

Comments and Corrections

Corrections to “Exact and Numerically Stable Closed-Form Expressions for Potential Coefficients of Rectangular Conductors”

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In the above paper [1], equation (8) should be

$$\begin{aligned}
 I(k, l, m, n) &= \int_{x_m}^{u_n} \int_{x_m}^{u_n} \int_{y_k}^{v_l} \int_{y_k}^{v_l} \frac{1}{r_{ij}} dx dy dz \\
 &= \frac{z^3}{3} \left[6(p^2 - 1) q S \left(\frac{q}{\sqrt{p^2 + 1}} \right) \right. \\
 &\quad + 6(q^2 - 1) p S \left(\frac{p}{\sqrt{q^2 + 1}} \right) \\
 &\quad + 6pS(p) + 6qS(q) - 12pqT \left(\frac{pq}{\sqrt{p^2 + q^2 + 1}} \right) \\
 &\quad + 4p^2 \left(\frac{1}{\sqrt{p^2 + q^2 + 1} + \sqrt{q^2 + 1}} \right. \\
 &\quad \left. - \frac{1}{1 + \sqrt{1 + p^2}} \right) \\
 &\quad + 2q^2 \sqrt{q^2 + 1} + 2p^2 \sqrt{p^2 + 1} \\
 &\quad \left. - 2(p^2 + q^2) \sqrt{p^2 + q^2 + 1} \right].
 \end{aligned}$$

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Equation (12) should be

$$\begin{aligned}
 I(k, l) &= \int_{x_k}^{u_l} \int_{x_k}^{u_l} \int_{y_0}^{y_1} \int_{z_0}^{z_1} \frac{1}{\hat{r}_{ij}} dx du dy dz \\
 &= \sum_{m=1}^2 \sum_{n=1}^2 (-1)^{m+n} \left[x^2 c_n \ln(b_m + \rho_{mn}) \right. \\
 &\quad - \frac{c_n^3}{3} \ln \frac{b_m + \rho_{mn}}{b_m + \tau_{mn}} + x^2 b_m \ln(c_n + \rho_{mn}) \\
 &\quad - \frac{b_m^3}{3} \ln \frac{c_n + \rho_{mn}}{c_n + \tau_{mn}} + 2x b_m c_n S \left(\frac{x}{\tau_{mn}} \right) \\
 &\quad - \frac{2b_m c_n}{3} (\rho_{mn} - \tau_{mn}) - \frac{x^3}{3} T \left(\frac{b_m c_n}{x \rho_{mn}} \right) \\
 &\quad \left. - b_m^2 x T \left(\frac{x c_n}{b_m \rho_{mn}} \right) - c_n^2 x T \left(\frac{x b_m}{c_n \rho_{mn}} \right) \right].
 \end{aligned}$$

We would like to point out that correct formulas were used for the numerical implementation in the paper and the experimental results shown in the paper are correct.

We regret our typographical errors and would like to thank Dr. Rafael Escovar from Mentor Graphics for bringing them to our attention.

REFERENCES

- [1] J. Jain, C.-K. Koh, and V. Balakrishnan, “Exact and numerically stable closed-form expressions for potential coefficients of rectangular conductors,” *IEEE Trans. Circuits Syst. II: Express Briefs*, vol. 53, no. 6, pp. 458–462, Jun. 2006.