119. International Workshop on Non-Commutative Geometry and Cyclic Cohomology July 31 to August 4, 2006.
120. ICSU Regional Office for Africa consultative Forum. Sept 25-27, 2006. I chaired The session on "Contributions of African Scientists in the Diaspora"
121. African Union Congress of African Scientists and Policy Makers, Alexandria, Egypt, October 26-29, 2006. I gave an invited Key-note Address on "African Solutions to African challenges through Science and Technology"...
122. Blackwell-Tapia Conference, IMA, Minnesota, USA, Nov 3-4, 2006
123. International Workshop on "Representations, Cohomology and Support Spaces" Bielefeld, April 29-May 1, 2007.
124. ICTP (Trieste, Italy) School and Conference on "Algebraic K-theory and its Applications" May 14-June 1, 2007. I was a Director of the School/Conference and I also gave an invited lecture on "Farrell-Jones conjecture and Higher K-theory of twisted polynomials and power series rings".
124. 2009 Southern Algebra Conference, University of Southern Alabama, Mobile, Alabama, USA. March 20-22, 2009. I gave an invited lecture on "Representation theory and Higher Algebraic K-theory"
125. 17th Annual Phillip L. Young Research Symposium, Grambling State University, April 23, 2009. I gave a lecture on "K-theory as a way of classifying various

- mathematical structures”.
- 126 CIMPA-UNESCO-BURKINAFASO School on “Index Theory and Interactions with Physics. May 20-30, 2009. I gave a series of invited lectures on “K-theory and Index Theory”
 - 128 7th African Mathematical Union (AMU) Pan-African Congress of Mathematicians Yamousoukro, Cote D’Ivoire. I gave an invited plenary lecture on “The role of Mathematics in the Science and Technology Development and Innovation in Africa.
 - 129 International Conference on Regional and Interregional Conference on strengthening Basic sciences in Developing Countries. Addis-Ababa, Ethiopia. Sept 1-5, 2009 I gave an invited lecture on “Regional and International Co-operation to strengthen basic sciences in Africa”
 - 130 Southern Regional Algebra Conference, Auburn University at Montgomery, Alabama, USA. I gave an invited lecture on “Equivariant Higher algebraic K-theory For the action of Algebraic Groups “ March 26-28, 2010.
 131. Workshop on capacity Building for Mathematical Sciences lectures in Tertiary Institutions. National Mathematical Centre, Abuja, Nigeria, June 21-25, 2010. I gave an invited lecture on: “Trends in Contemporary Mathematics: Illustrations From K-theory”.
 132. International Congress of Mathematicians (ICM), Hyderabad, India August 20-28, 2010.
 133. 80th anniversary celebration (Mathematical Sciences) of the Institute of Advanced Study (IAS) Princeton held at IAS Princeton, NJ Sept 24-25, 2010.
 - 134 21st General Meeting of TWAS, Hyderabad, India, October 18-23, 2010. I chaired the session on “Lectures by Awardees of 2009 TWAS prizes in the Physical Sciences
 - 135 International Conference on “K-theory, C*-algebra and index theory”. Nov 1-6, 201 held at the University of Gottingen, Germany. I gave an invited lecture on “K-theory, Cyclic Homology, and Chern Characters of Some Quantum Groups”
 - 136 International conference on Algebraic K-theory and its applications. (In honour of My 70th birthday) Nanjing University, Nanjing, China March 17-21, 2011. I gave an invited lecture on “Farrell-Jones Conjecture and K-theory of twisted Laurent series rings over orders and semi-simple algebras over number fields and p-adic fields.”
 - 137 Capacity building workshop for University Mathematics lecturers , National Mathematical Center, Abuja, Nigeria, June 20-25, 2011. I gave an invited lecture on “Elementary classifications of various mathematical objects and structures”.
 - 138 International Conference on “Algebraic Representation Theory” University of Uppsala, Uppsala, Sweden August 31-September 4, 2011. Gave an invited lecture on “Equivariant Higher algebraic K-theory for the action of Algebraic Groups”
 - 139 Workshop on “Index Theory Via K-theory and C*Algebras with Applications to Physics” June 27-July 7, NMC, Abuja, Nigeria I gave a series of lectures on “ Introduction to Index theory via K-theory and C*-Algebras”.
 - 140 2012 Joint Mathematics Meetings (JMM) January 4-7, 2012, Boston, Massachusetts, USA. I gave the National Association of Mathematicians (NAM) Invited Claytor-Woodward lecture. Titled “Profinite (continuous) Equivariant Higher algebraic K-theory for the action of Algebraic groups.”

- 141 USA Southern Regional Algebra Conference (SRAC) , Clayton State University, Morrow, Atlanta, GA, USA .March 30 – April 1, 2012. I gave an invited lecture on “Farrell-Jones conjecture and higher K-theory of twisted Laurent series rings over orders and semi-simple algebras “
- 142 International Conference on Algebraic K-theory and Arithmetic in memory of Jurgen Hurrelbrink at Beldewo, Poland, July 22-28, 2012.. I gave an invited plenary lecture titled" Profinite Equivariant Higher Algebraic K-theory for the action of algebraic groups"
- 143 2013 Joint Mathematics Meetings (JMM) , San Diego, California, January 9 - 12, 2013 . During this meeting, I was inaugurated as a Foundation Fellow of the American Mathematical Society
- 144 8th African Mathematical Union (AMU) Pan-African Congress of Mathematicians Abuja, Nigeria. June 30 - July 7, 2013. I gave an invited plenary lecture titled: "K-theory and Representation theory: Illustrations with Algebraic Groups".
- 145 International Conference on Pure and applied Mathematics, University of Technology, Lae, Papua New Guinea. I gave two invited plenary lectures:
 (1) Public Lecture: “Mathematics as a time-tested resource for Scientific, Technological, Socio-Economic and Intellectual Development”
 (2) Mathematical Research Lecture: “K-theory and Representation Theory--- Illustrations with Algebraic Groups”
- 146 9th General Assembly of the African academy of Sciences (AAS), April 15-19, 2014, Brazaville, Congo. I delivered a key-note mathematical presentation titled: “K-theory, Representation Theory, and classifications of various mathematical structures and objects.
147. USA-Africa Summit on Science, Technology and Innovation organized by the USA National Academy of Sciences, Washington DC, August 5-8, 2014. I chaired a session on “Key opportunities for fostering STI Development in Africa”
- 148: Massachusetts Institute of Technology (MIT) STARR FORUM on “Africa Rebooted: STI in Development. September 24, MIT, Boston, MA, USA. I made an invited contribution on “ Possible MIT-Africa areas of STI collaboration for development”
- 149 The World Academy of Sciences (TWAS) 25th General meeting, Muscat, Oman, October 26-29, 2014. I chaired the session on “Presentations by Young TWAS Affiliates in Mathematics and Physics”.
- 150: ICPAM-2 Goroka International Conference on Pure and Applied Mathematics at the University of Goroka, Papua New Guinea, Dec 8-12, 2014. I delivered two invited lectures: 1) A plenary Mathematics lecture titled “Comology of $SL_n(A)$ of arbitrary orders A (e.g non commutative group rings) in Algebras over Number Fields” and 2) A PUBLIC LECTURE titled “Mathematical Sciences Research and Education in the Age of Globalization”
- 151 AAS/AMU three week Symposium on “Current Research Trends in the Mathematical Sciences and Applications (May 16-20,2016) and a pre-symposium School (May 3-16, 2016). I gave an invited colloquium lecture titled “Cohomology of SL_n of arbitrary orders(e.g non-commutative group rings) in algebras over number fields” as well gave a course of eight lectures at the School on the topic “Algebra and its ramifications in other areas of mathematics”

