
Barcelona Analysis Seminar **2022–2023**

URL. <https://mat.uab.cat/web/seminarianalisi/>**Date.** October 20, 2022**Time.** 15:00 CET**Room.** B3 (Universitat de Barcelona)**Online streaming (Zoom).** [Click here to join.](#)

Energy methods for nonsymmetric nonlocal operators

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In this talk we consider parabolic equations driven by nonlocal operators with a nonsymmetric jumping kernel. In contrast to the symmetric case, nonsymmetric nonlocal operators have not yet been studied systematically. Our emphasis is on Hölder regularity estimates and (full) Harnack inequalities for weak solutions to such equations. Moreover, we discuss two-sided estimates for the fundamental solution to the corresponding Cauchy problem. We are able to connect the theory of nonsymmetric nonlocal operators with the important results of Aronson-Serrin, Ladyzhenskaya-Solonnikov-Ural'tceva, and Aronson in the local linear case. This talk is based on joint works with Moritz Kaßmann.