This is a review text file submitted electronically to MR.

Reviewer: Znojil, Miloslav

Reviewer number:

Address:
NPI, 250 68 Rez,
Czech Republic
znojil@ujf.cas.cz

Author: This line will be completed by the MR staff.

Short title: This line will be completed by the MR staff.

Control number: 1886432

Primary classification: 90C20

Secondary classification(s): 90C26 65F40 15A48 15A09

Review text:

The paper is motivated by a quadratic optimization problem specified as a minimization of a quadratic, admittedly non-convex and non-concave polynomial f(x) in n variables x considered on a certain r-parametric set K [cf. eq. (5.1)]. Assuming that f(x) is not unbounded from below on K, this problem is re-phrased as a search for the minimal parameter h=h(threshold) at which a certain r-dimensional "parametral matrix" A(h) (which is linear in h) ceases to be CP (= copositive, meaning that the mean value ¡z—A—z¿ stays nonnegative for all the non-negative r-plets z). An algorithm which finds the value of h(threshold) is then developed for the solution of the problem but, before all that is done, we are presented with the detailed survey/completion of the underlying perturbed-matrix-inversion theory (cf. the title).