- 152 AAS General Assembly, June 20-22, 2016. I gave an address at the opening ceremony, inducted His Excellency the president of Botswana as Honorary AAS Fellow, and presided over the AAS GC and GA meetings
- 153 International Workshop for Capacity Development through South-South and triangular co-operation in Science, Technology and ICT. July 20-22, 2016, I discussed the situation in Africa and Nigeria in particular.
- 154 Workshop on Innovations in investments in young children globally, Abidjan, cote D'Ivoire. I chaired the session on Research Innovations from Regional Scholars.
- 155, Sixth Berlin Demography Forum, Feb 16-17, 2017. During the forum, I gave key-note address on "The Demographics of Africa: Health, Children, Ageing"

XIII. Research Interests and Contributions

- My research over the years have focussed on Commutative and Non-commutative Algebra /Arithmetic/Geometry through methods of K-theory, Cyclic homology, encompassing Algebra,*(in its broadest sense) , Number theory, Representation theory, Algebraic topology, operator algebras and some Algebraic Geometry and Differential Geometry. Such usually non-commutative structures; include e.g. (1) Orders in algebras over number fields and p-adic fields; (2) Group-rings and representations of finite, discrete, profinite, algebraic and compact Lie groups; (3) C*-algebras, and Lie groups C*-algebras; (4) Hopf algebras and Quantum groups. Note that cyclic homology and K-theory of the latter two structures belongs to non-commutative geometry.
- My initial work contributed to the understanding of the LF and NF functors with applications to the computation of Picard group of Algebraic Geometry, see [3]. Moreover, I also contributed to the understanding of Whitehead groups of group-rings of finite group over the ring of integers in algebraic number fields and p-adic fields as well as Whitehead groups of orders in algebras over such fields. I proved several finiteness results in this direction (see [4],[5]).
- Later, with the definition of Higher Algebraic K-theory by Quillen and others, it became important for various applications to understand the structure of Higher K-theory of orders and group-rings, (that is, to study K_n (all n) of the category of finitely generated projective modules over group-rings and orders; K_n of the category of G -representations in the category of finitely generated modules over such rings as the ring of integers in number field, their localisations and completions, where G is a finite, profinite or compact group). More precisely, let R be the ring of integers in a number field F , A any R -order in a semi-simple F -algebra Σ , \mathfrak{p} a prime ideal of R , I have proved many striking results on the Higher K-groups $K_n(A)$, $G_n(A)$, as well as on Higher dimensional class groups $C\ell_n(A)$. For example, I proved that for all $n \geq 1$, $K_n(A)$, $G_n(A)$ are finitely generated Abelian groups, and that $\text{rank } K_n(A) = \text{rank } G_n(A) = \text{rank } K_n(\Sigma)$ for all $n \geq 2$; that $SK_n(A)$, $SG_n(A)$, $SK_n(A_{\mathfrak{p}})$, $SG_n(\mathfrak{p})$ and $C\ell_n(A)$ are finite groups for all $n \geq 1$. See [10],[12],[14],[17],[21]. All the results above hold for $A=RG$, (G finite group) and I also proved that if G is a finite p -group, then $SK_n(RG)$, $C\ell_n(RG)$ are finite p -groups for all $n \geq 1$. I also proved a striking characterisation of p -adic semi-simple algebras Σ in terms of K-theory of maximal orders Γ in Σ , i.e. Σ is unramified over its centre if and only if $SK_{2n-1}(\Gamma)=0$ for all $n \geq 1$. (See [7]).

- In [12], I obtained several important results on the Higher K-theory of the category of representations of a finite group G in the category of $\underline{P}(\Gamma)$ where Γ is a maximal order in a central division algebras over number fields and p-adic fields. These results translate into computations of $G_n(\Gamma G)$ as well as lead to showing via topological and representation theoretic techniques that a non-commutative analogue of a fundamental result of R.G. Swan at the zero-dimensional level does not hold.
- Moreover, in collaboration with A. Dress, I was able to formulate an equivariant Higher Algebraic K-theory via the theory of Mackey functors and this equivariant theory has proved very useful in proving result on Higher K-theory of group-rings. More precisely, if G is any finite group, \mathcal{C} an exact category, and T a G -set, we constructed higher algebraic K-functors $K_n^G(-, \mathcal{C}, T), P_n^G(-, \mathcal{C}, T)$, as "Mackey functors" from the category of G -sets to the category of Abelian groups, (i.e. functors satisfying certain functorial properties, in particular, the categorical version of Mackey subgroup theorem in representation theory), in such a way as to identify $K_n^G(G/H, \mathcal{M}(R))$ with $K_n(\underline{\mathcal{M}}(\text{RH}) = G_n(\text{RH}); K_n^G(G/H, \mathcal{P}(R))$ with $K_n(\underline{P}_R(\text{RH}))=G_n(R, H)$, and $K_n^G(G/H, \mathcal{P}(R)G/e)$, with $K_n(\text{RH})$ for any subgroup H of G where for any ring R with identity, $\mathcal{P}(R)$ is the category of finitely generated projective R -modules and $\underline{\mathcal{M}}(R)$ is the category of finitely generated R -modules, (R Noetherian), and $\mathcal{P}(\text{RH})$ the category of RH -lattices, see [8],[9]. I have since generalised these constructions to the cases where G is a profinite group (see [11]) and G a compact Lie group (see [24]). These constructions have also been useful in studying cohomology of groups. My book on 'Axiomatic theory of induced Representation of Finite Groups', is an exposition of the theory of Mackey functors in the context of representation of finite groups (see [48]). Through the above techniques I was able to prove the striking result that if k is a field of characteristic p , G a finite or profinite group, then the inclusion functor $\underline{P}(kG) \rightarrow \underline{M}(kG)$ induces an isomorphism K-groups tensored with $\mathbb{Z}(1/p)$, i.e. $K_n(kG) \otimes \mathbb{Z}(\frac{1}{p}) \simeq G_n(kG) \otimes \mathbb{Z}(\frac{1}{p})$ (see [8],[11]). This result leads to some interesting computations e.g. that for a finite group G , $K_{2n}(kG)$ is a finite p -group (see [14]).
- Furthermore, I have studied and obtained several finiteness results on Higher K-theory of modules over 'EI' categories, i.e. categories in which every endomorphism is an isomorphism. The theory of modules over 'EI' categories is a generalisation of modules over group-rings and has topological applications in the study of transformation groups since certain topological invariants reside in the K-theory groups (see [20]).
- Let \mathcal{C} be an exact category, ℓ a rational prime. I have developed an extraordinary cohomology theory in form of a profinite Higher K-theory $K_n^{pr}(\mathcal{C}, \mathbb{Z}_\ell)$ yielding remarkable ℓ -completeness theorems for various exact categories \mathcal{C} and in particular for the profinite higher K and G-theories $K_n^{pr}(\mathcal{A}, \mathbb{Z}_\ell) = K_n^{pr}(\mathcal{P}(A), \mathbb{Z}_\ell)$, $G_n^{pr}(\mathcal{A}, \mathbb{Z}_\ell) = G_n^{pr}(\mathcal{M}(A), \mathbb{Z}_\ell)$ where A is any R -order in a semi simple F -algebra over number fields and p-adic fields.. This study was inspired by continuous cohomology theories rooted in algebraic topology and Arithmetic Algebraic Geometry. The results proved apply if $A = \text{RG}$, if R is the ring of integers in a number field or p-adic field F , I have also defined and studied continuous K-theory of p-adic orders A , and obtained several results on this

construction including the fact that $K_{2n}^c(\wedge)$ the even dimensional continuous higher K-groups are pro-p-groups(see [27]).

