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Weak well-posedness of SDEs with divergence-free drifts

We discuss results on weak well-posedness of SDEs with time-inhomogeneous divergence-free singular drifts. These drifts belong to a large class of (form bounded-type) drifts containing e.g. the largest possible Morrey class, which brings us close to the minimal assumptions on the drift such that the corresponding parabolic equation still admits a regularity theory. Our proofs use De Giorgi-Moser's method supplemented with a new iteration procedure, earlier results proved using Nash's method. This is a joint work in progress with D. Kinzebulatov.