

Moduli of regularity and rates of convergence for Fejér monotone sequences

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Abstract

In this talk we are concerned with the concept of modulus of regularity as a tool to analyze the speed of convergence for classes of Fejér monotone sequences which appear in fixed point theory, monotone operator theory, and convex optimization. This concept allows for a unified approach to a number of notions studied in these fields, as well as to obtain effective rates of convergence for several algorithms. This talk is based on the work [U. Kohlenbach, G. López-Acedo, A. Nicolae, Moduli of regularity and rates of convergence for Fejér monotone sequences, *Israel J. Math.* 232 (2019), 261–297].