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## African Journal of Science, Technology, Innovation and Development (AJSTID)

### *Call for Papers: Mathematical Modelling: Concepts and Applications for Sustainable Development*

***Deadline: 15 August, 2017***

#### **Background**

*The challenge in mathematical modelling is “. . . not to produce the most comprehensive descriptive model but to produce the simplest possible model that incorporates the major features of the phenomenon of interest.” -Howard Emmons*

Mathematical modelling essentially involves utilizing mathematical principles and concepts to describe real world phenomena. The end goal is to better understand these phenomena, glean insights about their behaviour and use obtained insights to control and make behavioural predictions about the phenomenon of interest. Mathematical models are finding renewed applications in disciplines ranging from economics to engineering, natural sciences, social sciences and interdisciplinary and trans-disciplinary fields. Some mathematical problems often require the use of more than one tool or modelling technique for accurate analysis and solution. The challenge for modellers is often to determine the right tools and approach to use in solving real world problems.

We would like to invite researchers to contribute to publish both in the planned special issue in AJSTID and book chapters in the forthcoming book to be published by Taylor & Francis Routledge Publishers. Papers should describe contributions of mathematical modelling techniques or methods to solve problems and highlight how significant mathematical modelling limitations were handled. Furthermore the papers must demonstrate sufficient novelty and provide meaningful insights in the solution of practical problems. You are welcome to contribute original papers to be submitted by August 15, 2017.

**Themes:** This special issue of *AJSTID* calls for original research papers on, but not limited to the broad topics outlined below:

- *Novel mathematical modelling techniques*
- *The theoretical underpinnings of mathematical modelling*
- *Game theoretic models*
- *Deterministic mathematical models*
- *Stochastic mathematical models*
- *Soft Computing methods*
- *Mathematical optimization methods*
- *Pattern recognition and image processing*
- *Finite element modelling*
- *Mathematical modelling in the education curriculum (including knowledge decolonisation)*
- *Applications of mathematical modelling (natural sciences, engineering, social sciences, economics and unity of knowledge)*
- *Multidisciplinary applications of mathematical modelling*

Manuscripts should describe original and previously unpublished results which are currently not considered for publication in any other journal. All the manuscripts shall be submitted at <http://www.edmgr.com/rajs/default.aspx> and will undergo a peer-review process.

### **Important Dates**

Paper submission deadline: August 15, 2017

First review notification: September 20, 2017

Revisions due: October 20, 2017

Second review notification: November 30, 2017

Final manuscript due: January 15, 2018

Acceptance notification: January 30, 2018

Tentative date of publication: March 2018

### **Guest Editors**

Dr. Nnamdi Nwulu (Corresponding Editor), Senior Lecturer, Department of Electrical & Electronic Engineering Science, University of Johannesburg, South Africa, [nnwulu@uj.ac.za](mailto:nnwulu@uj.ac.za)

Prof. Mammo Muchie, DST/NRF SARCHI chair, Tshwane University of Technology, South Africa, [mammo.muchie@gmail.com](mailto:mammo.muchie@gmail.com)

### **Useful Links**

<http://www.tandfonline.com/toc/rajs20/current>

[www.sarchi-steid.org.za](http://www.sarchi-steid.org.za)

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