- In a joint work with G. Tang, I have obtained interesting results on higher K-theory of virtually infinite cyclic groups V for the two types of V . When V is the semi-direct product of G and T with respect to an automorphism α of G given by inner automorphism by elements of T , we prove among other results that if R is the ring of integers in a number field F , then for all non-negative integers n , $G_n(RV)$ is a finitely generated Abelian group and $NK_n(RV)$ is $|G|$ -torsion. For the second type where V is the amalgamated product of finite groups G_0 and G_1 with respect to a finite subgroup H where the index of H in G_0 and G_1 is 2, we prove that the Nil groups of V are $|H|$ -torsion (see [32]).
- In a joint work with G. Tang, I obtained explicit computation of the "bar" homology groups of a non-unital ring - a problem arising in higher K-theory and algebraic topology, see [30].
- I have in a joint work with M. Mahdavi-Hezavehi investigated and obtained interesting results on the algebraic structure of subgroups of the group of units of a non-commutative local ring (see [33]).
- I have also been working on Non-commutative geometry especially entire/periodic cyclic homology and K-theory of involutive Banach algebras, C^* -algebras, group C^* -algebras, Hopf algebras and quantum groups and studying connections (Chern characters) between K-theory and cyclic homology of these structures. More precisely, I have, in a joint work with D.N Diep and N.Q. Tho, constructed and studied non-commutative Chern characters from K-theory of compact Lie group C^* -algebras and compact quantum groups to their entire/periodic cyclic homology, and proved interesting results - that the Chern characters are isomorphisms modulo torsion in the case of compact Lie group C^* -algebras and compact quantum groups, (see [22],[25]).
- I have also, in a joint work with D.N. Diep, obtained some interesting results on non-commutative Chern characters of some non-compact quantum algebras see [31]. More precisely, we proved that the periodic cyclic homology groups of the quantised algebra of functions on coadjoint orbits of connected and simply connected Lie groups are isomorphic to the periodic cyclic homology of the quantised algebra of functions on coadjoint orbits of compact maximal subgroups, without localisation. We also compute the K-groups, periodic cyclic homology and Chern characters of such algebras for quantum half planes and quantum punctured complex plane.
- I have also been working on quantum group theoretic formulation of the Baum-Connes conjecture - a celebrated problem in non-commutative geometry. More precisely let A be a discrete quantum group acting on a C^* -algebra B and satisfying some regularity assumptions (resembling the proper G -compact action for a classical discrete group G on some space). I have, in a joint work with D. Goswami (see [34]) constructed an analytic assembly map from the A -equivariant K-homology groups to the K-theory groups.. In [36], we have provided a complete formulation of Baum-Connes conjecture for the action of discrete quantum groups as well as verified our formulation for general finite dimensional discrete quantum groups and proved surjectivity of our assembly map for the dual of $SU_q(2)$.
- In a joint work with X. Guo, I have defined and studied wild kernels for higher K-theory of division algebras D over number fields. We proved among other results that it is finite. We also obtained interesting connections between the wild kernels and the subgroup of divisible elements of \cdot of K-tgroups of the division algebras. (see [37])
- In a joint work with Guo and Qin (see [38], I have proved that if F is a number field and D a finite dimensional central division F -algebra with square free index, then $K_2 D$ is

generated by Steinberg symbols $\{a,b\}$ with a in F^* , b in D^* , whereas if F is a global field, then for any integer $n > 3$, there is an extension field E over F of degree n such that K_2E is not generated by the Steinberg symbols $\{a,b\}$, a in F^* , b in E^* .

- In a joint work with X. Guo, I proved that if A is a quaternion algebra and B an Eichler order in A , then the only p -torsion possible in even dimensional higher class groups of B are for those rational prime p which lie under prime ideals of O_F at which A is not maximal. A similar result is obtained for hereditary orders in semi-simple algebras. (See [40])
- In [42], I have constructed absolute and relative equivariant higher Algebraic K-Theory for Waldhausen categories as a generalization of the constructions in [8] for exact categories. Applications to Thomason's complicial Waldhausen categories are given as well as some finiteness results for some Waldhausen K-groups.
- In [43], I proved that if R is the ring of integers in a number field F and A is any R order in a semi-simple F algebra, then $K_{2n}A$, $G_{2n} A$ are finite groups and that when G is a finite p -group, $SK_{2n-1}(Z G)$, $SK_{2n-1}(Z_p G)$, are finite p -groups
- [41] is a comprehensive exposition of Higher algebraic K-theory including constructions, fundamental results, and connections to Galois, Etale, Motivic Cohomology theories, Representation theory as well as well as computations of K-theory of integers in global and local fields.
- .Let G be an algebraic group over a field F . In [45], I studied and computed equivariant higher K-groups as well as profinite equivariant higher K-groups for some G -schemes over number fields and p -adic fields. I also obtained among others, some finiteness and l -completeness results for twisted flag varieties etc.
- In [46], I proved that the rational Higher K-theory and G-theory for twisted power Series rings over arbitrary orders are isomorphic as well as isomorphic to rational K-theory of twisted power series rings over semi-simple algebras over number fields.. I also proved some finiteness results for negative K-theory of such rings as well as some l -completeness and other results for profinite K-theory of such rings.
- In [51], I constructed a cohomology theory in the category of generalized Bredon co-efficient systems in a purely categorical setting in order to generalize classical Bredon cohomology theory and show that this theory constructed in general categorical terms indeed yields Bredon cohomology for finite, discrete, and profinite groups. I also study Higher K-theory for the category of finitely generated (resp. finitely generated projective) objects in the category of generalized Bredon co-efficient systems and obtain some finiteness results.
- In [47], I study higher K-theory of p -adic orders, and twisted polynomial and power series rings over p -adic orders. For higher K-theory of p -adic orders, I obtain a partial solution to an open question, and in the three cases, obtain some p -torsion results. I also prove that higher K- and G-theories of twisted Laurent series rings over p -adic orders are rationally isomorphic.
- [48] is focussed on studying equivariant exact categories for the actions of finite and algebraic groups as well as computing their higher and profinite higher K-groups. For algebraic groups, several results are presented for twisted flag varieties and Severi-Brauer varieties.
- [49] is the essential contents of the series of lectures I gave titled "Introduction to K-

theory and Index Theory.”at the International “CIMPA/UNESCO/BURKINAFASO Workshop on ‘Index Theory and Interactions with Physics”. The lecture was aimed at introducing the participants to Index theory via K-theoretic methods.

- In [50], I discussed some trends in contemporary mathematics with illustrations from K-theory.
- I have published a book titled ‘Abstract Algebra’ xvii + 419 pages suitable for the use of honors undergraduates and beginning graduate students in mathematics (see [53]). Together with J Rawnsley and E. Thoma I also published a book “Representation and its Applications (see [54]). [55] is the Journal publication of Proceedings of an International K-theory Conference I organized at Ibadan, Nigeria in 1987. Moreover, I have published in the lecture notes series of the National Mathematical Centre, Abuja, Nigeria, my notes on 'Topics in Algebraic K-theory', and 'Commutative Algebra' - all arising from the invited lectures I gave at the Centre on the topics (see [56] [57],). Moreover, apart from [55], I have edited several other Proceedings of International K- theory meetings –Books and Journal publications-- see [53], [58], [59], [60], [62]. My most recent book "Representation Theory and Higher Algebraic K-theory" xxvii + 442 page published by Chapman and Hall in 2007 is suitable for an advanced graduate course or for use by Researchers in the field and related fields. See [61]. This is the first book on this topic and the Editors of the book describe me as a “Premier Authority in the field”

Finally, I have published quite a number of papers on topical issues in Mathematical Research and Education, as well as Topical issues in Science and Technology (see [62] to [82]).

