

Equation (1) in Section 2.1 was corrected in the manuscript. The constraint equation vector 'g' and its Jacobain matrix 'G' are function of both generalized coordinates 'u' and time 't'. The dependency of 'u' was not there and added to the manuscript.

Equation (1) had been written as,

$$\begin{aligned} \mathbf{M}(\mathbf{u})\ddot{\mathbf{u}}(t_i) + \mathbf{C}\dot{\mathbf{u}}(t_i) + \mathbf{K}\mathbf{u}(t_i) + \mathbf{G}_u^T(t_i)\boldsymbol{\lambda}(t_i) \\ = \mathbf{f}(\mathbf{u}, \dot{\mathbf{u}}, t_i) + \mathbf{f}_v(\mathbf{u}, \dot{\mathbf{u}}, t_i) \\ \mathbf{g}(t_i) = \mathbf{0}, \mathbf{G}_u(t_i) = \frac{\partial \mathbf{g}(t_i)}{\partial \mathbf{u}(t_i)} \end{aligned} \quad (1)$$

After the correction it becomes

$$\begin{aligned} \mathbf{M}(\mathbf{u})\ddot{\mathbf{u}}(t_i) + \mathbf{C}\dot{\mathbf{u}}(t_i) + \mathbf{K}\mathbf{u}(t_i) + \mathbf{G}_u^T(\mathbf{u}, t_i)\boldsymbol{\lambda}(t_i) = \mathbf{f}(\mathbf{u}, \dot{\mathbf{u}}, t_i) + \mathbf{f}_v(\mathbf{u}, \dot{\mathbf{u}}, t_i) \\ \mathbf{g}(\mathbf{u}, t_i) = \mathbf{0} \quad , \quad \mathbf{G}_u(\mathbf{u}, t_i) = \frac{\partial \mathbf{g}(\mathbf{u}, t_i)}{\partial \mathbf{u}(t_i)} \end{aligned}$$

The parentheses of 'g', 'G' and 'G^T' were updated.