# Geometric regularity estimates for quasilinear evolution models

João Vitor da Silva [*]

In this lecture we establish geometric $C^{1+\alpha}$ regularity estimates for bounded solutions of certain nonlinear evolution models in divergence form whose prototype is the evolutionary $p-$Laplacian operator. The main insights to obtain such estimates are based on geometric tangential methods, and make use of systematic oscillation mechanisms combined with new intrinsic scaling techniques.

This is a joint work with Marcelo D. Amaral[1], Gleydson C. Ricarte[2] and Rafayel Teymurazyan[3].

# References

[1] M.D. Amaral, J.V. da Silva, G.C. Ricarte and R. Teymurazyan, *Sharp regularity estimates for quasilinear evolution equations.* To appear in **Israel J. Math.**

[2] J.V. da Silva, *Geometric $C^{1+\alpha}$ regularity estimates for nonlinear evolution models.* To appear in a special issue of **Nonlinear Analysis**: Nonlinear Potential Theory.

[*]Universidad de Buenos Aires - Argentina, email:`jdasilva@dm.uba.ar` ResearchGate:`https://www.researchgate.net/profile/Joao_Da_Silva12`.

[1]Universidade da Integração Internacional da Lusofonia Afro-Brasileira - UNILAB - Brazil, email:`marceloamaral@unilab.edu.br`.

[2]Universidade Federal do Ceará - Brazil, email:`ricarte@mat.ufc.br`.

[3]Universidade de Coimbra - Portugal, email:`rafayel@utexas.edu`.