Complex Time Methods and Chameleon Scalar Fields in the Dynamics of Spatial Extremes

Dionysia Panagoulia and Kalomoira Zisopoulou
National Technical University of Athens, School of Civil Engineering, Department of Water Resources and Environmental Engineering, Zographou, Greece (dpanag@hydro.ntua.gr)

Complex Time Methods and Chameleon Scalar Fields in the Dynamics of Spatial Extremes

Dionysia Panagoulia1 and Kalomoira Zisopoulou 2

1 School of Civil Engineering, Department of Water Resources and Environmental Engineering, National Technical University of Athens, Zografou, Greece. E-mail dpanag@hydro.ntua.gr

2 Travaux Publics, Becket House, London, United Kingdom

It is shown that complex time in classical physics may transform the action functional Lagrangian and Lagrangian density processes to, among others, energy descriptive functionals. By imposing restrictions in the problem coordinate space as per need, such as Sobolev or Hardy spaces, or to the complex time plane such as the two variable Hilbert Space dependent Bergman. Decomposition new results are obtained which facilitate a better understanding of the mechanism governing spatial extremes in terms of flows.

The introduction of Khoury-Weltman type chameleon scalar fields will, by the recognition of existing oscillatory patterns, pave a connective chain of momenta between smaller and larger objects which will uncover the causal relationships between them which will allow for variable reduction in multivariate methods.