

Green's function and infinite time bubbling in the semilinear heat equation at the critical Sobolev exponent

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We discuss some new results on globally defined in time positive solutions of the semilinear heat equation with critical power nonlinearity and Dirichlet boundary conditions in a bounded domain. For any given number k we can find a solution that, as time grows, blows up exactly at k points of the domain with a bubbling profile that can be precisely computed. This is joint work with Carmen Cortázar and Monica Musso.