By April 20, please

MATHEMATICAL ASSOCIATION OF AMERICA, INC.

(9)

ABSTRACT OF PAPER

Title of Paper: LILLIPUTIAN DYNAMICS -
The Physics of Extreme Size Change

Time ..... minutes.

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ABSTRACT

Whenever the size of an object or animal is changed, the scale factor must be considered. It was discovered experimentally that because strength is proportional to cross-sectional area, while mass is proportional to volume, a large animal or object, built similar to a smaller one, will be weaker, proportionately, by a factor of scale. Also, the smaller an object or animal becomes, the more surface area, relative to mass, it has. This explains why very small animals seem extremely hungry and are easily water-logged. Scaling is also important when the behavioral properties of various size ships are considered . These are but a few of the many aspects of scaling.