CORRECTION

Correction to: Inductive linearization for binary quadratic programs with linear constraints

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1 Correction to: 4OR https://doi.org/10.1007/s10288-020-00460-z

In the affiliation part of page 1, "Endenicher Allee 19A" has become "Friedrich-Hirzebruch-Allee 8"

In Section 2 Linearization methods for BQPs, "explicit" should be omitted

In Section **3 Inductive linearization**, "We will show in the following that this is "automatically" the case for binary x_i, x_j if three handy consistency conditions are satisfied, and if we take care that the induced constraints (9)–(11) satisfy $a_k \geq 0$ and $b_k \geq 0$. The latter is immediate if the same properties already hold for the original constraints employed to induce (6)–(8). We assume this throughout the rest of this paper since it facilitates the readability of the proofs considerably. Nevertheless, as expounded in the appendix, these properties can also be established without loss of generality (even almost obliviously) if the original constraints selected for multiplications do not (entirely) fulfill these properties." should have read "We will show in the following that this is "automatically" the case for binary x_i, x_j if three handy consistency conditions are satisfied. Since this facilitates the readability of the proofs considerably, let us assume for the moment that we have $a_k \geq 0$ and $b_k \geq 0$ for all $k \in K$. As expounded in the appendix, the general case can be handled without loss of generality either by establishing these properties explicitly or by imposing the implications of the three consistency conditions in an adapted fashion."

In Section **3 Inductive linearization**, "is only necessary" should have read "only needs to be considered"

In Section **3 Inductive linearization**, "Suppose first that ($_*E_i$) exists" should have read "Suppose first that ($_*E_j$) exists"

In Section **3 Inductive linearization**, "and that $y_{ij}=0$ as otherwise" should have read "and that $y_{ij}<1$ as otherwise"

The original article can be found online at https://doi.org/10.1007/s10288-020-00460-z.

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In Section **3 Inductive linearization**, in the underbrace below y_{ij} in the expression labeled $({}_*`E_j)$, "=0" should have read "<1"

In Section **3 Inductive linearization** of this article, "This implies, however, that the other summands on the left hand side of $({}_*`E_j)$ need to compensate for the amount of $a_k^i > 0$. Thus, there must be some $h \in I_k$, $h \neq i$, such that $y_{hj} > 0$ (or $y_{jh} > 0$) while $x_h = 0$." should have read "In other words, the left hand side of $({}_*`E_j)$ is larger by an amount of $a_k^i(1 - y_{ij}) > 0$. This implies, however, that there must be some $h \in I_k$, $h \neq i$, such that $y_{hj} > 0$ (or $y_{jh} > 0$) while $x_h = 0$."

In Section **3 Inductive linearization** of this article "α_k^h" should have read "a_k^h"

In Section **3 Inductive linearization** of this article "$(b_k - a_k^j)(1 - x_j)$" should have read "$b_k(1 - x_j)$"

In Section 4 Obtaining a compact inductive linearization (automatically), "tupel" should have read "tuple"

In Section 4 Obtaining a compact inductive linearization (automatically), "(21)"-this label should have been placed at the right of the fourth-last expression/line

In Section 4 Obtaining a compact inductive linearization (automatically), "if either only equations or inequalities are" should have read "if only equations are"

In Section 5.2 A scenario with a strictly stronger linear relaxation, "Notably, the scenario described in Theorem 9 includes half-integral solutions which are feasible for the linear relaxations of many integer programming formulations of quadratic combinatorial optimization problems." should be omitted

In Section **6.1 The quadratic assignment problem,** "—" should have read "–"

In Section 6.3 The quadratic 0–1 knapsack problem, "employed inequalities of type (8)" should have read "employed inequalites of type (7)"

In Section 6.3 The quadratic 0–1 knapsack problem, equations "(36) (37) (38) (39)" should have been removed

In Section 6.3 The quadratic 0–1 knapsack problem, "However, the inequalities (1)–(3) of the "standard linearization" are not implied in the general case of arbitrary a_j, $j \in J$, and b." should have read "However, in the general case of arbitrary a_j, $j \in J$, and b, an implication of the "standard linearization" inequalities (1)–(3) cannot be expected."

In section **Appendix: normalization of linear constraints in binary optimization,** "left as well as on the right" should have read "left and on the right"

In section **Appendix: normalization of linear constraints in binary optimization,** "(40)" should have read "(36)"

In section **Appendix: normalization of linear constraints in binary optimization,** "in order to obtain a linearization constraint with a non-negative left hand side." should have read "such that the respective linearization constraint imposes the necessary implications on their value."

The original paper has been corrected.