

AN INTRODUCTION TO ANALYSIS OF 3D GRAIN BOUNDARY DATA  
IN THE SPACE OF MACROSCOPIC BOUNDARY PARAMETERS

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**Abstract:** Grain boundaries have an impact on properties of polycrystalline materials. New experimental techniques for acquisition of 3D microstructures provide large sets of data on grain boundary networks. At present, the information is usually given in the form of macroscopic boundary parameters. The talk will be about basic aspects of analysis of such data. In particular, it will concern the impact of symmetry on the description of boundaries, methods for assessing grain boundary populations, methods for representing these populations, parameters for description of geometrically special boundaries and estimated fractions of special boundaries. There will be more about how to interpret the data or how to calculate a given characteristic than about actual results for particular materials.