Supplementary Material

Seismic behavior and design of wall-EDD-frame systems

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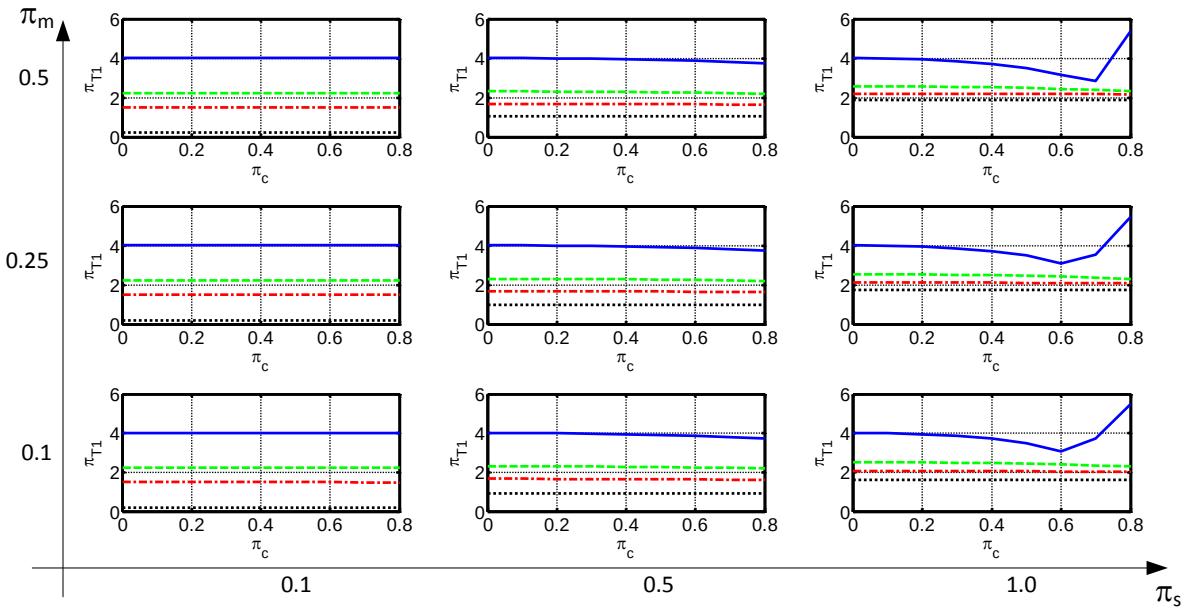
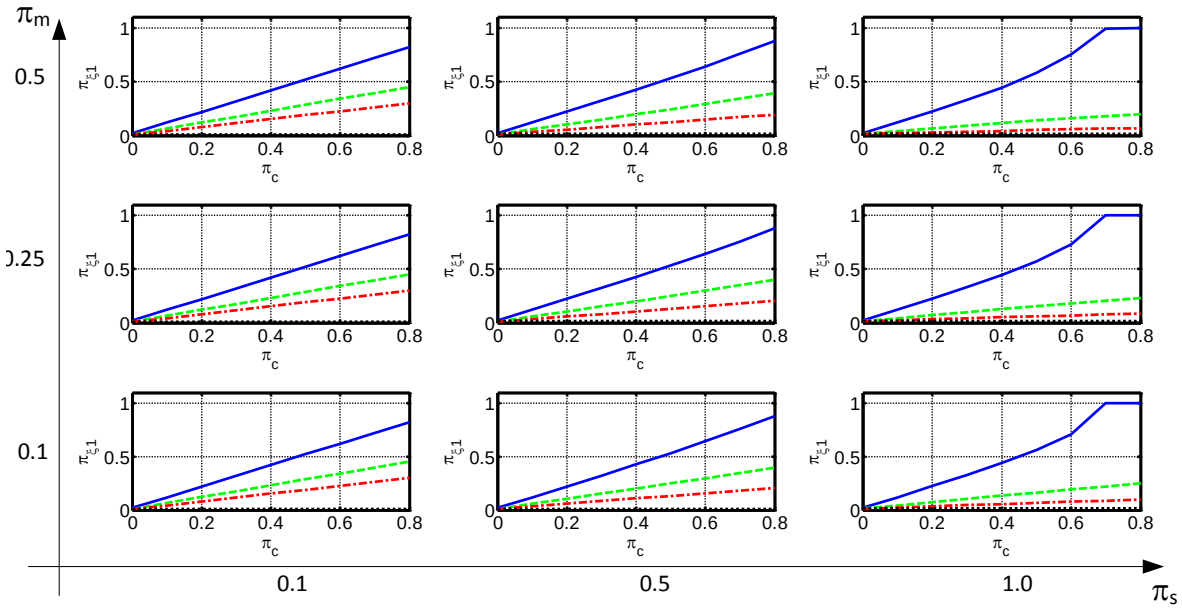
1. Supplementary Data

