## On the supercritical gKdV equation.

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In this talk, I plan to discuss some results for the supercritical gKdV equation, such as well-posedness, existence of maximizers for Airy-Strichartz inequalities, concentration of blow-up solutions and scattering. These results were obtained in collaboration with Ademir Pastor, Brian Pigott, Felipe Linares, Henrique Versieux and Nicola Visciglia. The author was partially supported by CNPq-Brazil and FAPEMIG-Brazil.

## References

- [1] L. G. Farah, F. Linares, A. Pastor and N. Visciglia, Large data scattering for the defocusing supercritical generalized KdV equation, to appear Communications in Partial Differential Equations.
- [2] L. G. FARAH AND A. PASTOR, On well-posedness and wave operator for the gKdV equation, Bulletin des Sciences Mathématiques, 137 (2013), 229–241.
- [3] L.G. FARAH AND B. PIGOTT, Nonlinear profile decomposition and the concentration phenomenon for supercritical generalized KDV equations, to appear Indiana University Mathematics Journal.
- [4] L.G. FARAH AND H. VERSIEUX, On the lack of compactness and existence of maximizers for some Airy-strichartz inequalities, Differential and Integral Equations, 31 (2018), 27–56.