MaSS
DST-NRF CENTRE OF EXCELLENCE IN MATHEMATICAL & STATISTICAL SCIENCES

CoE-MaSS weekly seminar series

THE DST-NRF CENTRE OF EXCELLENCE IN MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS) WOULD LIKE TO PRESENT A RESEARCH SEMINAR BY

Prof Abdul Kara

(School of Mathematics, Wits University)

"Multipliers, symmetries and conservation laws: the case of manifolds and geodesic equations"

Friday, 11 September 2015
10h30-11h30

Broadcast live from:
Videoconferencing Facility, 1st Floor
Mathematical Sciences Building, Wits West Campus

How to connect to this seminar remotely:
You can connect remotely via Vidyo to this research seminar by clicking on this link:
http://wits-vc.tenet.ac.za/flex.html?roomdirect.html&key=y0SSOwFsvsidbzg4qFdWXvvQtyI
and downloading the Vidyo software before the seminar.
You must please join in the virtual venue (called "CAM Seminar Room" on Vidyo) strictly between **10h00-10h15**. No latecomers will be added.

Important videoconferencing netiquette:
Once the seminar commences, please mute your own microphone so that there is no feedback from your side into the virtual room. During the Q&A slot you can then unmute your microphone if you have a question to ask the speaker.

Title:
Multipliers, symmetries and conservation laws: the case of manifolds and geodesic equations

Presenter:
Prof Abdul Kara, School of Mathematics, University of the Witwatersrand, Johannesburg, South Africa**;** Abdul.Kara@wits.ac.za
Website: https://sites.google.com/site/ahksymmetry

Abstract:
It is well known that there exists a strong relationship between the symmetries and conservation laws of differential equations. An equivalent interplay exists for the isometries that arise from Riemannian metrics that define the distance functions on the respective manifold. We explore the idea that that the latter is not independent of the former and further show that one can define all symmetries via the multipliers (which are variational integration factors in particular cases).