The supplementary data presents responses of interest of the system in their nondimensional form (that of **Equation 2** in the paper). **Supplementary Figures 1-3** present the periods and damping ratios of the first three modes; **Supplementary Figures 4-8** present the frame inter-story drift, the wall base shear, the frame base overturning moment, the wall base overturning moment and the frame acceleration, respectively; Finally, **Supplementary Figures 9-10** present the connection force and displacement, respectively. In all supplementary figures four lines appear. These represent connections by viscous dampers (continuous blue); a flexible spring ($\pi_k = 4.8$) and a viscous damper (dashed green); a stiffer spring ($\pi_k = 13.6$) and a viscous damper (dash-dotted red), and; a stiff connection (dotted black). To retrieve the dimensional responses, the nondimensional responses could be transformed using **Equation**

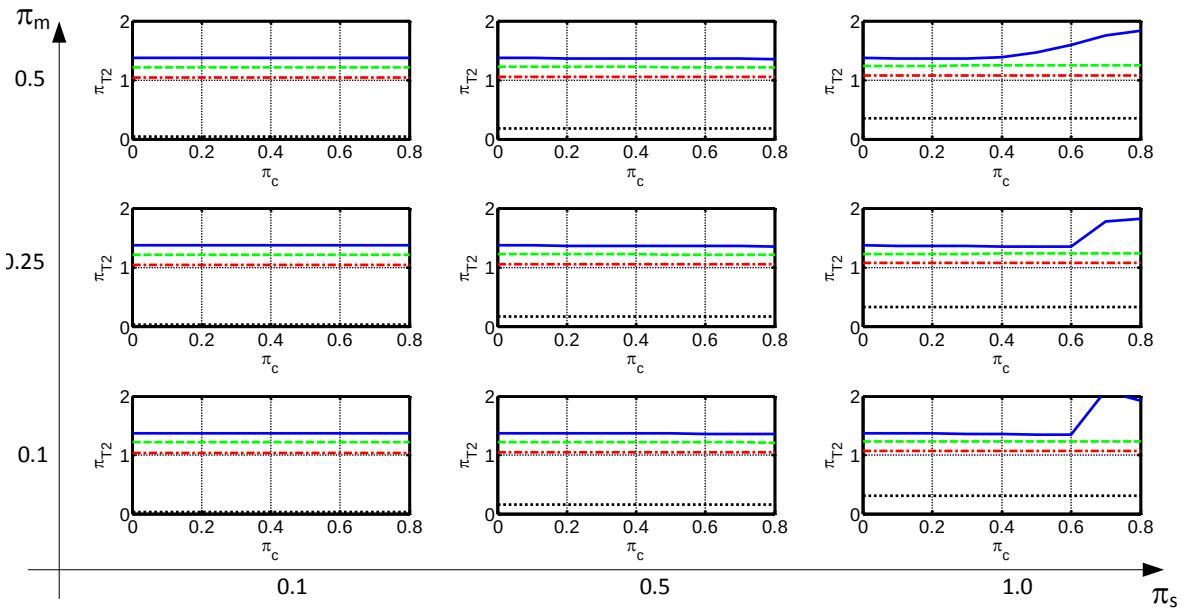


(a)

