

A ADDITIONS AND CORRECTIONS TO PUBLICATIONS

Publication [P1]:

- On page 77 the claim that “fairness need not be taken into account, if we know we are dealing with a safety specification.” is only true for *machine closed* [1] fairness specifications. A fairness property is machine closed if does not rule out any finite behaviour. For instance, fair Kripke structures are not machine closed.
- The pseudocode algorithm description starting on page 79 has two errors: the removal of σ from S' should be done after the **od** on the next line, and we should not add elements to X on the last but third line without checking the if the element has been seen before (the set Q). See Figure 3.1 on page 17 for the complete and corrected pseudocode.

Publication [P2]:

- The Petri net in Figure 1 on page 300 has a bug: the arc from the place “busy” to the transition “go_crit_r” should be reversed
- In the proof of Theorem 1 on page 307, part (a) contains a numbering inconsistency. The sentence “otherwise if $t_i \in T_V$ set $j = j + 1$ ” should read “otherwise (iii) if $t_i \in T_V$ set $j = j + 1$ ”. This makes the numbering consistent with the description of the steps that follows.
- On page 307, the claim that “. . . we then have a solution which traverses the product three times in the worst case by first using Valmari’s one-pass algorithm any illegal livelocks. If no illegal livelocks are found we can use the standard nested depth first algorithm to find any illegal infinite traces.” is incorrect. The best known algorithm for the tester verification requires four passes of the state space [P3].

Publication [P4]:

- In Section 3, the table defining the translation is missing cases for the \wedge -operator and the \vee -operator. The missing cases are:

$:=$	$i \leq k$	$i = k + 1$
$ \psi_1 \wedge \psi_2 _i$	$ \psi_1 _i \wedge \psi_2 _i$	$ \psi_1 _i \wedge \psi_2 _i$
$ \psi_1 \vee \psi_2 _i$	$ \psi_1 _i \vee \psi_2 _i$	$ \psi_1 _i \vee \psi_2 _i$

- In Section 3.1, in the table defining the basic optimised encoding, all occurrences of φ should be replaced by ψ . For completeness the cor-

rect table is reproduced below.

$:=$	$i \leq k$	$i = k + 1$
$ \mathbf{G} \psi _i$	$ \psi _i \wedge \mathbf{G} \psi _{i+1}$	$\bigvee_{j=1}^k (l_j \wedge \langle\langle \mathbf{G} \psi \rangle\rangle_j)$
$ \mathbf{F} \psi _i$	$ \psi _i \vee \mathbf{F} \psi _{i+1}$	$\bigvee_{j=1}^k (l_j \wedge \langle\langle \mathbf{F} \psi \rangle\rangle_j)$
$ \mathbf{G} \mathbf{F} \psi _i$	$ \mathbf{G} \mathbf{F} \psi _{k+1}$	$\bigvee_{j=1}^k (l_j \wedge \langle\langle \mathbf{F} \psi \rangle\rangle_j)$
$ \mathbf{F} \mathbf{G} \psi _i$	$ \mathbf{F} \mathbf{G} \psi _{k+1}$	$\bigvee_{j=1}^k (l_j \wedge \langle\langle \mathbf{G} \psi \rangle\rangle_j)$
$\langle\langle \mathbf{G} \psi \rangle\rangle_i$	$ \psi _i \wedge \langle\langle \mathbf{G} \psi \rangle\rangle_{i+1}$	\top
$\langle\langle \mathbf{F} \psi \rangle\rangle_i$	$ \psi _i \vee \langle\langle \mathbf{F} \psi \rangle\rangle_{i+1}$	\perp

Publication [P5]:

- On page 382, Section 2.1, the definition of π^i is not compatible with the definition of PLTL in Section 3.1. This can be remedied by replacing the sentence “Further, let π^i denote the suffix of π starting from the i :th state.” with “Further, let $\pi^i \models \psi$ denote the validity of ψ when evaluated at position i of π .”
- In Section 3.2, page 388, in the table at the top of the page the $\delta(\psi)$ should be $\delta(\varphi)$. Thus, the second column of the first row should read $0 \leq d \leq \delta(\varphi), 0 \leq i \leq k$.
- In Section 5 on page 395, we claim that “We not see how soundness for full PLTL could be achieved without performing virtual unrolling.”. It is actually possible. The encoding would need to be modified so that a loop could only be closed if $s_k = s_l$ and all subformulas would have the same truth values at k and l . The exact details are left for further work.