

Meeting: 1006, Lubbock, Texas, SS 1A, Special Session on Topology of Continua

1006-54-114 **E. D. Tymchatyn*** (tymchat@math.usask.ca), 106 Wiggins Road, Saskatoon, SK S7N 5E6, Canada, and **K. Kawamura** and **A. Zagorodnyuk**. *Continuous Extensions of Partial Metrics*. Preliminary report.

If T is a metric space, a set K in $L_1(T)$ is decomposable if $f, g \in K$ and A is a measurable set in T implies $f|_A + g|_{T \setminus A} \in K$. Decomposability can be regarded as a kind of convexity condition. Theorem (Fryzkowski (1983)). If X is a compact metric space and $F : X \rightarrow L_1(T)$ is a lower semi-continuous multi-valued function with closed decomposable values then F has a continuous selection.

Bressan and Colombo (1989) relaxed the compactness condition on X to separability. We eliminate the separability condition on X . We use our result to give continuous extension of bounded partial metrics on closed subsets of a metric space X . This extends recent results of Tymchatyn and Zarichnyi (2004). (Received February 10, 2005)