



Automatic Dantzig-Wolfe Reformulation of Mixed Integer Linear Programs

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Correction sheet - PhD Thesis “Automatic Dantzig-Wolfe Reformulation of Mixed Integer Linear Programs” by Jens Vinther Clausen

- Page 3 definition 1.1: λ_p can be negative in a linear combination.
- Page 4 definition 1.12: The definition of extreme rays can be more precise. First of all we exclude the 0 vector from the extreme rays. Secondly, the two rays in the linear combination must be non-equivalent, i.e. not a multiple of each other.
- Page 15 final block of text: x in “ $\{x \in \mathbb{R}^{n_i} | D_i x_i \leq b_i\}$ ” and “ $X_i = \text{conv}\{x \in \mathbb{Z}^{n_i} | D_i x_i \leq b_i\}$ ” should be x_i .
- Page 65 section 2.3: The variables in the example are x_2 and x_3 , not \bar{x}_2 and \bar{x}_3 . Furthermore, $\mathcal{X}_{ij} = \{\bar{x}_2, \bar{x}_3\}$ should be $\mathcal{X}_{12} = \{x_2, x_3\}$.
- Page 69: “This means that any solution to the smaller LP is naturally integer.” should instead read “This means that any basic solution to the smaller LP is naturally integer.”
- Page 73: The phrase “the optimal solution” appears twice on this page and should instead read “an optimal extreme point solution”.
- Page 80: “The first two terms of (2.49) are simply the original objective of SL.” should read “The first two terms of (2.49) are simply the original objective of IP.”
- Page 104 section 3.1 first line: “*monomials* S_i ” should be “*monomials* M_i ”.
- Page 107: “Section 2.5” should be “Section 3.6”.
- Page 109: “Table ??” should be “Table 3.1”.
- Page 110: First instance of “Table ??” should be “Table 3.1”, the remaining two instances of “Table ??” should be “Table 3.2”.
- Page 111: “Table ??” should be “Table 3.2”.
- Page 112: The first sum should run to $n - k$ not to $n - 1$.
- Page 138: “CPLEX version 2.9” should read “CPLEX version 12.9”.
- Page 153: “Finally, [Mitchell, 1997] and [Basso et al., 2020]” should read “Finally, [Basso and Ceselli, 2018] and [Basso et al., 2020]”.
- Page 155: “(for alternative ideas see section and strong branching)” should be removed.
- Page 171 section 4.4.2: “54 instances” should be “48 instances”.