SOCIETY MEETING
Friday 5 July 2013

De Morgan House, Russell Square, London

(Nearest Tube: Russell Square)

3.30   Opening of the meeting and LMS business,

including the announcement of the 2013 Prize winners (open to all)

Karl-Theodor Sturm (Bonn)

Geometric Analysis on the Space of Metric Measure Spaces

The space $\mathbb{X}$ of all metric measure spaces (X, d, m) plays an important rôle in image analysis, in the investigation of limits of Riemannnian manifolds and metric graphs as well as in the study of geometric flows that develop singularities. We show that the space $\mathbb{X}$ – equipped with the L^2-distortion distance $\mathbb{\Delta\Delta}$ – is a challenging object of geometric interest in its own. In particular, we show that it has nonnegative curvature in the sense of Alexandrov. Geodesics and tangent spaces are characterized in detail. Moreover, classes of semiconvex functionals and their gradient flows on $\mathbb{X}$ are presented.

4.45   Tea/Coffee

5.15   **S.R. Srinivasa Varadhan (NYU)**
        Probability, counting and large deviations.

Calculations in probability theory often involves counting the number of objects in a given set. Tools from probability theory can therefore be useful in counting as well. We will look at some examples where Large Deviation Theory can be used to perform the count.

6.30   Reception

These lectures are aimed at a general mathematical audience. All interested, whether LMS members or not, are most welcome to attend this event.

To register for your place at the meeting, please Elizabeth Fisher (lmsmeetings@lms.ac.uk)

A reception will be held at the LMS at 6.30pm with a dinner afterwards. The venue and cost to attend the dinner are to be confirmed. Those wishing to attend the dinner should contact Elizabeth Fisher (lmsmeetings@lms.ac.uk) before 26 June.

There are funds available to contribute in part to the expenses of members of the Society or research students wishing to attend the meeting. The meeting will be preceded by a Graduate Student Meeting.

Contact Elizabeth Fisher (lmsmeetings@lms.ac.uk) for further information.