

## CoE-MaSS weekly seminar series

THE DST-NRF CENTRE OF EXCELLENCE IN  
MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS)  
PRESENTS A SEMINAR BY

**Prof Munawar Karim**

*(Department of Physics, St. John Fisher College, Rochester,  
New York, USA & NUST, Windhoek, Namibia)*

### **“Autostabilized Electron”**

Wednesday , 20 June 2018  
10h30-11h30

CoE-MaSS Seminar Room, 1<sup>st</sup> floor,  
Math Sci Bldg, West Campus, Wits University.



The stability of the electron has been in question since its discovery in 1895. There is no known mechanism that can compensate the high outward pressure due to its field. We show that the high outward pressure necessitates the introduction of the induced gravity field. Requiring the inwards gravity pressure to equal the outward field pressure yields a radius of the electron. It is of the order of the Planck length multiplied by the fine structure constant. The calculation also yields the GUT energy of  $10^{17}$  GeV where all forces merge into a unified field. The results quoted are derived from fundamental principles of quantum electrodynamics and the Einstein field equations

Email: [mkarim@sjfc.edu](mailto:mkarim@sjfc.edu)



You can connect to all CoE-MaSS weekly seminar series remotely using Vidyo.

1. Click on this link to connect to the [CoE-MaSS Seminar Room](#)
2. Type in your display name (e.g. *UKZN-NameSurname*)
3. Click *Go*.

If you have trouble connecting, please phone the Technical Support Officer on duty in-venue between 10h00-10h25 on +27(0)11 717 7069. **This phone will not be answered once the seminar has started.**

---

### **Important videoconferencing netiquette:**

Please ***mute your 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. Thank you.