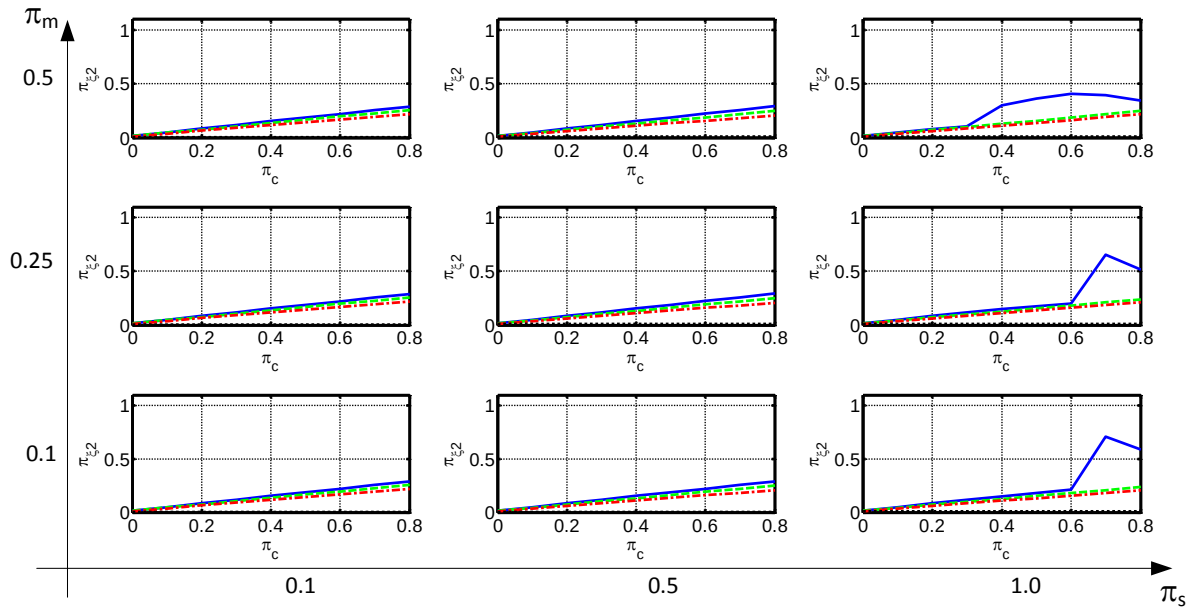


(b)

Supplementary Figure 1. First mode (a) period and (b) damping ratio

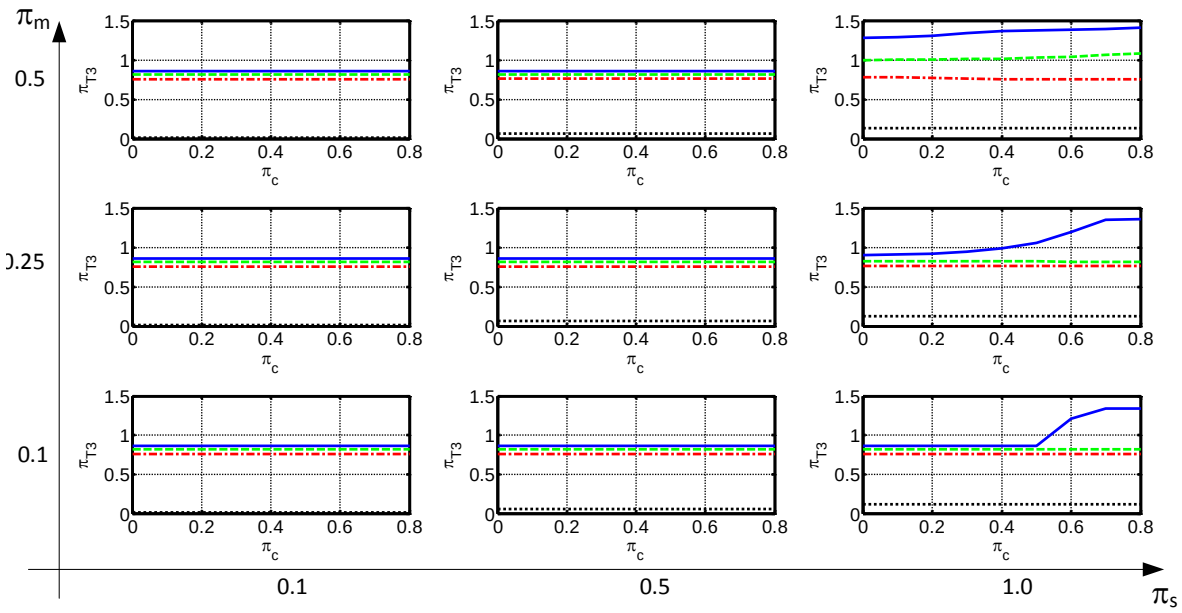


(a)

