A dynamical system approach to a class of radial fully nonlinear equations

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Abstract

We will present some recent results obtained on the existence, nonexistence and classification of radial positive solutions of some weighted fully nonlinear equations involving Pucci extremal operators. Our study is entirely based on the analysis of the dynamics induced by an autonomous quadratic system which is obtained after a suitable transformation. This method allows to treat both regular and singular solutions in a unified way, without using energy arguments. This is a work in collaboration with Gabrielle Nornberg (ICMC/USP, Brazil) and Filomena Pacella (Sapienza Università di Roma, Italy).

References

[1] Liliane Maia, Gabrielle Nornberg and Filomena Pacella, A dynamical system approach to a class of radial weighted fully nonlinear equations, *Communications in Partial Differential Equations*, 2020, 1-30. https://doi.org/10.1080/03605302.2020.1849281