

Errata for “Cooperative Eco-Driving at Signalized Intersections in a Partially Connected and Automated Vehicle Environment”

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IN [1], the traffic volume of the left-turn movement was set to be extremely high (with significant queue spill back from the left-turn bay) in the microscopic traffic simulator. Although some explanation has been provided in the paper, we consider the simulation results to be non-representative. Therefore, we reran the simulation with more balanced values across different movements, and updated the simulation results in TABLE V on page 8 of [1] with the one shown below.

The numerical results summarized in both the abstract (page 1) and Section VI. Conclusions and Future Work (page 9) should be updated, where “more than 7% reduction on energy consumption

and up to 59% reduction on pollutant emission” should be changed into “more than 10% reduction on energy consumption and up to 56% reduction on pollutant emission” under the balanced demand, according to the updated TABLE V.

REFERENCES

- [1] Z. Wang, G. Wu, and M. J. Barth, “Cooperative eco-driving at signalized intersections in a partially connected and automated vehicle environment,” *IEEE Trans. Intell. Transp. Syst.*, vol. 21, no. 5, pp. 2029–2038, May 2020, doi: [10.1109/TITS.2019.2911607](https://doi.org/10.1109/TITS.2019.2911607).

TABLE V
SIMULATION RESULTS OF ENERGY CONSUMPTION AND POLLUTANT EMISSIONS

Scenario	Vehicle Composition	Energy		NO _x		HC		CO		CO ₂	
(1)	0% CED & 100% Conventional	4930.6 kJ/km		0.066 g/km		0.019 g/km		1.764 g/km		358.0 g/km	
(2)	0% CED & 100% EAD-Only	4758.9 kJ/km		0.061 g/km		0.017 g/km		1.614 g/km		345.5 g/km	
	Reductions ratio with respect to	Scce.(1)	Scce.(2)	Scce.(1)	Scce.(2)	Scce.(1)	Scce.(2)	Scce.(1)	Scce.(2)	Scce.(1)	Scce.(2)
(3)	10% CED & 90% Conventional	1.1%	-2.6%	7.0%	-0.2%	7.8%	-0.7%	7.7%	-1.0%	1.1%	-2.6%
(4)	20% CED & 80% Conventional	2.6%	-1.0%	14.8%	8.2%	16.1%	8.4%	15.5%	7.5%	2.6%	-1.0%
(5)	30% CED & 70% Conventional	4.0%	0.5%	21.3%	15.2%	23.2%	16.2%	22.3%	15.0%	4.0%	0.5%
(6)	40% CED & 60% Conventional	4.8%	1.3%	25.4%	19.6%	27.6%	20.9%	26.5%	19.6%	4.8%	1.3%
(7)	50% CED & 50% Conventional	5.6%	2.1%	30.1%	24.7%	32.5%	26.3%	31.5%	25.0%	5.6%	2.1%
(8)	60% CED & 40% Conventional	6.4%	2.9%	35.4%	30.4%	38.1%	32.4%	37.6%	31.7%	6.4%	2.9%
(9)	70% CED & 30% Conventional	7.7%	4.2%	39.9%	35.3%	42.7%	37.4%	42.4%	37.0%	7.7%	4.2%
(10)	80% CED & 20% Conventional	8.2%	4.8%	43.9%	39.6%	46.8%	41.9%	46.8%	41.7%	8.2%	4.8%
(11)	90% CED & 10% Conventional	9.8%	6.4%	49.0%	45.0%	51.9%	47.4%	52.8%	48.4%	9.8%	6.4%
(12)	100% CED	10.0%	6.6%	52.1%	48.4%	54.8%	50.6%	56.3%	52.1%	10.0%	6.6%

Manuscript received December 13, 2019; accepted December 13, 2019. Date of current version October 30, 2020. (Guoyuan Wu and Matthew J. Barth are co-first authors.) (Corresponding author: Ziran Wang.)

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Digital Object Identifier 10.1109/TITS.2019.2960147