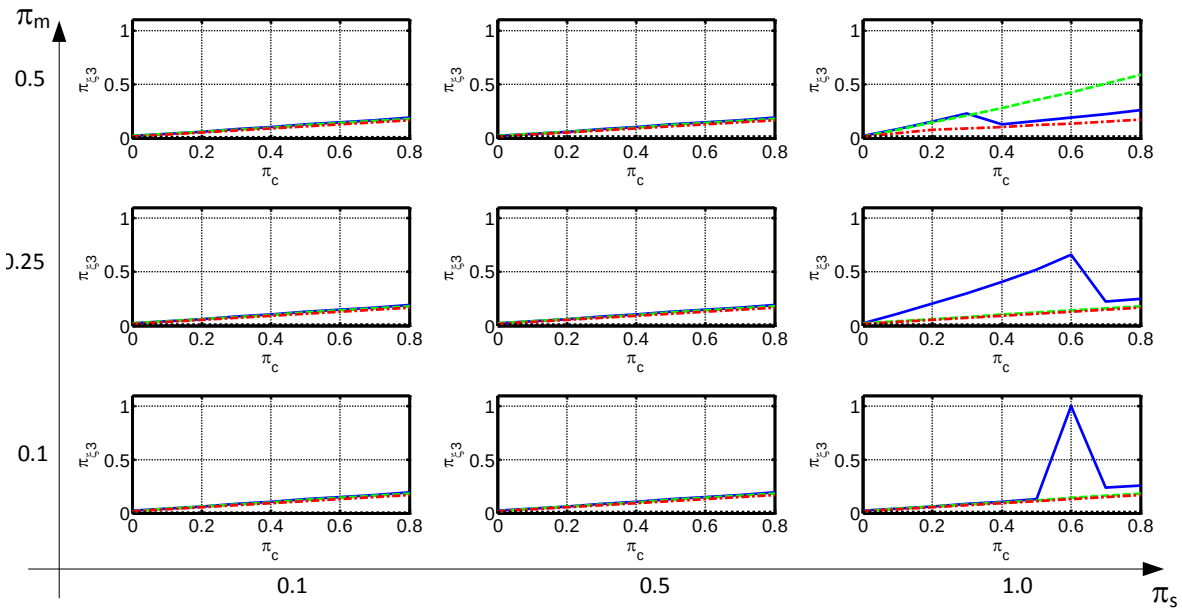


(b)

Supplementary Figure 2. Second mode (a) period and (b) damping ratio

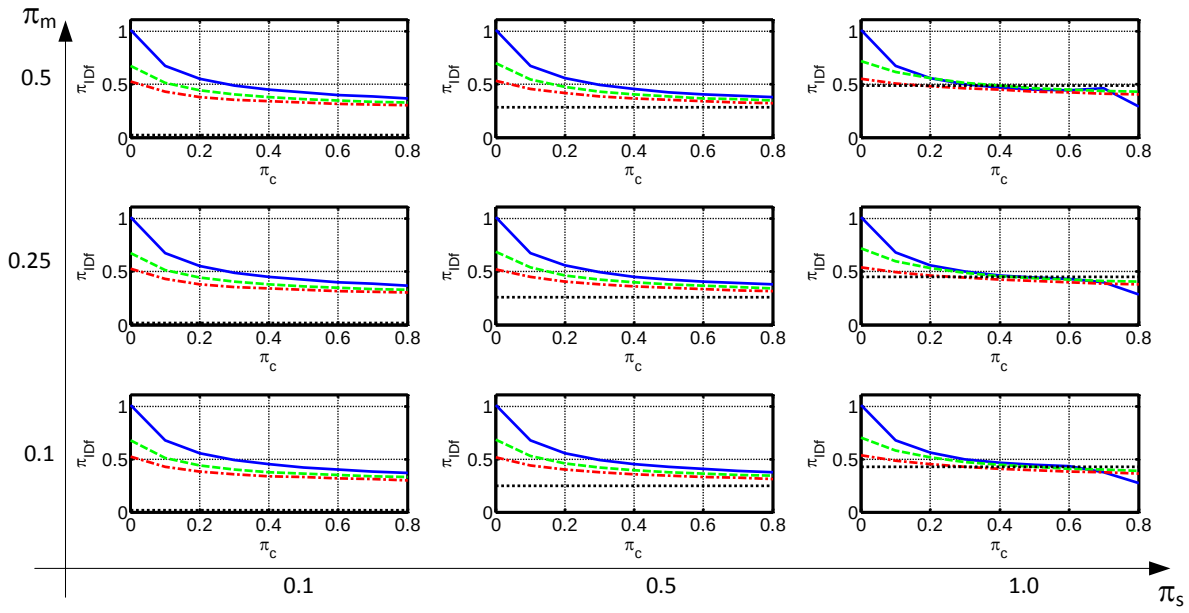


(a)

