PROGRAMME OF EVENTS OF THE AFRICAN ACADEMY OF SCIENCE (AAS)/AFRICAN MATHEMATICAL UNION (AMU) INTERNATIONAL SYMPOSIUM: (17 – 20 MAY 2016)

Monday, 16th May, 2016   Arrival of Participants

Day 1   Tuesday, 17th May, 2016   Opening Ceremony & Commencement of the Symposium

VENUE: Auditorium, Economic Community of West African States (ECOWAS) Commission, Asokoro, Abuja, Nigeria

OPENING SESSION	
8.00 -9.50	Registration of Participants @ ECOWAS Commission, Asokoro, Abuja
9.50 -10.00	Arrival of Dignitaries
10.00-10.05	National Anthem
10.05-10.10	Opening Prayers
10.10-10.20	Welcome Message by Director & CEO, NMC Abuja, Also, President, African Mathematical Union (AMU) & UNESCO Chair on Mathematics, **Prof. Adewale Roland T. Solarin.**
10.20-10.30	Welcome Address from the Chair, International Scientific Committee; President, African Academy of Science (AAS), **Distinguished Professor Aderemi Kuku**
10.30-10.50	Goodwill Messages from Partners and Sponsors
10.50-11.00	Message by the Executive Secretary, National Universities Commission**, Prof Julius A. Okojie**
11.00-11.10	Address by the Minister of Communication Technology, **Barr. Adebayo Shittu**
11.10-11.20	Address by the Minister of Science and Technology, **Dr. Ogbonnaya Onu**
11.20-11.30	Address by the President, ECOWAS Commission **His Excellency, Marcel Alain De Souza**
11.30-11.50	Address by the Minister of Education, **Alhaji Adamu Adamu**
11.50-11.55	Vote of Thanks: The Registrar, **Mallam A. M. Biu.**
11.55-12.00	Closing prayer & National Anthem

12.00-12.05	Group photo
12.05–12.15	FIRST BREAK

TECHNICAL SESSION

12.15-13.15	**Plenary Lecture 1: Aderemi Kuku (Nigeria): Cohomology of SL_n of arbitrary orders (e.g non-commutative group rings) in semi-simple algebras over number fields.**
13.15-14.15	**Plenary Lecture 2: Marteo Marsili (Italy): the Statistical mechanics of the general Equilibrium of Economies.**
1415-15.15	**SECOND BREAK**
15.15-16.15	**Plenary Lecture 3: Marie-Francoise Roy (France) Complexity of computing the topology of areal algebraic curve.**
16.15-17.15	**Plenary Lecture 4: Adewale Solarin (Nigeria): n-nion Algebras**
17.15-17.30	**THIRD BREAK**
17.30-18.30	**Plenary Lecture 5: Jean Lubuma(South Africa): Differential Equations models in Biosciences and Reliable Numerics.**
	End of the Programme for the Day
18.45	**SYMPOSIUM COCKTAIL**

Day 2: Wednesday, 18th May, 2016
Venue: Obasanjo Space Centre, National Space Research and Development Agency (NASRDA) & National Biotechnology Development Agency (NABDA)

TECHNICAL SESSION

9.00 -10.00	**Plenary Lecture 6: Daniel Makinde (South Africa): Nanofluid dynamics and its inherent irreversibility.**
10.00 -11.00	**Plenary Lecture 7: Sophie Dabo (Senegal/France) :Statistical modelling of spartial data**
11.00 -11.15	**FIRST Break**
11.15-12.15	**Plenary Lecture 8: Ninuola Akinwande (Nigeria) Some stability theories and their applications to some equilibrium states of a mathematical model of HIV/AIDS Dynamics.**

12.15-13.15	**Plenary Lecture 9: G. O. S. Ekhaguere: A partial selection of some recent results on partial algebras.**
13.15-14.15	**SECOND BREAK**
14.15-15.15	**Plenary Lecture 10: Samuel Ilori (Nigeria) Some Invariants of Flag Bundles**
15.15-16.15	**Plenary Lecture 11: Peter Onumanyi (Self -starting Implicit one-block Methods for Efficient Numerical Solutions of Stiff Ordinary Differential Equations**
16.15-16.30	**THIRD BREAK**
16.30-18.30	**PAPER PRESENTATIONS IN PARALLELSESSIONS**
18.30	**End of the Programme for the Day**

Day 3:   Thursday, 19th May, 2016
Venue: Obasanjo Space Centre, National Space Research and Development Agency (NASRDA) & National Biotechnology Development Agency (NABDA)

