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ONE WORLD OPTIMIZATION SEMINAR

May 25th, 2020 @ 15:00 CEST (Central European Summer Time)

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Back to Single-Resolvent Iterations, with Warping

Abstract. The scope of the classical proximal point algorithm for finding a zero of a monotone operator may seem rather limited. For this reason, the field of operator splitting has moved away from single-resolvent iterations and significantly expanded in various directions. We introduce a generalization of the standard resolvent, called warped resolvent, which is constructed with the help of an auxiliary operator. This notion will be shown to be a central tool which not only underlies a broad range of existing algorithms, but also serves as a platform to design new classes of splitting methods. The discussion will include Bregman-based splitting in reflexive spaces, primal-dual methods, inertial methods, systems of monotone inclusions, and best approximation methods.

Based on preprints and on-going work with M. N. Bui.

The link of the zoom-room of the meeting and the corresponding password will be announced the day before the talk on the mailing list of the seminar, to which one can subscribe on <https://owos.univie.ac.at>.