

Electronic Supplementary Material 1

For each performance, 9 schemes of the SSTM and SPTM are provided in this Electronic Supplementary Material, in which the line DF is divided into 10 equal parts and select the 9 corresponding equipartition points (i.e., 9 representative schemes with different non-dimensional parameter combinations) of each mechanism to provide specific presentations. To facilitate the view, the coordinates \mathbf{P} are directly provided in the Tables.

A. Motion isotropy index

Motion isotropy performances of 9 schemes of the SSTM and SPTM are provided in Tables A.1 and A.2, respectively. For the SSTM (Table A.1), the values of G_{η_j} of 9 schemes are calculated as 0.0896, 0.2034, 0.3656, 0.6511, 0.4694, 0.4952, 0.4861, 0.4789, and 0.4732, respectively. For the SPTM (Table A.2), the values of G_{η_j} of 9 schemes are calculated as 0.0887, 0.1938, 0.3151, 0.4336, 0.4694, 0.4336, 0.3151, 0.1938, and 0.0887, respectively.

Table A.1. Motion isotropy performances of 9 schemes of the SSTM

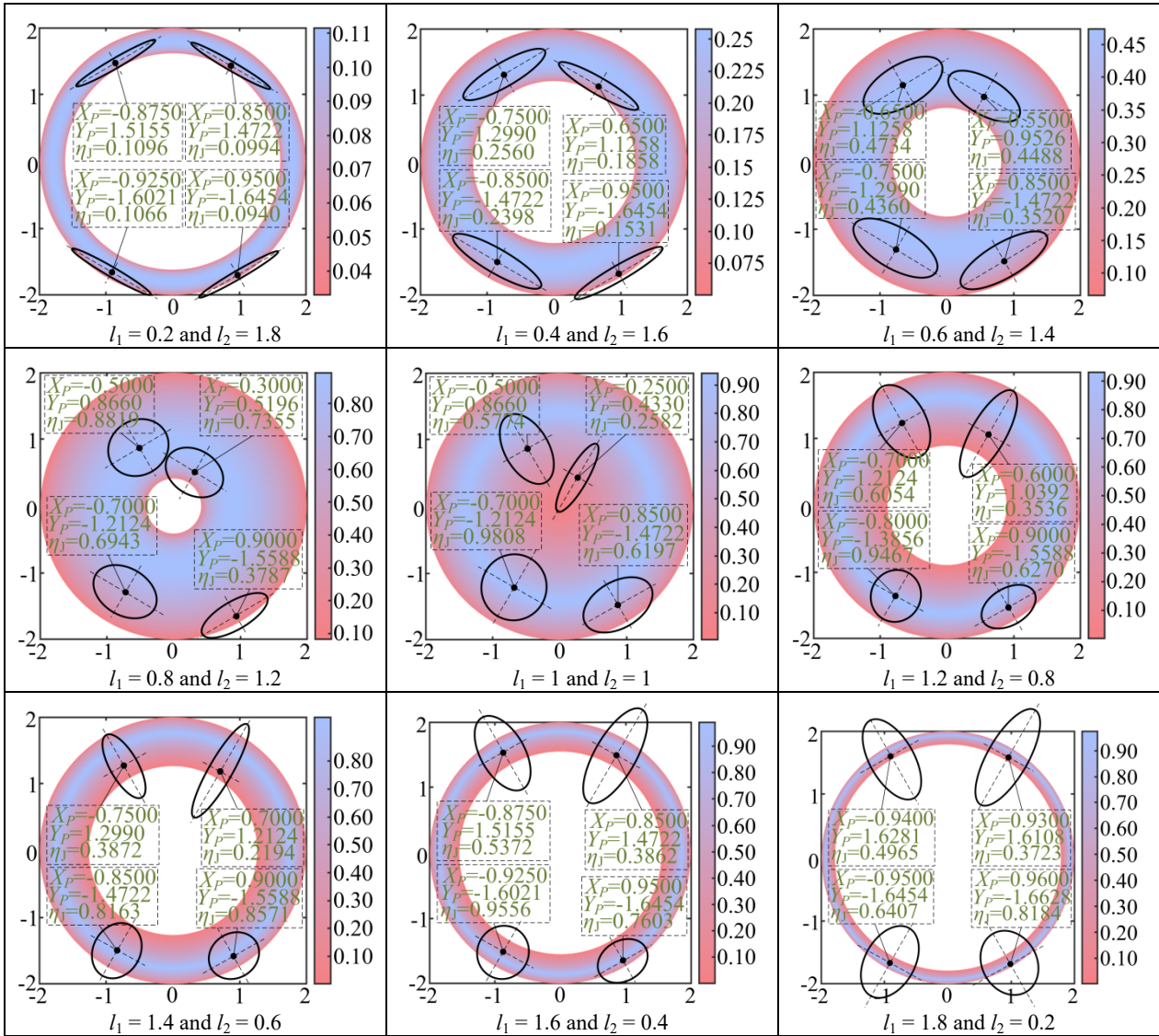
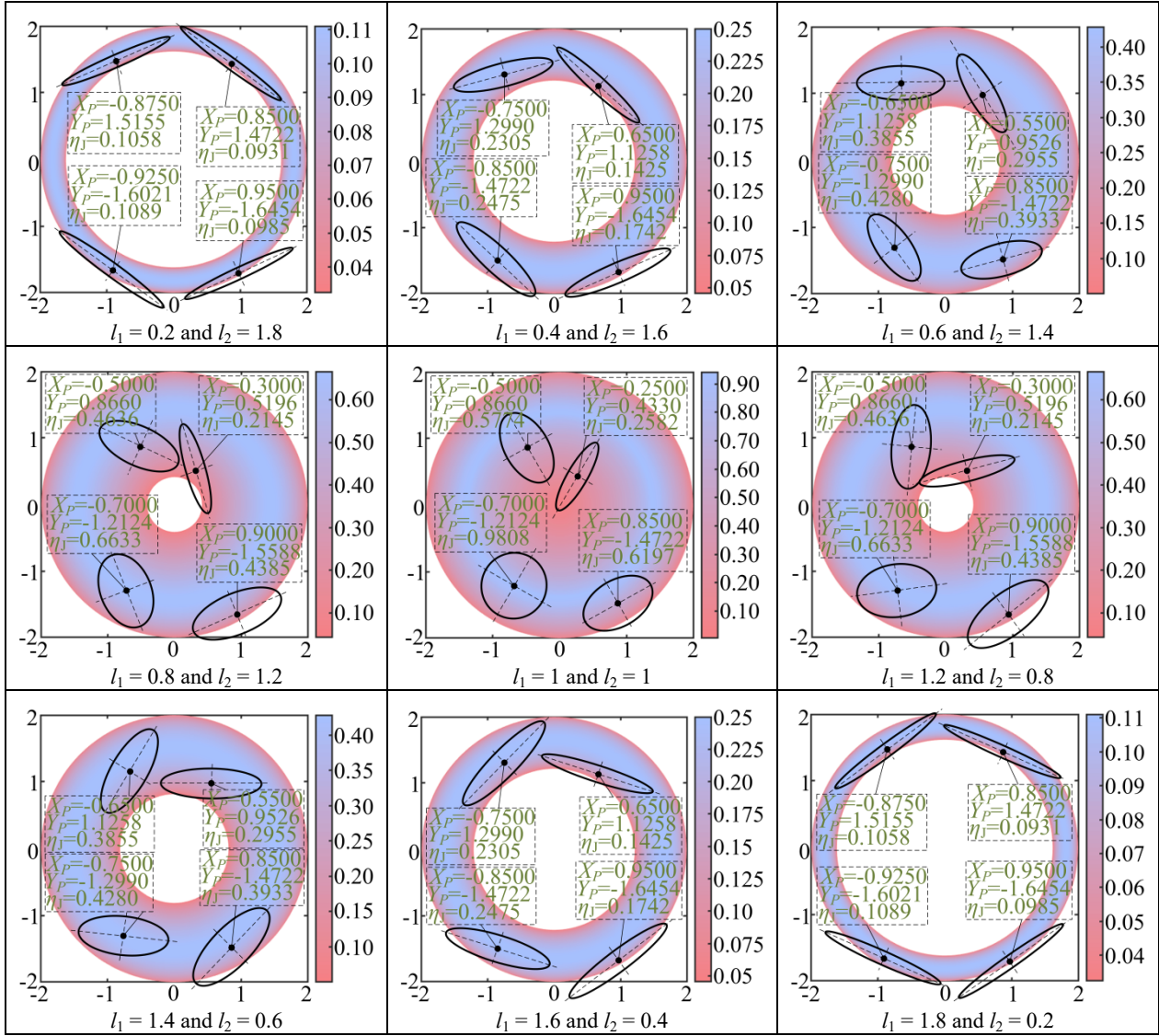


