Preamble

One of the most pressing 21st century issues is the control of pollution of the air and water. Its impact on human health, agriculture, biodiversity, water and sanitation and ecosystem imbalance is of great concern to the global community. Continuous emissions of pollutants in the air as a result of combustion of hydrocarbons, coal and sold fuel have led to rapid cases of carcinogenic and respiratory diseases such as lung cancer and asthma. Continuous deposition of contaminants from factories and spillages from oil companies and sewage into drinking water are endangering the life of people and marine life. Among the world topmost challenging problems are: eruption of earthquake, floods, extreme temperature, and emergence of diseases like bird flu, Ebola and swine flu, financial meltdown which rendered several millions people jobless and many nations insolvent financially the list continues ad finitum. Scientists, engineers, educationists and policy makers have been adopting mathematical modeling and simulation techniques to solve these problems challenging mankind.

In view of the above, the National Mathematical Centre (NMC), Abuja in collaboration with the Commission on Science and Technology for Sustainable Development in the South (COMSATS), Islamic Educational, Scientific and Cultural Organization (ISESCO), the entire Mathematical Modeling Community comprising: NMC-COMSATS-ISEESCO International Thematic Research Groups (ITRGs) and the National Thematic Research Groups (NTRGs) in Mathematical Modeling in Nigeria as well as the Government of Federal Republic of Nigeria is pleased to announce, to the Researchers, Scientists, Students and Policy Makers, the
International Conference on Mathematical Modeling and the Second Meeting of COMSATS’ International Thematic Research Group on Mathematical Modeling. It is expected to attract Mathematical scientists, Engineers and environmentalists and other relevant scientists and professionals all over the world.

THEME OF THE CONFERENCE:

Solving humanity problems and through Mathematical Modeling

The Conference will cover, among others, Modeling and Simulation in the following areas:

- Pollutions of air and water
- Population dynamics of bacteria, fungi, zooplankton, phytoplankton;
- Terrestrial and marine biodiversities.
- Multiscale hierarchical modeling
- Complex systems modeling and simulation
- Medical and biomedical systems and surgical modeling
- Bimolecular simulation and metamodeling techniques
- Climatic, reservoirs design and vehicle routine problems
- Engineering systems and telecommunication network
- Nanofluid and nanotechnology
- Quantitative models, financial models
- Applications in the industry and other human endeavors.
- Complex Atmosphere-Ocean General Circulation problem
- Ecological risk assessments
- Renewable and non-renewable energies
- Nuclear safety problem
- Energy efficient batteries
- Remote sensing and Satellite imagery
- Impact Assessments
- Geographic Information Systems (GIS)
- Quality control of water and air. Determinations of benchmarks for clean air and water quality.
- Transportation of contaminants in air and water.
- Oil spillages and corrosion problem in the marine and terrestrial environments.

Organizers
1. Professor A.R.T. Solarin, FMAN, President, AMU, Director/CE, NMC, COMSATS Distinguished Professor; UNESCO-NMC Chair of Mathematics (Chief Convener)
   National Mathematical Centre, Kaduna-Lokoja Road, Sheda
   PMB 118 Garki PO Abuja, Nigeria,
   Email: asolarin2002@yahoo.com; director@nmcauja.org
   Telephone: +234(0)8033014617; +2348172234901.
2. Professor P. Onumanyi (Deputy-Director) (Conference Coordinator)
National Mathematical Centre, Kaduna-Lokoja Road, Sheda
PMB 118 Garki PO Abuja, Nigeria,
Email: onumanyinmc@yahoo.com
Telephone: +2348033911465.

3. Professor Olusola J. Adeniran
Co-ordinator, Mathematics Programme, Coordinator, UNESCO-NMC Chair of
Mathematics;
National Mathematical Centre,
Kaduna-Lokoja Road, Sheda
E-mail: adeniranoj@nmcabuja.org
Phone: +2348033194406, +2348172234928

4. Professor B. O. Oyelami (Conference Coordinator)
Plateau State University Bokkos, Nigeria
&National Coordinator, Modeling and Simulation Research Group
National Mathematical Centre, Kaduna-Lokoja Road, Sheda
PMB 118 Garki PO Abuja, Nigeria
Email: boyelami2000@yahoo.com;
Telephone: +234(0)8036547613.