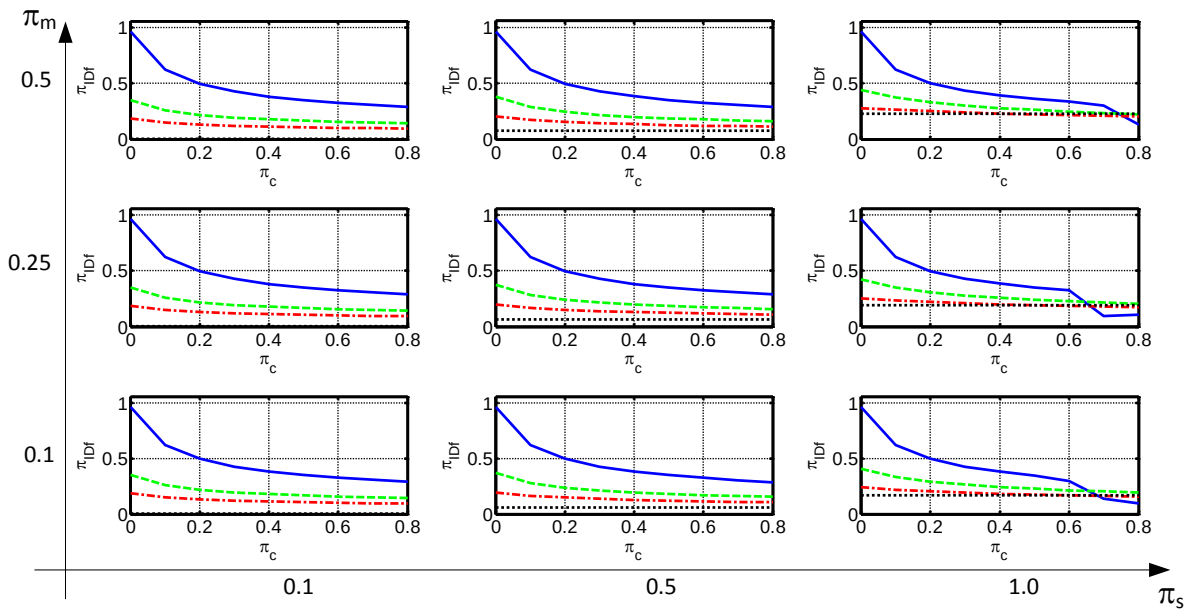


(b)

