On the self-similar blowup for the generalized SQG equation

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In this work, we propose to study the locally self-similar solutions of the generalized equation (SQG). We proved that under an L^q growth assumption on the self-similar profile and its gradient, we identify appropriate ranges of the self-similar parameter where the profile is either identically zero (no blowup) or its L^p asymptotic behavior can be characterized, for suitable p.

This is a joint work with A. Bronzi (Unicamp) and C. Mondaini (Drexel).