

# Derivations and Projections on Banach Jordan triples

Bernard Russo<sup>1</sup>

We shall use the product rule for differentiation to motivate the study of topological Lie and Jordan algebras and triples. We also discuss the role of contractive projections in the structure theory of Jordan triples and in quantized functional analysis.

Some topics which we plan to cover are:

1. Automatic continuity of derivations
2. Structure of continuous derivations (are they inner?)
3. Projective stability (stability under contractive projections)
4. Projective rigidity (existence of contractive projections)
5. Projections and operator space theory (injectivity)

## References

- [1] Peralta, Russo: Automatic continuity of derivations on  $C^*$ -algebras and  $JB^*$ -triples; preprint 2010.
- [2] Ho, Peralta, Russo: Ternary Weakly Amenable  $C^*$ -algebras and  $JB^*$ -triples; preprint 2011.
- [3] Neal, Russo: Existence of contractive projections on preduals of  $JBW^*$ -triples, *Israel J. Math.*, 2011.
- [4] Neal, Russo: Contractive projections and operator spaces, *TAMS* 2003.

<sup>1</sup> *Department of Mathematics, UC Irvine, Irvine CA, USA*