1171-35-117   **Simon Bortz***, 345 Gordon Palmer Hall, 345 Gordon Palmer Hall, Tuscaloosa, AL 35487.
Non-local aspects of (local) parabolic equations.

We discuss the role of the half-order time derivative in the study of (local) parabolic equations. In particular, we discuss how this object appears in the regularity theory and the study of parabolic singular integral operators. Finally, we will discuss some more recent developments that connect parabolic potential theory and parabolic geometric measure theory, where this half order time derivative (still) plays a fundamental role. A particular difficulty is that fractional derivative conditions are not as intuitive geometrically as, say, a Hölder condition. (Received August 09, 2021)