XIV. Research In Progress

1) COHOMOLOGY OF SL_n OF ARBITRARY ORDERS (e.g non-commutative group-rings) IN SEMISIMPLE ALGEBRAS OVER NUMBER FIELDS.

Let R be the ring of integers in a number field F , A an R -order in a semi-simple F -algebra B . We can define a ‘reduced norm’ map $nr : GL_n(B) \rightarrow C^*$ where C^* is the group of units of the center C of B . We denote the kernel of nr by $SL_n(B)$ –a semisimple algebraic group. Then $SL_n(A) := (GL_n(A) \text{ intersected with } SL_n(B))$ is an arithmetic subgroup of $SL_n(B)$. The aim of this work is to compute the cohomology of $SL_n(A)$ as a non-commutative analogue of results of A. Borel.

Note that the considerations of orders in division algebras does not yield results on arbitrary orders in semisimple algebras and so does not yield results on group-rings. Note also that an arbitrary order in B does not split as product of orders in the simple components of B unless it is a maximal or hereditary order in which case it splits into a product of maximal or hereditary orders in the simple components of B .

Now, $SL_n(A)$ is a discrete subgroup of the Lie group G' of real points of $SL_n(B)$. If K be a compact subgroup of G' then we have the symmetric space $X = K/G'$ on which $SL_n(A)$ acts and we can compute the cohomology of the quotient space $X/SL_n(A)$. These computations eventually yield information on higher K -groups $K_n(A)$ (e.g rank of $K_n(A)$) and hence on $K_n(RH)$ where RH is the (non-commutative) group-ring of the non-Abelian finite group H .

2) BOREL REGULATORS FOR HIGHER K-THEORY OF ARBITRARY ORDERS (AND GROUP-RINGS) IN SEMI-SIMPLE ALGEBRAS OVER NUMBER FIELDS.

I have defined a Borel-type regulator map from Higher K -groups ($K_n(A)$) of an arbitrary order A in a semi-simple algebra B as a non-commutative analogue of the Borel regulator map for integers in number fields. I am in the process of studying this map and compute the map and its kernel. I am also trying to see possible connections with non-commutative zeta functions defined some time ago by Bushnell and Reiner.

3) FARREL-JONES CONJECTURE AND HIGHER K-THEORY OF VIRTUALLY INFINITE CYCLIC GROUPS.

Let R be the ring of integers in a number field F , V any discrete group. Then Farrell-Jones conjecture asserts (roughly speaking) that K -theory of the group-ring RV can be computed in terms of K -theory of RH for virtually infinite cyclic subgroups H of G . Note that a group is virtually cyclic if it is either finite or virtually infinite cyclic (i.e. contains a subgroup of finite index). Virtually infinite cyclic groups are of two types, namely i) the group V which admits an epimorphism (with finite kernel) to the infinite cyclic group and ii) the group V which admits an epimorphism (with finite kernel) to the infinite dihedral group. My joint paper with G. Tang "Higher Algebraic K -theory of virtually infinite cyclic groups" *MATHEMATISCHE ANNALEN* 325, 711-726 (2003) was the first to study higher K -theory for virtually infinite cyclic groups where we proved among other results, that $G_n(RV)$ are finitely generated Abelian groups for all $n \geq 0$, and the nil groups for the two types of groups are torsion.

Because the groups RV (for the first type of V) are special cases of twisted Laurent series rings over arbitrary orders in semi-simple F -algebras, I studied the more general situation resulting in my paper "Higher Algebraic K -theory for twisted Laurent series over orders and semi-simple algebras", *ALGEBRAS AND REPRESENTATION THEORY*, 11, 355-368 (2008) (which also covered pro-finite Higher K -theory) where I proved among other results that the K -theory and G -theory for twisted power series rings over arbitrary R -orders are rationally isomorphic as well as rationally isomorphic to K -theory of twisted power series rings over semi-simple F -algebras. I also obtained some l -completeness results for the profinite higher K -groups.

I have also studied the local situation resulting in my paper "Higher Algebraic K -theory of p -adic orders, twisted polynomial and Laurent series rings over p -adic orders" *COMMUNICATION*

IN ALGEBRA 39,3801-3812 (2011) where I obtained a partial answer to an open question on SK_n of p -adic integral group rings, proved that the nil-groups of twisted polynomial and Laurent series rings over p -adic orders are p -torsion as well as proved rational isomorphisms for K - and G -theories for twisted Laurent series rings over p -adic orders and K -theory of twisted Laurent series rings over p -adic semi-simple algebras. These results show that Farrell-Jones conjecture can be formulated also in the local situation.

It is my intention to obtain more results on Higher K -theory (as well as profinite(continuous) higher algebraic K -theory) of virtually infinite cyclic groups both in the local and global situation.

4) COHOMOLOGY FOR GENERALIZED BREDON CO-EFFICIENT SYSTEMS AND HIGHER K -THEORY.

I have constructed a category of generalized Bredon co-efficient systems as well as constructed a cohomology theory for such categories in such a way as to generalize Bredon cohomology involving finite, pro-finite and discrete groups. I have also been computing Higher K -groups of the category of finitely generated projective objects as well as finitely generated objects in such categories. My results with above title have recently been published in the JOURNAL OF K -THEORY: Applications to Algebra, Geometry and Topology Cambridge University press (first view, 2012 1-15). The explicit finiteness results in the paper on Higher K -theory was obtained in the context of based categories. I do intend to obtain explicit computations in the context of generalized based categories.

5) EQUIVARIANT HIGHER ALGEBRAIC K -THEORY FOR THE ACTION OF ALGEBRAIC GROUPS

I have been working on Equivariant Higher algebraic K -theory as well as profinite (continuous) equivariant Higher K -theory leading to some explicit computations of higher K -groups and Profinite (continuous) higher K -groups of twisted flag varieties over number fields and p -adic fields. These computations which include several finiteness and l -completeness results are in my papers "Profinite Higher algebraic K -theory of twisted flag varieties". AFRIKA MATEMATIKA (PUBLISHED BY SPRINGER), 22, 91-104.; "Profinite and continuous Higher K -theory of exact categories, orders and group-rings. K -THEORY JOURNAL, 22 367-392 (2001)

6) HIGHER DIMENSIONAL CLASS GROUPS OF ORDERS AND GROUP RINGS

The notion of higher dimensional class groups of orders and group-rings, defined via Higher Algebraic K-theory, coincides in zero dimension with the usual notion of class group of orders and group-rings which in turn is a generalization of the number theoretic class groups of Integers in number fields . In my joint papers with X. Guo, "Higher Class groups of generalized Eichler Orders" COMMUNICATIONS IN ALGEBRA, 33, 709-718, (2005); "Higher Class groups of locally triangular orders over number fields" ALGEBRA COLLOQUIUM, 16, 1,79-84, (2009) , we proved among other results that if F is a number field, and A is a generalized Eichler Order (, e.g an Eichler order in a quaternion F -algebra or a hereditary order in a semi-simple F -algebra), OR if A is a locally triangular order, then the only p -torsion possible in even dimensional higher class groups of A are for those rational primes p which lie below prime ideals of O_F at which A is not maximal.

