

**ADDITIONAL CORRECTIONS TO SECOND YEAR CALCULUS, 4TH
PRINTING**

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Pages 240–241. [thanks to Tom Meyer at Bard College at Simon’s Rock] Equation (9.10) is incorrect. In (9.9), define the scalar field $f_k(\Delta\vec{x})$ to be the k th coordinate of $|\Delta\vec{x}|\vec{E}(\vec{c}, \Delta\vec{x})$, which is the k th coordinate of $\vec{F}(\vec{c} + \Delta\vec{x}) - \vec{F}(\vec{c}) - \vec{L}_c(\Delta\vec{x})$, and therefore is continuously differentiable at $\vec{0}$.

As at the bottom of page 240 and top of page 241, we use the mean value theorem to conclude that

$$\left| f_k(\vec{a} - \vec{c}) - f_k(\vec{b} - \vec{c}) \right| \leq \frac{\mu}{2\sqrt{n}} |\vec{a} - \vec{b}|,$$

and therefore

$$\left| |\vec{a} - \vec{c}|\vec{E}(\vec{c}, \vec{a} - \vec{c}) - |\vec{b} - \vec{c}|\vec{E}(\vec{c}, \vec{b} - \vec{c}) \right| \leq \frac{\mu}{2} |\vec{a} - \vec{b}|.$$

Page 359. The left side of equation (11.70) should be $-\mathbf{J}(\mathbf{E} - c^2\mathbf{B}dt)$