Supplementary Figure 3. Third mode (a) period and (b) damping ratio

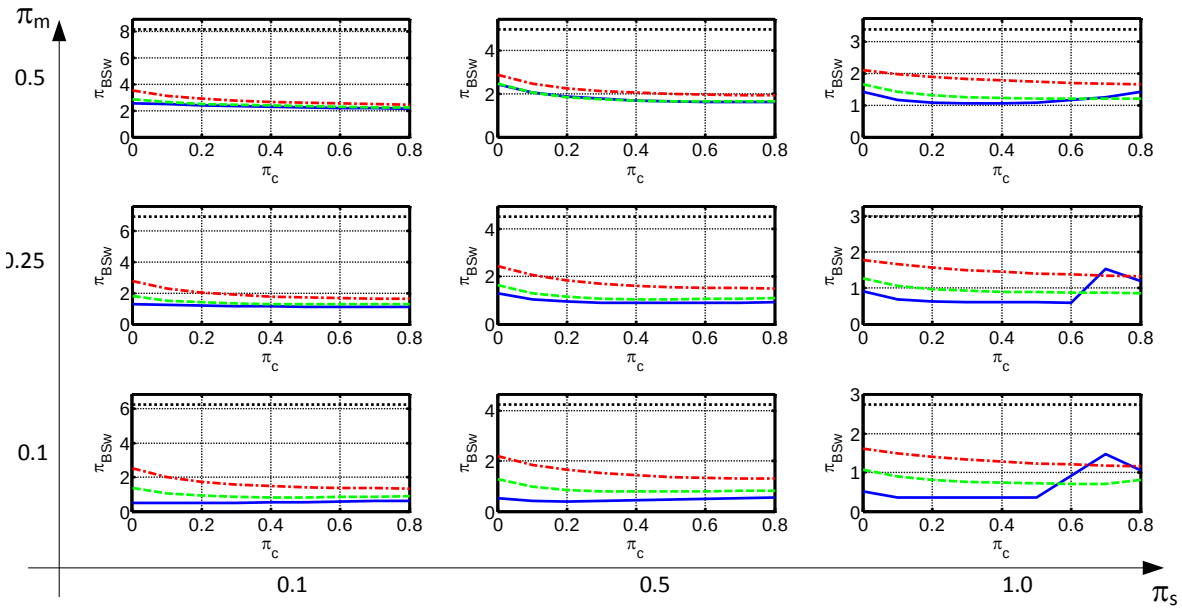


(a)

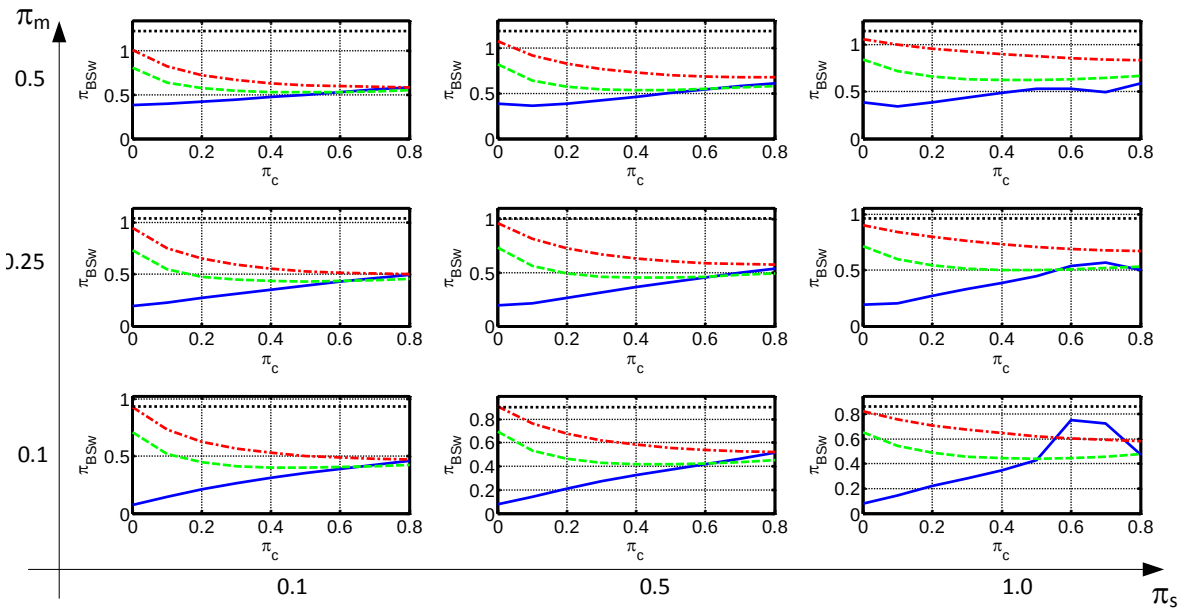


(b)

Supplementary Figure 4. Max Interstory Drift of the Frame: (a) constant velocity region (b) constant acceleration region