Table A.2. Motion isotropy performances of 9 schemes of the SPTM



B. Maximum force index

Maximum force performances of 9 schemes of the SSTM and SPTM are provided in Tables B.1 and B.2, respectively. The values of G_{ris} of 9 schemes of the SSTM (Table B.1) are calculated as 1.1108, 1.2490, 1.4259, 1.6584, 1, 0.6910, 0.6125, 0.5635, and 0.5278, respectively. The values of G_{ris} of 9 schemes of the SPTM (Table B.2) are calculated as 0.5556, 0.6250, 0.7143, 0.8333, 1, 0.8333, 0.7143, 0.6250, and 0.5556, respectively.

Table B.1. Maximum force performances of 9 schemes of the SSTM

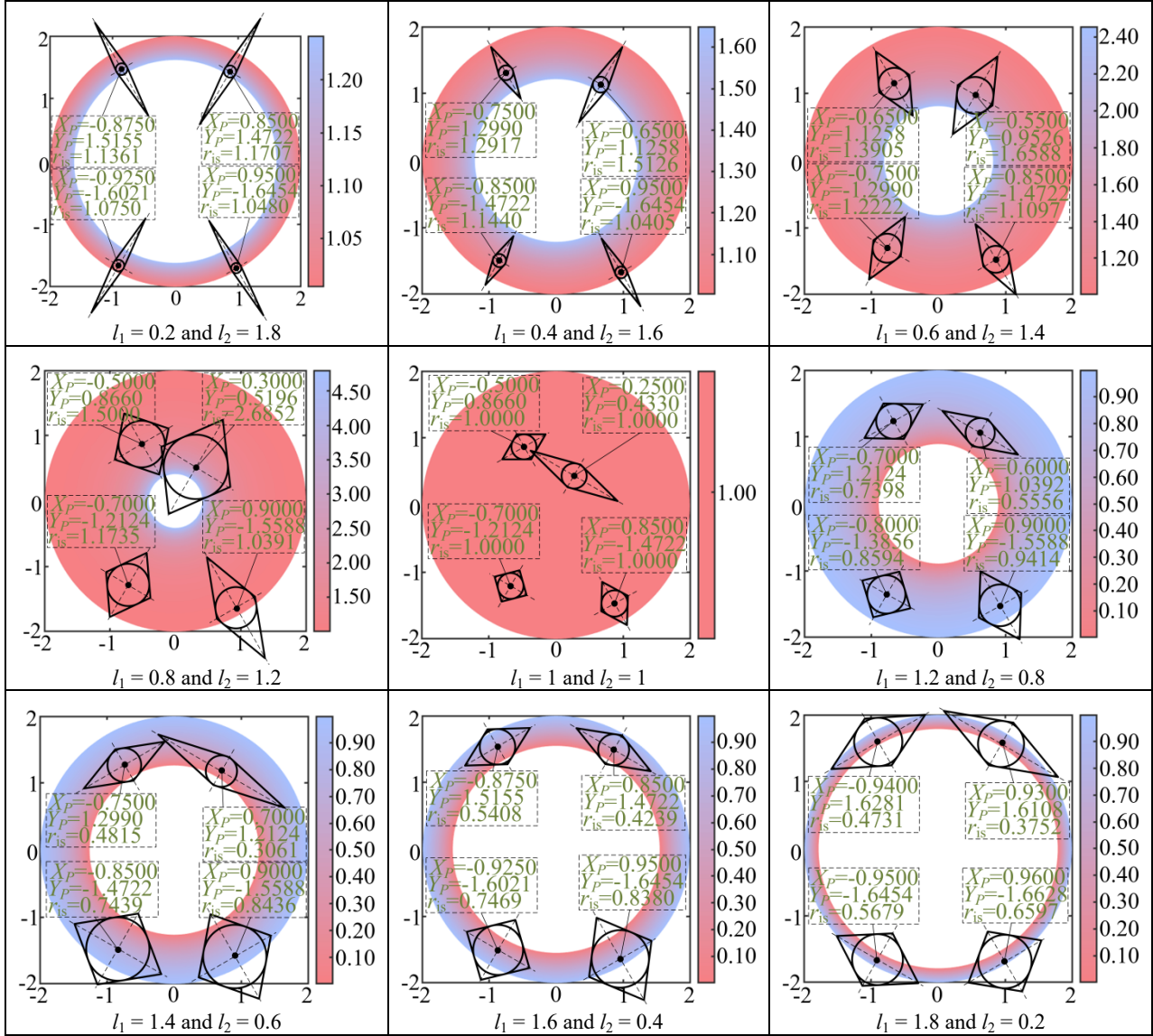
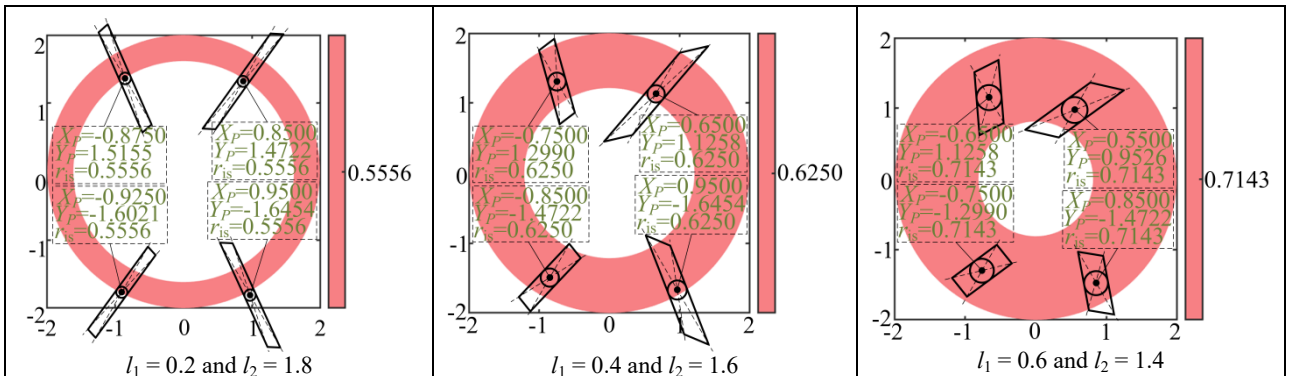
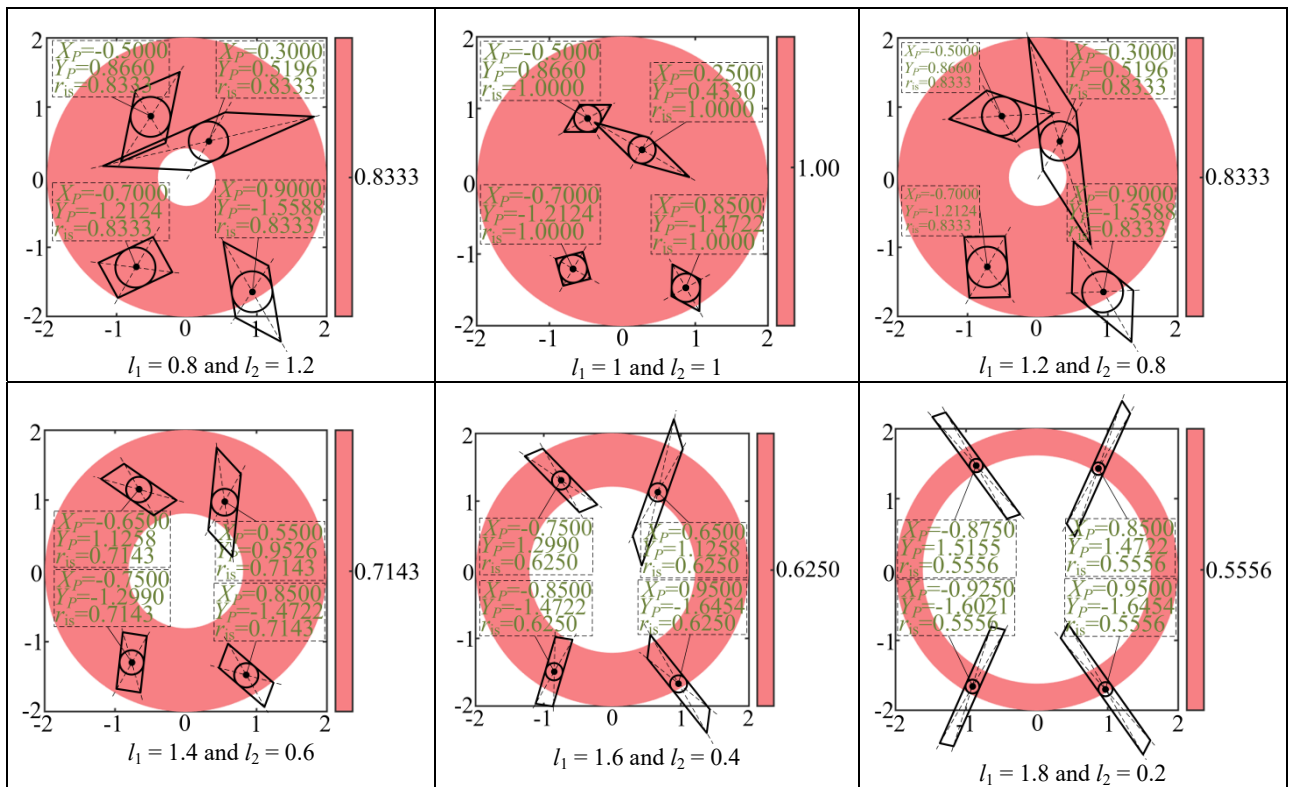


