

THE LATTICE BOLTZMANN METHOD AS A GENERAL-PURPOSE TOOL IN COMPUTATIONAL MECHANICS

100 – ADVANCED DISCRETIZATION TECHNIQUES

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ABSTRACT

The Lattice Boltzmann (LB) method has emerged as a robust and efficient numerical method. Originally developed in the context of fluid mechanics, it continues to find more fields of application as researchers adapt it to their problems of interest. In this symposium, we would like to bring together researchers working on the use of the LB method to new problems of interest in applied mechanics and mathematics including, but not restricted to, solid mechanics, heat transfer, wave propagation, materials science, multiphysics problems, etc.

Researchers are encouraged to present new developments that will help to understand the theoretical underpinnings of LB methods, enabling the generalization of the method and understanding it as a powerful and general-purpose discretization technique for problems in computational mechanics and applied math. Also, results that provide insights into connections of LB to other well-established methods are welcome.