TECHNICAL SESSION	
9.00 -10.00	**Plenary Lecture 12: Charles Chidume(Nigeria) New research problems in zeros of maximal monotone operators, Hammerstein integral equations, evolution equations, convex optimisation.**
10.00 -11.00	**Plenary Lecture 13: Frank Sottile(USA) Galois groups of Schubert problems**
11.00-11.15	FIRST Break
11.15-12.15	**Plenary Lecture 14: Mahmoud Abdel aty (Egypt) Information Entropy of many atoms with nano resonators.**
12.15-13.15	**Plenary Lecture 15: Charles Akinyokun (Nigeria): Factor Analysis of the effect academic staff profile on the investment portfolio of higher institutions.**
13.15-14.15	**SECOND BREAK**
14.15-16.15	ROUND TABLE DISCUSSIONS - The Future of Mathematical Sciences in Africa - The Way Forward.
16.15-16.30	**THIRD BREAK**
16.30-18.30	PAPER PRESENTATIONS IN PARALLEL SESSIONS
18.30	**End of the Programme for the Day**

Day 4:   **Friday, 20th May, 2016**
**Venue: Obasanjo Space Centre, National Space Research and Development Agency
(NASRDA) & National Biotechnology Development Agency (NABDA)**

TECHNICAL SESSION	
9.00 -10.00	**Plenary Lecture 16: Samuel Howusu (Ghana/Nigeria) THE NEW RESEARCH OPPORTUNITIES IN RIEMANNIAN GEOMETRY AND RIEMANNIAN THEORETICAL PHYSICS**
10.00 -11.00	**PAPER PRESENTATIONS IN PARALLEL SESSIONS**
11.00-11.15	FIRST BREAK
11.15-13.15	**PAPER PRESENTATIONS IN PARALLEL SESSIONS**
13.15-14.15	**SECOND BREAK**
14.15-16.15	**ROUND TABLE DISCUSSIONS – MATHEMATICAL SCIENCES- UNIVERSITY, RESEARCH INSTITUTES AND INDUSTRY PARTNERSHIP**
16.15-16.30	**THIRD BREAK**
16.30-18.30	**ACTION PLANS/COMMUNIQUE**
19.00	**Symposium Dinner**

DISTRIBUTION OF PAPERS INTO THREE PRESENTATION GROUPS

Venue: **Obasanjo Space Centre, National Space Research and Development Agency (NASRDA) & National Biotechnology Development Agency (NABDA)**

PURE MATHEMATICS

Day 2:   Wednesday, 18th May, 2016

S/N	TIME	NAME	TITLE
1.	16.30-16.50	A. O. Abdulkareem and J. O. Adeniran	Some Properties of the core of generalized Bol loops
2.	16.50-17.10	A. O. Isere	Rhotrices With Even Dimension
3.	17.10-17.30	A. Olayiwola	Counting The Number of Fuzzy Subgroups of Non-trivial semidirect product of $Z_4 \times Z_4$
4.	17.30-17.50	Andre Saint Eudes Mialebama Bouesso, Sylvain Attan, Djiby Sow	Weak Groebner Bases Over A Dual Bezout Domain
5.	17.50-18.10	Augustin Banyaga and Stephane Tchuiaga	The group of strong symplectic homeomorphisms in the $L^\infty-metric$
6.	18.10-18.30	Famurewa O. K. E.	The Effect of Simultaneous Increase In Step- Number And Order of Derivative on The Accuracy of A Class of Implicit Multiderivative Linear Multistep Method

Day 3:   Thursday, 19th May, 2016

7.	16.30-16.50	Ihechukwu Chinyere	Nontriviality of certain one-relator products of three groups
8.	16.50-17.10	Ndubuisi R. U., Udoaka O. G.	A Note $\widetilde{JE}$- Simple Left Restriction $\omega-semigroup$

9.	17.10-17.30	Oluwatosin Mewomo	From Amenable Groups to Banach Algebras amenability
10.	17.30-17.50	Osaye Fadekemi Janet	Average Eccentricity, Minimum degree and $C_4 - Free\ Graph$
11.	17.50-18.10	Praise Adeyemo	The Three Presentations of the Torus Equivariant K-theory of Flag variety G/B
12.	18.10-18.30	Rauf Kamilu	Dynamic Equation on time scales

Day 4:   Friday, 20th May, 2016

13.	11.15-11.35	Semiu Oladejo	Partial Ordering of Weak Mutually Unbiased bases
14.	11.35-11.55	Xavier Alexius Udo-utun	Multivalued Nonexpansive Mappings Characterized By Fixed Point Property.
15.	11.55-12.15		
16.	12.15-12.35		
17.	12.35-12.55		
18.	12.55-13.15		

APPLIED MATHEMATICS

Day 2:   Wednesday, 18th May, 2016

S/N		NAME	TITLE
1.	16.30-16.50		Behaviour of the interaction of two and four elections in one, two and three dimensions.
2.	16.50-17.10	Asibor Raphael Ehikhuemhen	MHD, Transient Electro-osmotic flow and heat transfer analysis in a horizontal channel.
3.	17.10-17.30	Badri Berrabah	Path integral for position-time dependent mass
4.	17.30-17.50	Baoku, I. G., Azeez, N. A. and Onwundinjo, F. I.	Numerical Solution for Hydromagnetic Flow with Heat and Mass transfer of Maxwell Fluid in a Porous Medium considering Thermo-diffusion and Diffusion-Thermo Effects.

