

Recent progress on the Liouville systems

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Abstract

The Liouville systems have several applications to the various areas of biology, geometry and physics. For example, the abelian Chern-Simons system with n -Higgs fields can be regarded as a perturbation of the Liouville system. Also, the nonlocal Liouville system corresponds to the stationary or self-similar Patlak-Keller-Segel system. In this talk, I will review some recent results on this system, and its connection to the Patlak-Keller-Segel system. I will especially focus on the bubbling phenomenon of the solutions.