

Erratum

for the paper “Solving nonconvex optimization problems - How GloptiPoly is applied to problems in robust and nonlinear control” by Didier Henrion and Jean-Bernard Lasserre, published in the IEEE Control Systems Magazine, Vol. 24, No. 3, pp. 72–83, 2004.

Known typos and errors:

- on page 74, bottom of second column, entry (2,2) in the input matrix of the linearized helicopter model is equal to 3.5446 (not 3.5450);
- in figure 2 (page 76) and figure 3 (page 78), green dots which are not at the intersection of two dark blue lines must be discarded;
- in figure 4 (page 78), green dots at approximate positions $x_1 = 0$, $x_2 = 2$ and $x_1 = 1$, $x_2 = -0.5$ must be discarded;
- in example 1 (page 77), the first constraint must read $3 + 2x_2 - x_1^2 - x_2^2 \geq 0$ (not $3 - 2x_2 - x_1^2 - x_2^2 \geq 0$); consequently, the first scalar constraint in the LMI relaxation \mathbb{Q}_1 must read $3 + 2y_{01} - y_{20} - y_{02} \geq 0$ (not $3 - 2y_{01} - y_{20} - y_{02} \geq 0$); in the LMI constraint at the bottom of page 77, coefficient -2 must be replaced with $+2$ in all the nine entries of the matrix;
- in example 2 (page 78), the first constraint must read $3 + 2x_2 - x_1^2 - x_2^2 \geq 0$ (not $3 - 2x_2 - x_1^2 - x_2^2 \geq 0$); consequently, the first scalar constraint in the LMI relaxation \mathbb{Q}_1 must read $3 + 2y_{01} - y_{20} - y_{02} \geq 0$ (not $3 - 2y_{01} - y_{20} - y_{02} \geq 0$).

We are grateful to Salvador Saucedo and Anders Helmersson for their feedback.

Didier Henrion, Jean-Bernard Lasserre
LAAS-CNRS, Toulouse, October 20, 2004