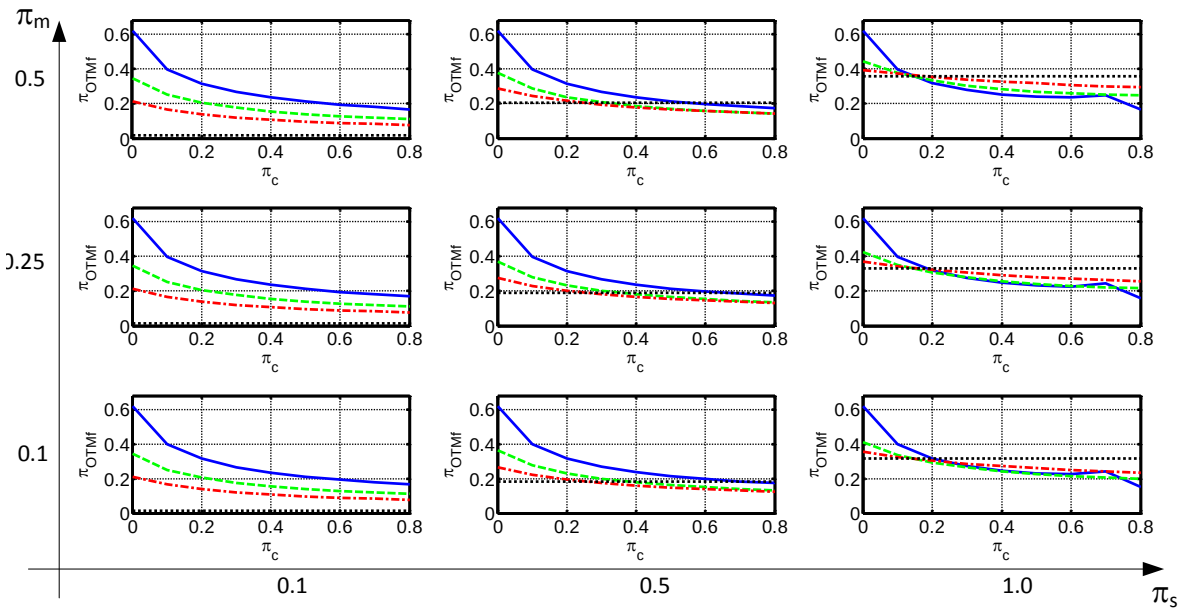


(a)

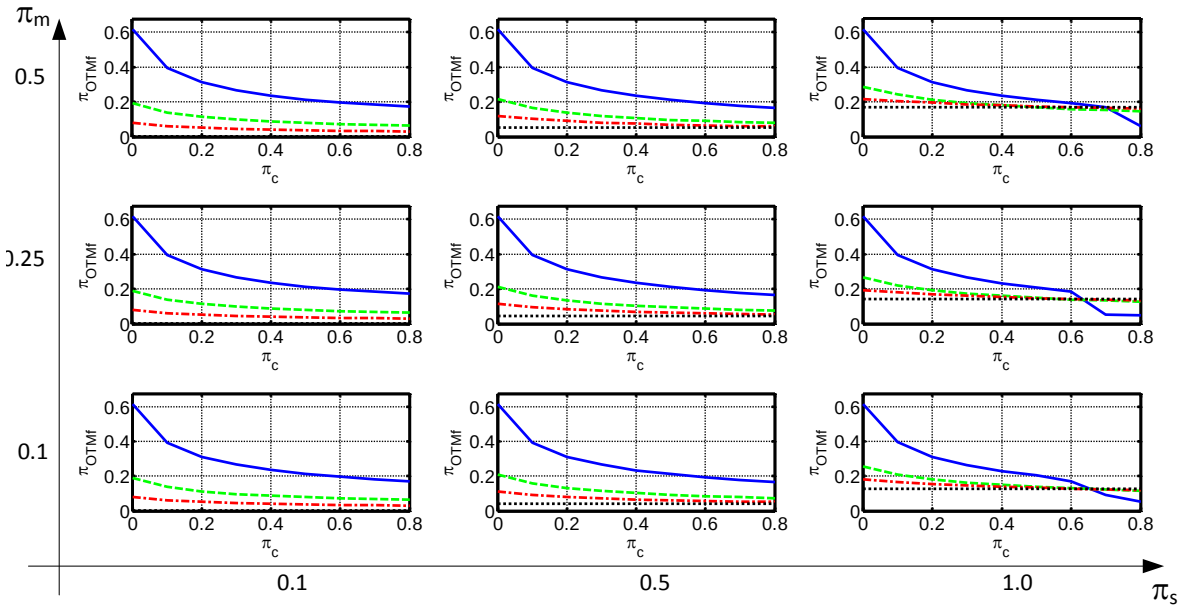


(b)

ıpplementary Figure 5. Wall base shear: (a) constant velocity region (b) constant acceleration region

