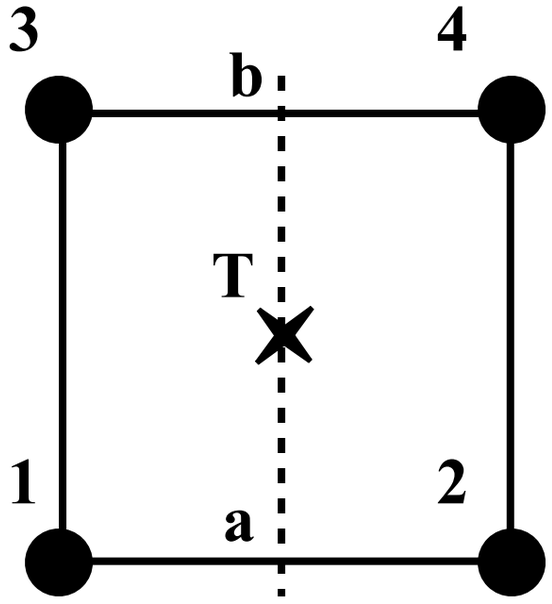

$$q_1, q_{x1}, q_2, q_{x2} \rightarrow q_a$$
$$q_{y1}, q_{xy1}, q_{y2}, q_{xy2} \rightarrow q_{ya}$$
$$q_3, q_{x3}, q_4, q_{x4} \rightarrow q_b$$
$$q_{y3}, q_{xy3}, q_{y4}, q_{xy4} \rightarrow q_{yb}$$

$$q_a, q_{ya}, q_b, q_{yb} \rightarrow q_T$$