

AN APPLICATION OF THE STRESS STATE DECOMPOSITION TECHNIQUE (SSDT) TO CANCER MODELLING

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Abstract. The main goal of the present paper is to present a mathematical framework for modelling tumour growth based on stress state decomposition technique (SSDT). This is a straightforward extension of the model for multi-phase nonsaturated soil consolidation with pollutant transport presented by the authors. It may be expected as an alternative to classical frameworks based on TCAT, Thermodynamically Constrained Average Theory. In this preliminary work, only the mathematical framework for tumour phase is proposed. Equations standing for tumour phase are brought into correspondence with those of gaseous phase in the soil problem. From these preliminaries assessments, it may be put forward that likewise the stress state decomposition procedure stands for an alternative for TCAT.