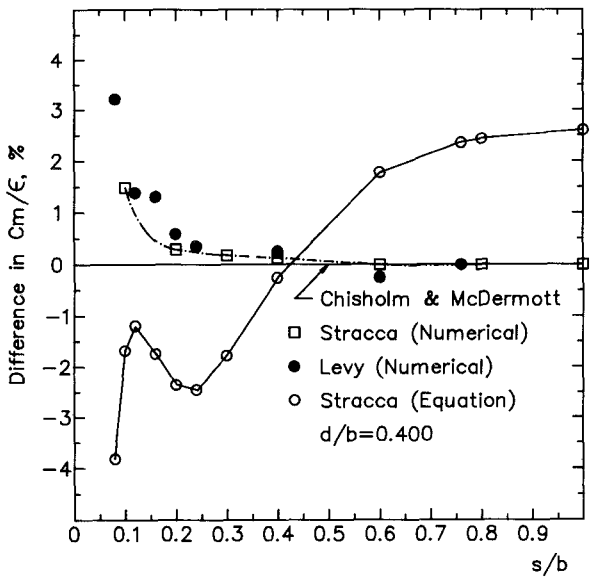

Fig. 2. Differences between values of C_m/ϵ. Chisholm and McDermott's equations are used as the basis of comparison. The broken line is a fit to values of C_m/ϵ derived from the accurate numerical results in [4].

Deviations between numerical data and values obtained with formulas (5) and (6) of [4] are much smaller than those in C_g/ϵ and C_m/ϵ as reported in the above letter. For example, for $d/b = 0.4$ (the same utilized here in Figs. 1 and 2) in the range of validity of our interpolating expressions ($0.12 \leqslant s/b \leqslant 3.6$) [4], the maximum deviations between numerical and interpolated values of Z_{ce} and Z_{co} are

$$0\% \leqslant \Delta Z_{ce} \leqslant 1.0\%$$
$$-0.03\% \leqslant \Delta Z_{co} \leqslant 1.4\%.$$

c) In the design of coupled-line filters or directional couplers, some parameters derived from Z_{ce} and Z_{co} are of importance, such as

$$Z_m = (Z_{ce} + Z_{co})/2$$
$$Z_g = \sqrt{Z_{ce} * Z_{co}}$$
$$m = (Z_{ce} - Z_{co})/(Z_{ce} + Z_{co}).$$

As far as the accuracy is concerned in evaluating these parameters, it is more convenient to use "ad hoc" expressions (obtained from interpolations of numerical data) than an indirect computation through the expressions for Z_{ce} and Z_{co}. A set of such equations, useful for design problems, is reported in [7]. For instance, the parameter m, which directly governs coupling both in directional couplers and in interdigital and combline filters, can be expressed as

$$m = M(d/b, s/b) * (\ln(\coth(\pi c/2b)))/(\ln(\coth(\pi d/4b)))$$

where $M(d/b, s/b)$ is a correcting term whose expression is reported in [7]. The above equation guarantees an accuracy with respect to the numerical data of better than 1 percent for $d/b = 0.4$.

Finally, we take this opportunity to correct a typing error that occurred in formula (4) of [4]: the exponent of the first term in square brackets should be $-1/2$.

References

[1] S Frankel, "Characteristic impedance of parallel wires in rectangular troughs," *Proc. IRE*, vol 30, pp. 182–190, Apr. 1942.
[2] R. M. Chisholm, "The characteristic impedance of trough and slab lines," *IRE Trans Microwave Theory Tech.*, vol. MTT-4, pp. 166–172, July 1956.
[3] R. Levy, "Conformal transformations, combined with numerical techniques, with applications to coupled-bar problems," *IEEE Trans. Microwave Theory Tech* , vol. MTT-28, pp 369–375, Apr. 1980.
[4] G. B. Stracca, G Macchiarella, and M. Politi, "Numerical analysis of various configurations of slab lines," *IEEE Trans. Microwave Theory Tech* , vol. MTT-34, pp 359–363, Mar. 1986.
[5] E. M. T. Jones and J. T. Bolljahn, "Coupled strip transmission line filters and directional couplers," *IRE Trans. Microwave Theory Tech* , vol. MTT-4, pp. 75–81, Apr. 1956.
[6] R. J. Wenzel, "Exact theory of interdigital band-pass filters and related coupled structures," *IEEE Trans. Microwave Theory Tech.*, vol. MTT-13, pp. 559–575, Sept. 1965
[7] G. B Stracca, G Macchiarella, M. Politi, and G. Dolci, "Design formulas for coupled slab-lines," *Alta Frequenza*, vol. LIV, no. 6, 1985.

Corrections to "New Quasi-Static Models for the Computer-Aided Design of Suspended and Inverted Microstrip Lines"

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The following errors appeared in the equations of the above paper[1]:

a) In equation (3), c_i should be read as C_i.
b) In equation (A2g), d^3 should be replaced by f^3.
c) In equation (A3h), (486.7425 + 7425 + 279.8...) should read (486.7425 + 279.8...), i.e., delete 7425.
d) In equation (A3k), −919.36661 should read +919.3661.
e) In equation (A2p), 161.2689 f^2 should read 161.2689 f^3.

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[1] R. S. Tomar and P. Bhartia, *IEEE Trans Microwave Theory Tech* , vol. MTT-35, pp. 453–457, Apr 1987.