

On Uniqueness Properties of Solutions to the Benjamin-Ono Equation

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This talk is concerned with some special uniqueness properties of solutions to the IVP associated to the Benjamin-Ono equation. These will be deduced as a consequence of some persistent properties in weighted Sobolev spaces. In particular, we shall show that the uniqueness results established in [1] do not extend to any pair of non-vanishing solutions of the BO equation. Also, we shall prove that the uniqueness result established in [1] under a hypothesis involving information of the solution at three different times can not be relaxed to two different times.

References

- [1] G. Fonseca and G. Ponce, *The IVP for the Benjamin-Ono equation in weighted Sobolev spaces*, J. Funct. Anal. **260** (2011), pp. 436–459.

Joint work with: German Fonseca (*UNAL*), Gustavo Ponce (*UCSB*)