THE ROLE OF LIOUVILLE TYPE SYSTEMS IN THE STUDY OF NON-TOPOLOGICAL VORTICES IN CHERN SIMONS THEORY Gabriella Tarantello

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We discuss elliptic systems of Liouville type in presence of singular sources, as derived from the study of non-abelian (selfdual) Chern-Simons vortices. We shall focus on the so called non-topological vortex configurations, and present some recent results. Also we discuss many of the still open questions.

Keywords: Liouville systems, Non-abelian vortices, blow-up technique.