Explicit determination of torsion in even dimensional higher class groups of arbitrary orders in semi-simple F -algebras (and hence group-rings) is still an open problem that I intend to tackle . The answer for odd dimensional higher class groups in this case is known through the work of Kolster and Laubenbacher (On higher class groups of orders; Math Z. 228 (2) 229-246.

7) FORMULATION OF BAUM-CONNES CONJECTURE FOR THE ACTION OF QUANTUM GROUPS

I have been working on and obtaining results on quantum group formulation of the Baum-Connes conjecture a celebrated problem in Non-commutative Geometry. More precisely, let A be a discrete quantum group acting on a C^* -algebra B satisfying some regularity assumptions, (analogous to the proper G -compact action for a classical discrete group G on some spaces). I have, in a joint work with D. Goswami constructed an analytic assembly map from the A -equivariant K -homology groups to the K -theory groups as well as provided a complete formulation of the Baum-Connes conjecture for the action of discrete groups. We also verified our formulation for general finite dimensional discrete quantum groups and the dual of $SU_q(2)$. (See "A complete formulation of Baum-connes conjecture for the action of discrete quantum groups" *K-theory Journal* , 30, 341-363. (2003).

I do intend to test the conjecture for more examples of discrete quantum groups as well as formulate a variant of the conjecture for locally compact quantum groups.

4

8) CONSTRUCTION OF NON-COMMUTATIVE ETALE COHOMOLOGY

I am currently working on a construction of a non-commutative etale cohomology which will be an extension of Soule's construction in the context of number fields to division and semi-simple algebras over number fields and orders in such algebras.

9) NON-COMMUTATIVE CHERN
CHARACTERS OF LIE GROUP C*-
ALGEBRAS AND QUANTUM GROUPS.

Also in Non-Commutative Geometry, I have been working on the construction and study of non-commutative Chern characters from K-theory of Lie Group C*-algebras and quantum groups to their entire/periodic cyclic homology groups. In joint works with D. N. Diep and N. Q. Tho, --- "Non-Commutative Chern characters of compact Lie group C*-algebras" K-theory Journal 17, (2) 195-208, 1999 and " Non-commutative Chern characters of compact quantum groups" Journal of Algebra, 226, 311-331. 2000. I am currently working on such connections between K-theory of locally compact and other non-compact quantum groups. Jointly with D. N. Diep, I already have a preprint "K-theory and Periodic Cyclic Homology of some non-compact quantum algebras"

10) EXTENSION TO WALDHAUSEN
CATEGORIES OF MY RESULTS ON
PROFINITE HIGHER K-THEORY OF EXACT
CATEGORIES.

I am currently working on extending my recent results on Pro-finite Higher Algebraic K-theory of exact categories to Waldhausen categories.

XV. Supervision, and Mentoring of Postgraduate Students, Post Docs and other Mathematicians

A) At the University of Ibadan, Ibadan, Nigeria.

a) M.Sc Dissertations supervised.

- 1) 1975 Augustin Chukwunyere ANYAWU SK_1 of finite group-rings and orders
- 2) 1976: Kehinde Omobola ONABULE: **K-theory of Polynomial Extensions**
- 3) 1978: Kayode Samuel OSHIN. **Higher Algebraic K-theory of Fields**
- 4) 1979: Chisaraoku Otuoma ABOSI: **Some connections between K_2 and Brauer group of fields.**
- 5) 1980: Offiong Bassey OFFIONG: **Homotopy Algebraic K-theory**
- 6) 1981: Modupe Olufunlayo OLUTOGUN: **Some computational aspects of Higher Algebraic K-theory**
- 7) 1983: Bashir Mohamed GHANDI: **The plus construction and group epimorphism**
- 8) 1985: Kenneth NWABUEZE: **On the class groups and Picard groups of group-rings and orders**
- 9) 1986: Michael Adedapomola ALAWODE: **Cyclic Homology and Algebraic K-theory**

b) Ph.D thesis supervised

Ph.D Ibadan (1997) Michael Adedapomola Alawode; The unit groups of Burnside rings of various finite groups

B) At the International Centre for Theoretical Physics (ICTP) Trieste Italy

a) ICTP Diplomas supervised: (Note: ICTP Diplomas are equivalent to M.Sc and

M.Phil degrees. ICTP is a post-doctoral Research Institution and so does not award degrees like Universities. The diploma programme is a special crash programme to prepare talented students (most of whom have M.Sc already) from developing countries for a Ph.D programme at the World's best Univerities.

- 1) **1997: Guy DEGLA Algebraic K-theory and Cyclic Homology.**
- 2) **1997: David Mumo Malonza : Structure of Mackey functors with some applications**
- 3) **1999: Basant Kumar Karna: Representation Rings of finite groups**
- 4) **2000 Charles Poo Grothendieck groups of vector bundles over classifying spaces of compact Lie groups.**
- 5) **2000 Garesh Bhandari ; Witt rings of Galois groups**
- 6) **2001: Sharam Biglari: Presheaves with transfers and motivic cohomology.**
- 7) **2003: Jorge Plazas On the Baum Connes conjecture.**

b) Some of the Post-Docs and other young mathematicians I supervised and mentored at ICTP are the following. See pages 42-43 of this CV for more.

- 1) S. Tang (China) Algebraic Topology 1995
- 2) C.Kelisa (Rwanda) Harmonic Analysis 1995
- 3) Y. Mamu (Ethiopia) Number theory 1996
- 4) M. Berham (Morocco) Functional Analysis 1996(China)
- 5) M. Alawode, (Nigeria) Burnside rings and K-theory
- 6) J. Ye(China) Algebraic Groups 1996
- 7) D.N. Diep, Non-commutative Geometry (1997, 1998, 2000)
- 8) A. Babour (Egypt) Algebraic Topology 1997
- 9) H. Qin (China) K-theory and Number Theory 1997-98
- 10) H. Y.Ahmed (Jordan) Algebra 1997
- 11) K. Ayegmon (Benin Republic) Commutative algebra 1998
- 12) J. Juyamaya (Chile) Algebra 1998
- 13) S. Iayasere (India) Algebraic Number theory 1997-98
- 14) P. Phung (Vietnam) Algebra, Quantum Groups 1997-98; 1999
- 15) N. Bitjong(Cameroon) Algebraic Topology 1998
- 16) E. Desquith, (CoteD'voire). Algebra, Functional Analysis 1998
- 17) D.Ban (Croatia) Complex Manifolds 1998
- 18) A. Wade (Senegal) Differential Geometry/Topology 1999
- 19) P. Hajac: (Poland) Non-Commutative Geometry 1999/2000
- 20) G. Tang (China) K-theory 2000-2001
- 21) D. Goswami (India) K-theory and Non-Commutative Geometry 2001/2002
- 22) A.Tsemo (Cameroon) Geometry, Afine Manifolds 2001-2002
- 23) X.Guo (China) K-theory and Number Theory. 2002-2003.

c) While at ICTP, I co-supervised with D. N. Diep the Ph.D thesis of N.Q. Tho on " Chern characters of compact Lie groups of C*-algebras and quantum groups" for a 1998 Ph.D of the Institute of Mathematics at Hanoi in Vietnam.

C) I have mentored and supervised informally many postgraduate Students, Post Docs and young mathematicians at the National Mathematical Centre, Abuja, Nigeria, University of Iowa, USA, IMSP—Institut de Mathematiques et de Sciences Physiques, Porto Novo, Benin Republic, Ohio State University and Miami University Oxford, OHIO.

