1035-51-1078 **Jordi Lopez-Abad** (abad@logique.jussieu.fr) and **Lionel Nguyen Van Thé*** (nguyen@math.ucalgary.ca), Department of Mathematics and Statistics, University of Calgary, Calgary, Alberta T2N1N4, Canada, and **Norbert Sauer** (nsauer@math.ucalgary.ca).
Oscillation stability from a metric point of view.

In 94, Odell and Schlumprecht showed that ℓ_p is arbitrarily distortable whenever $1 < p < \infty$, a result which solved the longstanding distortion problem for ℓ_2. From the point of view of the metric structure of the unit sphere $\mathbb{S}^\infty$ of ℓ_2, this theorem exhibits a curious property: it proves the existence of a partition of $\mathbb{S}^\infty$ into two parts $\mathbb{S}^\infty = A \cup B$ such that for $\varepsilon > 0$ small enough, none of the ε-neighborhoods $(A)_\varepsilon$ or $(B)_\varepsilon$ includes an isometric copy of $\mathbb{S}^\infty$. The purpose of this talk is to go deeper into the analysis of this metric phenomenon by studying a similar problem for another remarkable complete separable metric space which is known to share many Ramsey-theoretic features with $\mathbb{S}^\infty$. As a consequence, it will be shown that even though $\mathcal{C}[0,1]$ is not oscillation stable, its unit sphere S possesses the following partition property: for every $\varepsilon > 0$ and every partition $S = A \cup B$, $(A)_\varepsilon$ or $(B)_\varepsilon$ includes an isometric copy of S. (Received September 18, 2007)