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Correction to "Integrated Directional Derivative Gradient Operator"

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In the aforementioned paper [1] it was stated on page 510 that the proposed gradient operator achieves best performance when the operator parameters are $L = W = 1.8$ for a 5×5 neighborhood size, and $L = W = 2.5$ for a 7×7 neighborhood size. While all experimental results reported in that paper were obtained using the optimal parameter values, an oversight caused suboptimal operator masks to be given in Figs. 1 and 2 of the mentioned paper. The optimal operator masks are shown in Fig. 1.

1/10500

-116	-530	-668	-530	-116
-128	-335	-404	-335	-128
0	0	0	0	0
128	335	404	335	128
116	530	668	530	116

1/28224

-3	-348	-555	-624	-555	-348	-3
-142	-372	-510	-556	-510	-372	-142
-113	-228	-297	-320	-297	-228	-113
0	0	0	0	0	0	0
113	228	297	320	297	228	113
142	372	510	556	510	372	142
3	348	555	624	555	348	3

Fig. 1. Row derivative masks for 5×5 and 7×7 integrated directional derivative gradient operator. Column masks are obtained by 90° rotation of row masks.

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[1] O. A. Zuniga and R. M. Haralick, *IEEE Trans. Syst. Man Cybern.*, vol. SMC-17, no. 3, pp. 508–517, May/June 1987.

Correction to "A Decision Support System and a Heuristic Interactive Approach for Solving Discrete Multiple Criteria Problems"

B. MALAKOOTI

Three errata made in the aforementioned published paper[1] are corrected as follows.

On page 274, column 2, line 29 (in second paragraph of Section II), the line that reads "inequalities is strictly greater than and u is a positive" should have read "inequalities is strictly less than and u is a positive".

On page 277, the equation in the first column and the next two lines after the first paragraph, which appeared as

$$\text{“}V(X) = W_1 X_1 + W_2 X_2 + \cdots + W_k X_k$$

$W_1, \cdots, W_k$ where W is the normalized gradient. The assessed weights are normalized values of the gradient."
should have read

$$\text{“}V(X) = w_1 x_1 + w_2 x_2 + \cdots + w_k x_k$$

where $W = w_1, w_2, \cdots, w_k$ is the normalized gradient assessed in the vicinity of a given point, X^0. Hence if point X_1 is preferred to point X_2, (9) can be stated as

$$V(X_1) - V(X_2) = W(X_1 - X_2)$$
$$= w_1(x_{11} - x_{21}) + w_2(x_{12} - x_{22})$$
$$+ \cdots + w_k(x_{1k} - x_{2k}) > 0.\text{”}$$

On page 281, the line (in the first column) that reads "disregarded (i.e., constraints of type (3) can be disregarded" should instead read "disregarded (i.e., constraints of type (13) can be disregarded."

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[1] B. Malakooti, *IEEE Trans. Syst. Man Cybern.*, vol. 18, no. 2, pp. 273–284, Mar./Apr. 1988.