XVI. Publications

A) Thesis/Dissertation

1. A.O. Kuku: (1968) A survey of Algebraic K-theory, **M.Sc. Ibadan, 1968 (written under Professor Joshua Leslie then at University of Ibadan)**
2. A.O. Kuku: (1971) On the Whitehead group of p-adic integral group-rings of finite p-groups. **Ph.D. Ibadan, 1971 (Thesis written at Columbia University, New York, USA, under Professor Hyman Bass)**

B) RESEARCH ARTICLES

3. A.O. Kuku (1973): Some Algebraic K-theoretic applications of the LF and NF functors. **Proceedings of the American Mathematical Society, 37 (2) 363-365.**
4. A.O. Kuku (1973): Whitehead group of orders in p-adic Semi-simple algebras. **Journal of Algebra 25 (3) 415-418**
5. A.O. Kuku (1976): Some finiteness theorems in the K-theory of orders in p-adic algebras. **Journal of London Mathematical Society, (13) 122-128.**
6. A.O. Kuku (1977): SK_n of orders and G_n of finite signs, Algebraic K-theory – **Lecture notes in Mathematics, 551. Springer-Verlag, Berlin Heidelberg-New York. 60-68.**
7. A.O. Kuku (1979): SG_n of orders and group-rings. **Mathematisches Zeitschrifts, 291-295.**
8. A. Dress and A.O. Kuku (1981): The Cartan map for equivariant higher algebraic K-groups. **Communications in Algebra, 9(1) 727-746.**
9. A.O. Kuku and A. Dress (1982): A convenient setting for equivariant higher algebraic K-theory. **Lecture Notes in Mathematics. 966, Springer-Verlag; Berlin, Heidelberg, New York, 59-68.**
10. A.O. Kuku (1982): Higher algebraic K-theory of group-rings and orders in algebras over number fields. **Communications in Algebra. 10(8) 905-916.**
11. A.O. Kuku (1984): Equivariant K-theory and the cohomology of profinite groups. **Lecture Notes in Mathematics 1046, Springer Verlag, Berlin 235-244**

- 12 A.O. Kuku (1984): K-theory of group-rings of finite groups over maximal orders in division algebras. **Journal of Algebra**, **91(1)** 19-31.
- 13 A.O. Kuku (1984): Some applications of Algebraic K-theory to representation theory, number theory, homological algebra, topology, and analysis. **Abacus**, **17(1)**, 1-18.
- 14 A.O. Kuku (1986): K_n, SK_n of integral group-rings and orders. **Contemporary Mathematics**, **55**, 333-338.
- 15 A.O. Kuku (1986): Induction Theory for finite group representations via Mackey functors. **Proceedings of Abidjan Symposium on Methods Group Theory**, 1986.
- 16 A.O. Kuku (1987): Some recent development in Algebraic K-theory, **Proceedings of the SAMSA Conference, Lesotho, 1987**, 52-63.
- 17 A.O. Kuku (1987): Some finiteness results in the higher algebraic K-theory of orders and group-rings, **Topology and its Applications** **25**, 185-191.
- 18 A.O. Kuku (1993): Some recent developments in the K-theory of group-rings and orders in algebras. **Afrika Matematika** , (3) **2**, 1993, 67-77
- 19 A.O. Kuku (1995): Algebraic K-theory and some other areas of Mathematics **Proceedings of the Third Pan-African Congress of Mathematics** , pp. 1-20, 1995.
- 20 A.O. Kuku (1996): Higher K-theory of modules over 'EI' Categories. **Afrika Matematika** (3) **6**, 1996, pp 15-28.
- 21 A.O. Kuku (1999): Ranks of K_n and G_n of orders and group-rings of finite groups over integers in number fields **Journal of pure and Applied Algebra** **138** (1999), 39-44.
- 22 D.N. Diep, A.O. Kuku and N.Q. Tho (1999): Non-Commutative Chern characters of compact Lie group C^* -algebra. **K-Theory Journal** (1999) **17(2)** 195-208.
- 23 D.N. Diep, P.H. Hai and A.O. Kuku (1999): Compact quantum group C^* -algebra as Hopf Algebras with approximate units (**Preprint**).
- 24 A.O. Kuku (2000): Equivariant Higher K-theory for compact Lie group actions. **Beitrage Zur Algebra und Geometrie (Contributions to Algebra and Geometry** (41) (2000) No 1, 141-150.
- 25 D.N. Diep, A O. Kuku and N.Q. Tho (2000): Non-Commutative Chern Characters of compact quantum groups. **Journal of Algebra** **226**, 311-331 (2000).

- 26 A.O Kuku (2000): Higher Dimensional class groups of groupings and orders in algebras over number fields (**Preprint**).
- 27 A.O. Kuku (2001): Profinite and continuous higher K-theory of exact categories, orders and group – rings. **K-Theory Journal** **22**, 367-392 (2001)
- 28 A.O. Kuku (2003): Classical Algebraic K-theory (i.e. the functors K_0, K_1, K_2) **Handbook of ALGEBRA**, vol. 3, 157-196: Elsevier (2003).
- 29 A.O. Kuku (2001): Continuous cohomology and Higher K-theory of exact categories. In "Applicable Mathematics - its Perspectives and Challenges". (J.C. Misra (ed)) pp. 42-53. Narosa Publishing House, New Delhi, India.
- 30 A.O.Kuku and W. Tang (2003): An explicit computation of the "Bar" homology groups of a non-unital ring. **Beitrag zur algebra und Geometrie Vol 4, no 2** 375-382 (2003)
31. D.N. Diep and A.O. Kuku (2001): Non-commutative Chern-Connes characters for Some non-compact quantum algebras (Preprint)
- 32 A.O. Kuku and G. Tang (2003): Higher K-theory of group rings of virtually infinite cyclic groups. **Mathematisches Annalen**, 325, 711-726 (2003).
- 33 A. O. Kuku and M. Mahdavi-Hezavehi (2004): Subgroups of $GL_1(R)$ for local rings R **Communications in Algebra**", vol 32, no. 5, 1895-1902 (2004).
- 34 D. Goswami and A.O. Kuku (2002): Towards the Baum-Connes Analytical Assembly Map for the action of discrete quantum groups (preprint)
- 35 A.O. Kuku (2003): K-theory and representation theory. "Contemporary Developments in Algebraic K-theory" **Proceedings of the ICTP (2002) K-theory School dedicated to H. Bass on his 70th birthday, ICTP Lecture Notes Series 15**, 259-356 (2003)
- 36 D. Goswami and A.O. Kuku (2003): A complete formulation of Baum-Connes conjecture for the action of discrete quantum groups. '**K-theory**' **Journal** **30**, 344-363 (2003)
- 37 X. Guo and A.O. Kuku (2006): Wild kernels for higher K-theory of division and semi-simple algebras. "**Beitrag zur Algebra and Geometrie**" / "**Contributions to Algebra and Geometry**". 47, (1) 1 - 14
- 38 X. Guo, A.O. Kuku and H. Qin (2003): On K_2 of Division Algebras. **Communications in Algebra**, 33 (2005) No. 4, 1073-1081
39. D.N. Diep and A.O. Kuku (2003): K-theory and periodic cyclic homology of some non-Compact quantum algebras (Preprint)

