

Orthogonally additive mappings on Hilbert C^* -modules

Dijana Ilišević, University of Zagreb, Croatia

Let \mathcal{A} be a C^* -algebra and let $(W, \langle \cdot, \cdot \rangle)$ be a Hilbert C^* -module over \mathcal{A} . A mapping f on W is said to be orthogonally additive if for all $x, y \in W$

$$\langle x, y \rangle = 0 \implies f(x + y) = f(x) + f(y).$$

If T is an additive mapping on W and Φ is an additive mapping on \mathcal{A} , then the mapping f defined by

$$f(x) = T(x) + \Phi(\langle x, x \rangle) \text{ for all } x \in W$$

is an orthogonally additive mapping. The aim of this talk is to answer the question whether the converse also holds true.

This is a joint work with Aleksej Turnšek (University of Ljubljana, Slovenia) and Dilian Yang (University of Windsor, Canada).