

1106-53-2891 **Karsten Gimre*** (gimre@math.columbia.edu), 2990 Broadway, New York, NY 10027, New York, NY 10027. *Second order renormalization group flow.*

The second order renormalization group flow,

$$\frac{\partial g_{ij}}{\partial t} = -2R_{ij} - \alpha R_{iklm} R_j{}^{klm},$$

is a generalization of the Ricci flow arising from renormalization of the nonlinear sigma model in quantum field theory. We will discuss various issues related to existence of the flow as well as soliton solutions. (Received September 17, 2014)