5.	17.50-18.10	C. E. Abhulimen	A new Class of Second Derivative methods For Numerical Integration of Stiff initial Value Problems
6.	18.10-18.30	Dawit H. Gebre, O. D. Makinde, M. Kinyanjui	Modelling Turbulent Hydromagnetic Flow with Radiative Heat over a moving Vertical Plate in a Rotating System

Day 3:   Thursday, 19th May, 2016

7.	16.30-16.50	Fagbade Adeyemi Richard	Steady mhd natural convection flow past a semi-infinite moving vertical plate in porous medium: influence of soret-dufor and variable viscosity effect.
8.	16.50-17.10	Idorenyin Etukudo	Obtaining Optimal Solution to Linearly Constrained Optimization Problems with Linear Objective Function: Optimal Designs Option.
9.	17.10-17.30	Joseph Olorunju Omolehin	Fibonacci Scheme On Gradient Method For Some Control Problems
10.	17.30-17.50	M. Y. Mafuyai	On the Energy of Waves of Different Frequencies and the Phenomenon of Resonnance
11.	17.50-18.10	Omosede E. Osafile	A Modified Lanczos Approach To The Study Of Highly Correlated Electron Systems
12.	18.10-18.30	Suleiman B. Adamu and Lawan S. Taura	1 D Klein-Gordon Equation in an Infinite Square Well with PT-Symmetry Boundary Condition.

Day 4:   Friday, 20th May, 2016

13.	11.15-11.35		
14.	11.35-11.55		
15.	11.55-12.15		
16.	12.15-12.35		
17.	12.35-12.55		
18.	12.55-13.15		

APPLICATIONS

Day 2:   Wednesday, 18th May, 2016

S/N	TIME	NAME	TITLE
1.	16.30-16.50	Are Elisha Bayode	Global Stability and Bifurcation Analysis of A Generalized Ebola Virus Disease Model with dead infectives.
2.	16.50-17.10	Bakare E. A. , Are E. B.	Optimal Control Analysis of the effect of multiple control strategies on cholera disease transmission dynamics in the presence of asymptoticntransmission.
3.	17.10-17.30	Dennis Ikpe, Sure Mataramvura & Ronnie Becker	Compound Levy Random Bridges And Credit Risky Asset Pricing
4.	17.30-17.50	E. S. Taiwo, C. R. Nwozo & I. Adinya	Determining optimal evaluation decision policies for disaster (A case study of Benue Flood Disaster 2012)
5.	17.50-18.10	Elias Mwakilama	Constructing Optimal Routes for IFT Ambulances using the Dijkstra-based TTD model: A case Study of Zomba District Health Ofice
6.	18.10-18.30	Gbenga Jacob Abiodun	Modeling the impact of temperature and rainfall on the population dynamics of *An. arabiensis*

Day 3:   Thursday, 19th May, 2016

S/N	TIME	NAME	TITLE
7.	16.30-16.50	K. O. Okosun, G. J. Abiodun	Effect of Climate on Maleria-cholera co-infection
8.	16.50-17.10	O. F. Egbelowo, C. Harley, B. Jacobs	Nonstandard finite difference method applied to linear pharmacokinetics model

9.	17.10-17.30	S. A. Edet, I. Adinya	The Stochastic Dominance Approach to Analyse Days of the Week Anomaly in Nigeria Stock Market
10.	17.30-17.50	S. O. Lomotey, R. A. Buriti, I. Paulino, A. F. Medeiros, J. J. Makela, J. W. Meriwhether, D. Barros	Study on Planetary WavePorpagation in the Lower thermosphere Using Wind Measurements From Fabry-Perot Interferometers
11.	17.50-18.10	Sulaiman Sani, Lawal Iro Sani	Library Information Security Via Queue Disciples
12.	18.10-18.30	W. N. Mutuku	MHD Bioconvection of Gyrotactic Microorganisms in Nanofluids over a Permeable Stretching Surface

Day 4:   Friday, 20th May, 2016

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14.	11.35-11.55		
15.	11.55-12.15		
16.	12.15-12.35		
17.	12.35-12.55		
18.	12.55-13.15		

PARTNERS:

MINISTRY OF EDUCATION; MINISTRY OF SCIENCE & TECHNOLOGY; COMMITTEE OF VICE CHANCELLORS OF NIGERIAN FEDERAL UNIVERSITIES (CVC); NATIONAL UNIVERSITIES CONMMISSION (NUC); AFRICAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (AUST); NIGERIAN TURKISH NILE UNIVERSITIES (NTNU); TERTIARY EDUCATION TRUST FUND (TETFUND)

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