ERRATA

Erratum: “On the Boundedness of Outer Polyhedral Estimates for Reachable Sets of Linear Systems” [Computational Mathematics and Mathematical Physics, 48 (6), 918 (2008)]

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When translating from Russian to English some errors and incorrectnesses were made. We point out only the most disagreeable of them.

Inasmuch as the mishmash in terms of *tight*, *tough*, *touching* and *tangent* estimates was made, the following comments should clarify the situation. The term *tight* is well known [5]. The definition of the *tight* estimate is reproduced in the 6-th paragraph from the top on p. 919. The term *touch* is implicitly used by the translator as a synonym of the this term *tight* (line 21 from the bottom on p. 918, line 25 from the top on p. 919, line 8 from the top on p. 920). The estimates which are called *touching* in previous papers of the author (see, for example, reference [8] in the paper) here are called *tangent*. All right! Let the term *tangent* be accepted in the present paper. Then the first part of the phrase with the definition of the tangent estimates (in the 6-th paragraph from the top on p. 919) should be:

An outer polyhedral estimate of $\mathcal{Q}$ is called tangent if it is tight in the direction of n vectors that are biorthogonal to the columns of its orientation matrix...

The phrase in lines 6–2 from the bottom on p. 920 should be:

It is shown that the estimates may be unbounded and at that $q(t) \triangleq \text{Abs} P(t)\pi(t) \rightarrow \infty$ as $t \rightarrow \infty$ not only in the case of (2.13) (for $V=I$, this is the wrapping effect, which is well-known in interval analysis [4]) but also in the case of (2.11) if $\mathcal{R}(\cdot)$ satisfies the nondegeneracy condition

$$\mathcal{R}(t) \supseteq \mathcal{P}(r(t), I, \varepsilon_0 e), \quad t \in [0, \infty), \quad \text{where } \varepsilon_0 > 0, \quad e = (1, 1, \dots, 1)^\top. \quad (2.14)$$

Lemma 5 (p. 926) should be:

Let A be a stable and simple matrix, T be the matrix from (3.4), and the matrices $\tilde{V} = TV$ and $\tilde{W} = V^{-1}T^{-1}$ be partitioned into the respective blocks $\tilde{V}_i^j \in \mathbb{R}^{v_i \times v_j}$ and $\tilde{W}_j^i \in \mathbb{R}^{v_j \times v_i}$ ($i, j = 1, 2, \dots, m$). Let A have two eigenvalues λ_i and λ_j with distinct real parts (to be definite), let

$$|\text{Re } \lambda_i| < |\text{Re } \lambda_j|. \quad (5.3)$$

Then, if condition (2.14) is satisfied and V is such that

$$Z_i^j \neq 0 \in \mathbb{R}^{v_i \times v_j}, \quad \text{where } Z_i^j \triangleq \sum_{k=1}^m \text{Abs } \tilde{V}_i^k \text{Abs } \tilde{W}_k^j, \quad (5.4)$$

then the corresponding (by virtue of (2.9)–(2.11)) estimates $\mathcal{P}(t)$ are unbounded and we have $\|q(t)\| \geq \text{Const} \cdot \varepsilon_0 \cdot e^{(|\text{Re } \lambda_j| - |\text{Re } \lambda_i|)t}$; where $\text{Const} = \text{Const}(V) > 0$. If V is such that any pair λ_i and λ_j satisfying (5.3) obeys the condition

$$Z_i^j = 0 \in \mathbb{R}^{v_i \times v_j}, \quad (5.5)$$

then the corresponding estimates $\mathcal{P}(t)$ are bounded for $t \in [0, \infty)$.

In lines 3, 4 and 5 from the top of p. 922, the notation $\mathcal{P}_V^+$ for outer tangent estimates of sets should be replaced by $\mathbf{P}_V^+$.

The first formula in line 3 from the bottom of p. 930 should be

$$\partial\varphi_1(U) = \sum_{\alpha, \beta=1}^n \partial\varphi_1^{\alpha\beta}(U)\pi_\beta.$$