

CMM PDE Seminar

Speaker: [Adán Corcho](#), Universidad de Córdoba (Spain)

Title: "[Well-Posedness results for non-isotropic perturbations of the nonlinear Schrödinger equation on cylindrical domains](#)".

Abstract: We consider a non-isotropically perturbed nonlinear Schrödinger equation posed on two-dimensional cylindrical domains of the form $T \times \mathbb{R}$ and $\mathbb{R} \times T$. This equation arises in models describing wave propagation in fiber arrays.

In this talk, we present several well-posedness results for initial data belonging to Sobolev spaces. For the cylindrical domain $T \times \mathbb{R}$, we establish global well-posedness in $L^2 \times L^2$ for small initial data by proving an $L^4 - L^2$ Strichartz-type inequality. In the case of the domain $\mathbb{R} \times T$, we were unable to adapt the same estimate, so we employed a different approach to obtain well-posedness for data with regularity above L^2 regularity.

These results are part of a joint work with M. Panthee (UNICAMP, Brazil) and M. Nogueira (Federal University of Itajubá, Brazil).

Wednesday, June 18th at 12:10 pm.

Venue: DIM seminar room, Beauchef 851, 5th floor.

Zoom: <https://uchile.zoom.us/j/93613339766pwd=vB3J7Vhb0EX3kQDHfH741CKN19YKQz.1>

For further information, see our webpage: <https://eventos.cmm.uchile.cl/pdeseminar/>