Table B.2. Maximum force performances of 9 schemes of the SPTM





C. Structural stiffness index

Structural stiffness performances of the SSTM and SPTM are evaluated in Tables C.1 and C.2, respectively. In Table C.1, the values of G_{ris} of 9 schemes of the SSTM are calculated as 1.6263, 1.3060, 1.0390, 0.8253, 1.6081, 7.372, 9.8250, 11.9200, and 17.5910, respectively. In Table C.2, the values of G_{ris} of 9 schemes of the SPTM are calculated as 3.2528, 2.6147, 2.0962, 1.7297, 1.6081, 1.7297, 2.0962, 2.6147, and 3.2528, respectively.

Table C.1. Structural stiffness performances of 9 schemes of the SSTM

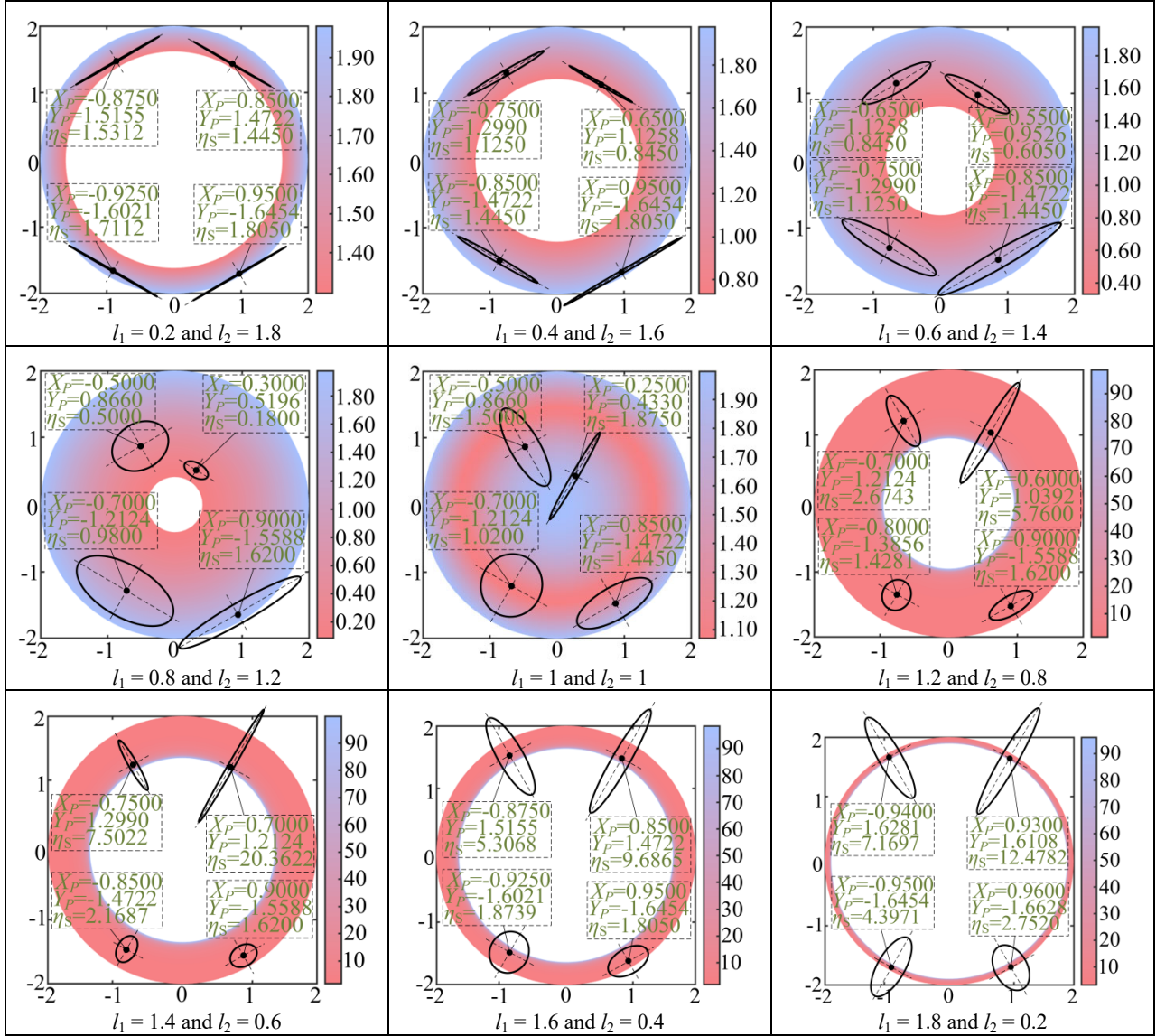


Table C.2. Structural stiffness performances of 9 schemes of the SPTM

