Antide Sitter/Conformal Field Theory:

New Developments and Applications

8-9 October 2009

The Anti-de Sitter/Conformal Field Theory (AdS/CFT) correspondence is one of the most interesting developments to come out of string theory. It maps the physics of strongly interacting field theories to a dual classical gravitational description. Such a duality has led to a better understanding of both string theory and strongly coupled conformal field theories. The "AdS/CFT: new developments and applications" program aims to discuss both new, more formal, aspects of the duality involving M2 branes (the 2+1 dimensional fundamental objects of M-theory) which have been developed over the last two years, alongside various novel applications of the duality to condensed matter systems, hydrodynamics and heavy ion collisions. The former developments provide for gauge theory duals to stacks of M2-branes and hence in principle allow for a quantitative study of the still mysterious M-theory. The latter applications have been surprisingly successful in understanding features such as the low viscosity of the quark gluon plasma created at RHIC and its opacity to energetic heavy quarks. Hopefully, similar usage of the AdS/CFT duality can be made for solid- state systems.

For more information, and to register, please visit: http://www.physics.princeton.edu/pcts/adscft/adscft.html

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