5. Clement Adeyemo (Secretary)
Coordinator, International Linkages and Advancement Office
National Mathematical Centre, Kaduna-Lokoja Road, Sheda
PMB 118 Garki PO Abuja, Nigeria
Email: coadeyemo2007@yahoo.com
Telephone: +234(0)803888142; +234(0)8172234900

6. Professor J A Ogidi (Invited Speaker)
Coordinator Biomathematics Programme
National Mathematical Centre, Kaduna-Lokoja Road, Sheda
PMB 118 Garki PO Abuja, Nigeria
Email: jaogidi2010@yahoo.com
Telephone: +2348036272195

7. Prof. Dr. Xiaodong Zeng (Invited Speaker)
International Center for Climate and Environmental Sciences (ICCES), Institute of
Atmospheric Physics, Chinese Academy of Sciences, Beijing 100029, China
Telephone: +86-10-82995283.
Email: xdzeng@mail.iap.ac.cn

8. Prof. Femi Taiwo (Invited Speaker)
Department of Chemical Engineering Obafemi Awolowo University Ile-ife, Nigeria
Email: ftaiwo@oauife.edu.ng
Telephone: +2348033881645
9. Professor M. O. Ibraheem (Invited Speaker)  
   Department of Mathematics  
   University of Ilorin Nigeria  
   Email: moibraheem@yahoo.com  
   Telephone: +2347038003294

10. Dr. Lugano Wilson; Lic. (Invited Speaker)  
    Tanzania Industrial Research and Development Organization (TIRDO)  
    Dar-es-Salaam, TANZANIA  
    E-mail: luganowilson@yahoo.com;  
    Telephone: +255 22 2668822

11. Dr. ABIODUN Babatunde Joseph (Invited Speaker)  
    Climate Research Analysis Group  
    Dept of Environmental and Geographical Science  
    University of Cape Town, Rondebosch, South Africa  
    Telephone: +27 (0)216505737  
    E-mail: babiodun@csag.uct.ac.za

12. Dr. Mofoluso A. Fagbeja (Invited Speaker)  
    National Space Research and Development Agency (NASRDA)  
    Umar Musa Yar’Adua Express Way,  
    P.M.B. 437 Garki, Abuja  
    Telephone: +234 815 756 4775, +234 809 922 8656  
    E-mail: mfgabe@yahoo.com

13. Dr. Asma T. Ibrahim (Invited Speaker)  
    National Space Research and Development Agency (NASRDA)  
    Umar Musa Yar’Adua Express Way,  
    P.M.B. 437 Garki, Abuja  
    Telephone: +234 806 295 0591  
    E-mail: asmabbfaroouk2002@gmail.com

14. Dr. Okanlawon O.O. Oni (Invited Speaker)  
    National Water Resources Institute Kaduna  
    Telephone: +234 803 981 728  
    E-mail: okanlawononi@gmail.com; adisaoni@yahoo.com

15. Abdullai Adamu  
    Nigerian Communication Satellite (NIGCOMSAT)  
    Umar Musa Yar’Adua Express Way  
    Abuja  
    Telephone: +234 803 602 2300  
    E-mail: abdullaiadamu007@yahoo.com
16. Olutunji Oladejo (COMSATS Liaison Officer)
National Mathematical Centre, Kaduna-Lokoja Road, Sheda
PMB 118 Garki PO Abuja, Nigeria
Telephone: +234 8030467414, +234 8172234733
E-mail: joshuaoladejo@rocketmail.com

**Registration Fee:** Ten Thousand Naira (₦10,000.00); **Students** =₦5,000.00
Papers from the Conference will be published as special issue after review process and will be
indexed in some standard international databases such as Mathrev, Zentralblatt MATH, and
Crossref.

All Abstracts of Presentations should be sent to:
boyelami2000@yahoo.com; joshuaoladejo@rocketmail.com. This must be received by 20th
December 2015.

**Arrival:** 27th December, 2015

**Conference period:** 28th - 29th December, 2015

**ITRG Meeting:** 30th December, 2015

**Departure:** 31st December, 2015

For more information visit: www.nmcabuja.org

A. M. Biu

Registrar, National Mathematical Centre Abuja, Nigeria

Announcer