# Jordan Structures in Banach Spaces and Symmetric Manifolds

Cho-Ho Chu*, Pauline Mellon*

## Abstract

We give an exposition of Jordan structures in Banach spaces and their background in complex holomorphy and symmetric manifolds. We also include some new results and applications to the geometry of Banach spaces.

## Contents

[41] M. Koecher, *An elementary approach to bounded symmetric domains*, Lecture Notes, Rice University, 1969.

[42] O. Loos, *Bounded symmetric domains and Jordan pairs*, Lecture Notes, University of California at Irvine, 1977.

[43] P. Mellon, *Dual manifolds of $JB^*$-triples of the form $C(X,U)$*, Proc. R. Ir. Acad. **93A-1** (1993) 27–42.

[44] P. Mellon, *Holomorphic curvature of infinite dimensional symmetric complex Banach manifolds of compact type*, Ann. Acad. Sci. Fenn. **18A-1** (1993) 299–306.

[45] P. Mellon, *Symmetric manifolds of compact type associated to the $JB^*$-triples $C_0(X,Z)$*, Math. Scan. **78** (1996) 19–36.

[46] A. Rodríguez Palacios, Jordan structures in Analysis, Proceedings of the 1992 Oberwolfach conference on Jordan algebras, Walter de Gruyter, Berlin (1994) 96–186.

[47] B. Russo, *Structure of $JB^*$-triples*, Proceedings of the 1992 Oberwolfach conference on Jordan algebras, Walter de Gruyter, Berlin (1994) 208-280.

[48] L.L. Stacho, *A short proof that the biholomorphic automorphisms of the unit ball of $L^p$ spaces are linear*, Acta. Sci. Math. **41** (1979) 381–383.

[49] L.L. Stacho, *A projection principle concerning biholomorphic automorphisms*, Acta. Sci. Math. **44** (1982) 99–124.

[50] D. Topping, *Jordan algebras of self-adjoint operators*, Mem. Amer. Math. Soc. **53** (1965).

[51] H. Upmeier, Symmetric Banach manifolds and Jordan $C^*$-algebras, North-Holland, Amsterdam, 1985.

[52] H. Upmeier, *Über die Automorphismengruppen beschränkter Gebiete in Banachraümen*, Dissertation, Tübingen (1975).

[53] J. Wolf, *Fine structure of Hermitian symmetric spaces*, in Symmetric Spaces, Marcel Dekker (1972) 271–357.

[54] J.D.M. Wright, *Jordan $C^*$-algebras*, Michigan Math. J. **24** (1977) 291–302.

Goldsmiths College
University of London
UK-London SE14 6NW

eMail: maa01chc@gold.ac.uk

Department of Mathematics
University College Dublin
IR-Dublin 4

eMail: pmellon@ollamh.ucd.ie