- 40 X. Guo and A.O. Kuku (2005): Higher class groups of generalized Eichler orders. **Communications in Algebra**, 33, (2005) No 3, 709-718
41. A.O. Kuku (2006): Higher Algebraic K-theory **Handbook of Algebra. Vol. 4. pp 3-74 Elsevier (2006)**
- 42 A.O. Kuku (2006): Equivariant Higher algebraic K-Theory for Waldhausen Categories. **“Beitrage zur Algebra und Geometrie”** Vol 47, No.2., 583-601 (2006) .
- 43 A. O. Kuku (2005): Finiteness of Higher K-groups of orders and groupings. **“K-theory” Journal.. 36, 51 -58 (2005)**
- 44 X. Guo and A.O. Kuku (2009): Higher class groups of locally triangular orders over number fields. **Algebra Colloquim 16, 1, 79-84 (2009).**
- 45 A. O. Kuku (2011) Profinite Higher Algebraic K-theory of twisted flag varieties **Afrika Matematika (Published by Springer.)22.(1) 91-104. 2011.**
- 46 A. O. Kuku (2008) Higher Algebraic K-theory for twisted Laurent series rings over orders and semi-simple algebras. **Algebras and Representation theory (2008) 11: 355-368**
- 47 A. O. Kuku (2011) Higher Algebraic K-theory of p-adic orders and twisted Polynomial and Laurent series rings over p-adic orders. **Communications in Algebra, 39, 10: 3801-3812.(2011)**
- 48 A. O. Kuku (2010) Higher Algebraic K-theory of G-representations for the actions of finite and algebraic groups. **In Group Theory—Classes, Representations and Connections and Applications. Nova Science Publishers pp 41-82.(2010)**
- 49 A. O. Kuku (2010) Introduction to K-theory and Index theory: **Lectures given at the Intenational CIMPA/UNESCO/BURKINA-FASO workshop on “Index theory and Interractions with Physics” .at the University of Ouagadugou, Burkina Faso, May 2009. On line publication of CIMPA—Centre International de Mathematiques Pures et Appliquees.(2010)**
- 50 A. O. Kuku (2010) Trends in Contemporary Mathematics: Illustrations from K-theory. **In Proceedings of the Workshop on “Capacity building .For Mathematical Sciences Lecturers in Tertiary Institutions. National Mathematical Centre, Abuja, Nigeria .pp 179-199.**
- 51 A. O. Kuku (2013) Cohomology for Generalized Bredon Coefficient Systems and Higher K-theory **.Journal of K-Theory: Applications to**

Algebra, Geometry and Topology (Published by Cambridge University Press) Vol 12, No 1, (2013) pp 99 – 113.

52 A. O. Kuku (2014) K-theory and Representation Theory: Illustrations with Algebraic Groups. **South Pacific Journal of Mathematics, Volume 1, No 2, pages 30-48,**

(C) **Books and Monographs**

53 A.O. Kuku (1980): Abstract Algebra, **Ibadan University Press (Reprinted 1992, 2010) xvii + 419 pages**

54 A.O Kuku , E. Thoma, J. H. Rawnsley: (1985) Group Representations and its Applications. **Les Cours du CIMPA, Nice, France (1985)**

55 A.O Kuku and C.A. Weibel (ed) (1989): **Proceedings of the Symposium on Algebraic K-theory, Ibadan, 1989. K-Theory Journal**

56 A.O. Kuku (1997): Basic commutative Algebra, **Lecture Notes Series, National Mathematical Centre, Abuja, Nigeria.**

57 A.O. Kuku (1997): Topics in Algebraic K-theory. **Lecture Note Series, National Mathematical Centre , Abuja Nigeria.**

58 H. Bass, A.O. Kuku and C. Pedrini (ed) (1999): Algebraic K-Theory and its Applications. **Proceedings of the Workshop and Symposium, Trieste, Italy. World Scientific, 1999. xii + 607 pages.**

59 M. Karoubi, A.O. Kuku and C. Pedrini (ed) (2003): "Contemporary Developments in Algebraic K-theory" (**Proceedings of the ICTP (2002) K-theory School Dedicated to H. Bass on his 70th birthday**). **ICTP Lecture Notes Series (15) viii + 536 pages.**

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(D) **Articles On Topical Issues In Mathematical Research And Education, Science And Technology**

- 63 A.O. Kuku (1988): Mathematics as a service subject –The African Experience. Selected papers on the teaching of mathematics as a service subject; R.R.Clemens et al (ed) **Springer-Verlag, New York. 53-67.**
- 64 A.O. Kuku (1988): Mobilisation and production of basic scientists for the development of Africa. **Proceedings of the First Congress of African Scientists, Brazzaville, Congo 223-234.**
- 65 A.O. Kuku (1988): Toward a more comprehensive Franco-African co-operation in mathematics, **Proceedings of Mathematiques a vneir' Societe Mathematique du France. Paris.**
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- 73 A.O. Kuku (1994): African mathematical Union (AMU) and the challenges of developing mathematical sciences in Africa. **London Mathematical Society Newsletter 1994, pp. 1-3**
- 74 A.O. Kuku (1995): Mathematical Education in Africa in relation to other continents. **(Proceedings of the International Commission on Mathematics Instruction) Conference, Monash University, Melbourne, Australia, 1995, pp. 403-424.**

- 75 A.O. Kuku (1996): Mathematics in AFRICA - an Appraisal. **TWAS Newsletter**.
76. A.O. Kuku (1997): Science and Technology Literacy (SLT) and Numeracy: Meanings and Rationales, **UNESCO book on 'Innovations in Science and Technology Education. W. Jenkins (Ed.) pp.141-164**
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- 81 A. O. Kuku (2006) African Solutions to African Problems through Science and Technology. **Invited Key-note Address at the congress of African Scientists and Policy Makers, Alexandria, Egypt. Oct 26-29, 2006.**
- 82 A. O. Kuku (2010) The role of Mathematics in the Scientific, Technological Development and Innovation in Africa. **In“Science, Technology and Innovation for socio-economic development. ICSU-ROA. International council for Science --- Regional Office for Africa. pp 87 – 98 (2010)**
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- 84 A. O. Kuku (2011). Elementary Classifications of Various Mathematical Objects and Structures. **Proceedings of the Capacity Building Workshop for Lecturers in Mathematical Sciences in Tertiary Institutions. National Mathematical Centre, Abuja, Nigeria. 158-169.**
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XVII Biographical Listings

1. Who's who in the World
2. Dictionary of international biography
3. International Who's who of Intellectuals
4. Men of Achievement
5. Men and Women of Distinction
6. Who's who in Africa
7. Who's who in Nigeria.

XVII Hobbies And Extra-Curricular Activities

Ballroom Dancing, Chess, Table Tennis, Lionism-President Bodija Lions Club, Ibadan, Nigeria
(1991-92 Lionistic year)

Melvin Jones Fellow, International Association of Lions Clubs, 1991-

XVIII. Bilingual and Multicultural Experience

I speak and write English very fluently. I also speak and write Yoruba, my mother tongue fluently.

I read and understand French literature , including scientific literature . Moreover, I do speak some smattering of French and do have some understanding when spoken to in French.

Having lived in Italy for nine years, I also read and understand Italian scientific literature and speak some smattering of Italian.

I speak and understand some smattering of Kiswahili having lived in Uganda for three years.

