

Closability of differential operators and structure of currents

Tuesday, June 25, 2024 11:30 AM (1 hour)

I will discuss recent results concerning the closability of certain directional derivative and Jacobian-type differential operators and their implications for the structure of flat chains and metric currents. Additionally, I will present a new, elementary proof of Ambrosio and Kirchheim's flat chain conjecture, in the case of 1-dimensional currents. This conjecture asserts that metric currents in the Euclidean space correspond to Federer-Fleming flat chains. Our new proof sheds light on the obstructions that one needs to face towards a positive answer to the conjecture in full generality. This is based on joint works with G. Alberti, D. Bate, and A. Merlo.

Presenter: MARCHESE, Andrea (Università di Trento)