Inequalities for the spectral radius of non-negative matrices and max algebra

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Abstract: In the first part of the talk some inequalities for the spectral radius of infinite non-negative matrices will be presented. In particular, some applications of the inequalities on the Hadamard weighted geometric mean will be outlined. This includes the Cohen's convexity theorem and the inequalities between the spectral radius of Hadamard-Schur product and the usual product of matrices, which received considerable attention recently.
In the second part of the talk we will introduce the algebraic system max algebra and present some results on the spectral radius in max algebra.
Some of the results are joint work with Roman Drnovšek and Vladimir Müller.