

UFSCar

DEPARTAMENTO DE MATEMÁTICA

COLÓQUIO

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Falará sobre:

**Non-uniform dependence for
the periodic CH equation**

Resumo. We will show that continuous dependence on initial data of solutions to the periodic CH equation is optimal. More precisely, we shall prove that the solution map is not uniformly continuous in Sobolev spaces with exponent greater than $3/2$. This extends earlier results to the whole range of Sobolev exponents for which local well-posedness of CH is known. The crucial technical tools used in the proof of this result are a sharp commutator estimate and a multiplier estimate in Sobolev spaces of negative index. This is work in collaboration with Carlos Kenig and Gerard Misiołek.

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