

Abstract submitted for 8th Australia New Zealand Mathematics Convention

Title: The structure of totally disconnected, locally compact groups

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Session: Groups and Dynamics

The last five years have brought significant progress in the theory of totally disconnected, locally compact groups that sets the scene for the development of a comprehensive understanding of these groups in the coming years. Three separate advances have seen the creation of a decomposition theory and a local theory these groups, as well as new results concerning the scale function. Some of the main contributors have been P.-E. Caprace, N. Monod, C. Reid and P. Wesolek.

This survey will begin with some background on totally disconnected, locally compact groups before saying what each of these three techniques is and comparing them with key ideas in the theory of Lie groups.