Just as in the AAS, during my nine years of Presidency of African Mathematical Union, (AMU) (1986-95) I presided over AMU Executive Council consisting of President, five Vice-presidents , and Regional Representatives from all sub-regions of Africa, (including Secretary General and Treasurer) from various linguistic and cultural backgrounds and at the end of my nine years of meritorious services to AMU, I was made Honorary President (for life) by the General Assembly. During the nine years, I organised mathematical and other activities in each of the five sub-regions of Africa. I have since transferred some of my experience gained in the AMU to AAS

Appendix

***Summary of My Activities at ICTP (International Centre for theoretical Physics)
Trieste, Italy during my Appointment 1995-2003***

by

Professor Aderemi Oluyomi Kuku

- 1) From May to September 1995, as President of the African Mathematical Union, I organised from ICTP the Fourth Pan-African Congress of Mathematicians which took place at the AI-Ahakhawayn University, Ifrane, Maroc, September, 18-26, 1995. Apart from my numerous other contributions to the success of the Congress, I gave a plenary mathematics lecture on: "Higher class groups of orders and group-rings". It is note-worthy that the General Assembly of the African Mathematical Union (AMU) unanimously decided to make me Honorary President of the AMU (for life) in appreciation of my nine years of meritorious service to the Union.
- 2) I have been in charge of weekly mathematics seminars at ICTP since July 1995, and I have been making mathematical contributions in several areas of mathematics during discussions at the seminars.
- 3) I initiated in March 1997, a series of specialised Algebra/Topology /K-theory seminars meant to explore deep connections between K-theory and other areas of mathematics – notable Algebra. Topology and geometry (Algebraic/Differential geometry/Non- Commutative geometry) as well as applications of K-theory to Mathematical Physics, Dynamical Systems, Econometrics and Control Theory.
- 4) I have been assessing and approving manuscripts of visiting mathematicians and Post-Docs for ICTP preprints/internal reports – since July, 1995
- 5) I completed the supervision of my Ph.D student, Michael Alawode, who visited ICTP January to July, 1996.
- 6) Invited Colloquium and seminar lectures given (see pages 5-6 of this CV)

I have generally assisted the Head of Mathematics in diverse ways: e.g. I assisted him in the preparation of the proposal document for the 1997 Schools on Nonlinear Functional Analysis, Elliptic Curves, and Algebraic K-theory submitted to EEC. I have participated in the selection of Post-Docs, Visiting Mathematicians and Associates since 1995.

I was a local organiser for the 1996 school on 'Computer Simulation of Partial Differential Equations', September 9-27, 1997.

I was a Director as well as the Local organiser for the 1997 School on "Algebraic K-theory and its applications" and I was in charge of all correspondence connected with the school. I worked in co-operation with the two other Directors towards the publication of the Proceedings of the Workshop at the School. The two other Directors of the School are Professors H. Bass, (Columbia University, NY, USA) and C. Pedrini, (University of Genova, Italy). The Proceedings was published by "World Scientific" (in 1999).

I was invited to be the 1997 Distinguished Visitor of the South African Mathematics Society – an honour awarded to only one mathematician in any year funds are available for such award. In this capacity, I gave invited colloquium/seminar lectures at eleven South African Universities. (See pages 5-6 of this CV)

In June 1997, there was a joint American Mathematical Society, South African Mathematics Society, and the London Mathematical Society conference in Pretoria, South Africa. I was invited together with Eric Friedlander of North –Western University, Evanston, Illinois, USA to organise a special session on Algebraic K-theory at the Pretoria meeting. I also gave an invited lecture at the meeting. (See pages 5-6 of this CV)

I was Director as well as local organizer for the 2002 School/Conference on Algebraic K-theory and its

Applications dedicated in honour of H. Bass on his 70th birthday. There was a special issue of K-theory Journal (in four volumes) for the Proceedings of the conference as well as a book titled “Contemporary Developments in Algebraic K-theory” for the Proceedings of the School. The other two co-editors of the two publications are M. Karoubi (Paris 7) and C. Pedrini (Genova).

(See section publication of books monographs etc)

International Conferences attended (with Papers read) See XII, pages 11-19)

7)Publication/Preprints since Joining ICTP (See XVI)

8). Mathematical Interactions with Visiting Mathematician at ICTP (supplementary to the list of Post-Docs and Young Mathematicians on pages 28/29 of XV)

- 1.M. Mahdavi, (Iran), Algebra, June-September, 1995
- 2.U. M. Markafi, (Nigeria), Group Theory, may-October. 1995
- 3.M/ Cipu, (Romania), Commutative Algebra, July-September, 1995
- 4.A. Suslin (Russia/USA) K-theory, July 1995
- 5.C. Pedrini, (Italy) K-theory, October, 1995
- 6.F. Torres, (Brazil/Peru) July 1995 to February 1996
- 7.R. Laubenbacher, (USA), K-theory, May, 1996
- 8.B. O Balogun , (Nigeria), Algebra, May-Sept. 1996
- 9.M. Khalkkali, (Canada, Iran), Cyclic Homology, May-August, 1996
- 10.M. Berhani, (Morocco), Functional Analysis, August-September 1996
- 11.V. Furtomy, (Ukraine) Lie Algebra, July, 1996
- 12.A. Bandhari, (India), Algebra, August, 1996
- 13.D. N. Diep, (Vietnam), K-theory/C-algebra, August/Sept. 1996, 1997, 1998, 2001
- 14.I. Gelfand, (USA), Miscellaneous, August, 1996
- 15.H. Hamaraous, (Morocco), K-theory, October, 1996
- 16.A. Bak, (Germany), K-theory, October, 1996
- 17.F. Kuene, (Netherlands), K-theory, October 1996
- 18.S. Kabaj. (Morocco), Commutative Algebra, August/September 1996
- 19.J. Browkin, (Poland), K-theory/Number theory, March, 1996
- 20.S. Yassemi, (Iran), Commutative Algebra, June-Sept., 1997
- 21.P. A. Tirao, (Argentina), Lie Groups/Algebras, September 1997 to Dec 1998
- 22.S. Jayasree (India). Algebraic Number theory, July-September 1997
- 23.Q. I. Nguyen, (Vietnam), Algebraic Groups, June –

- September, 1997; April-July 2000
- 24.V. Gnedbaye (Chad) Homological Algebra, January 1998 to Feb. 1999
 - 25.R. Dehy (Iran) Lie Algebras, January 1998 to Dec. 1998
 - 26.A. Dzhumadidaer (Kazakhstan). Lie algebras, July/August 1998
 - 27.A. A Darlov (Russia) Representation Theory, July/August 1998
 - 28.A. Karabegov. (Russia) Quantization, August/September 1998
 - 29.G. S. Li (China) Topology, October 1998 to January 1999.
 - 30.S. Asin-Lares (Mexico) Symplectic Geometry. January 1999 to July 1999
 - 31.M. Chen (China) Algebraic Geometry. January-November, 1999
 - 32.J. L Cianerce – Molina (Mexico) Geometry/Topology. Feb-July, 1999
 - 33.M. Elhamdadi (Morocco) Topology/K-theory. February – August, 1999
 - 34.T. Farrell (USA), Topology/K – theory, October November, 1999.
 - 35.R. Joshua (USA) K-theory / Alg Geometry, April-May, 1999
 - 36.M. K. L. Thakur (India Non-Associative Algebraic Structures, June to December 2000
 - 37.H. Rui (China), Representation Theory/Hecke Algebras. April-Sept. 2000
 - 38.C. Eyraab (France), Topology/Geometry, May 2001 to August 2002
 - 39.N. Ourimi (Tunisia), Complex Geometry, June 2001 to Feb. 2002

9) **ICTP Diploma Courses – Teaching and Dissertation Supervision (See XV pages 28/29)**

Professor Aderemi Oluyomi Kuku