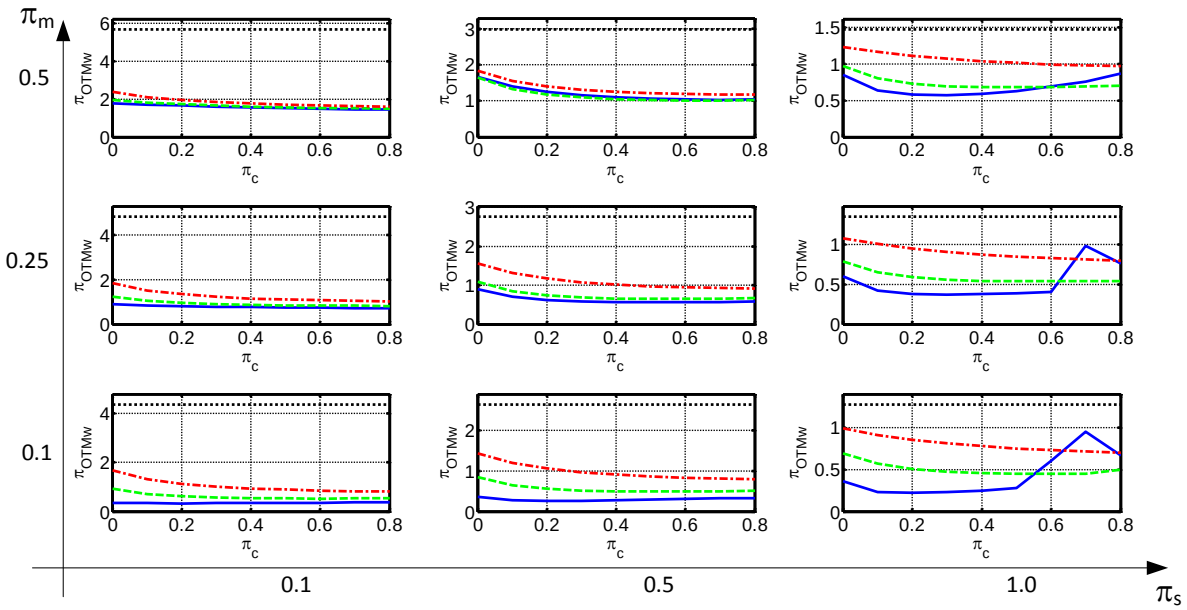


(a)

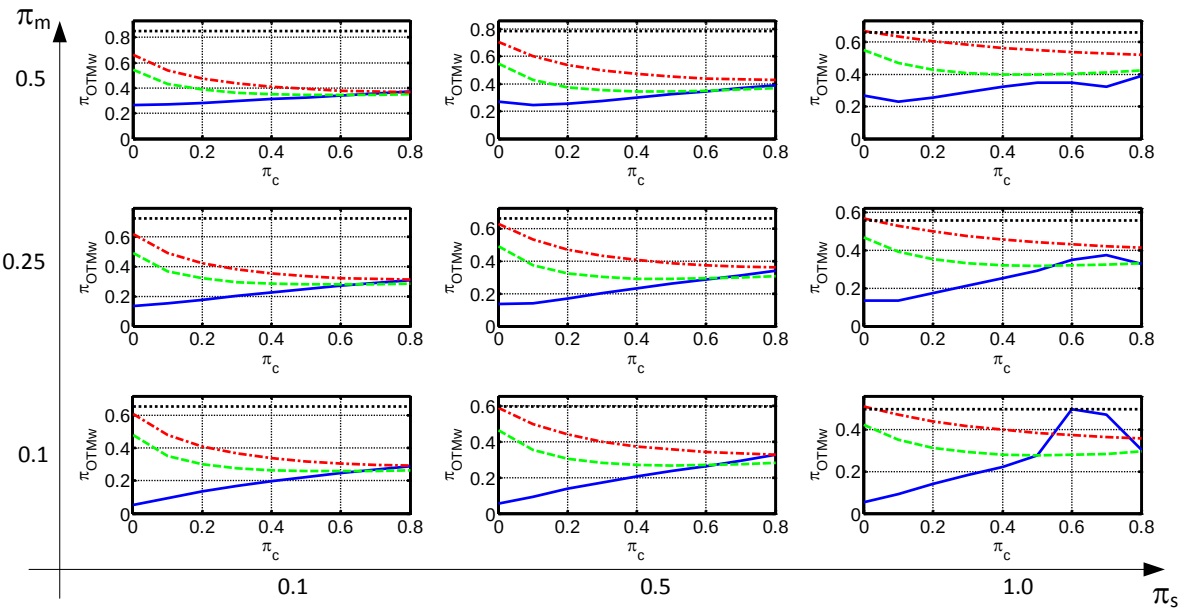


(b)

ɔlementary Figure 6. Frame base overturning moment: (a) constant velocity region (b) constant acceleration region

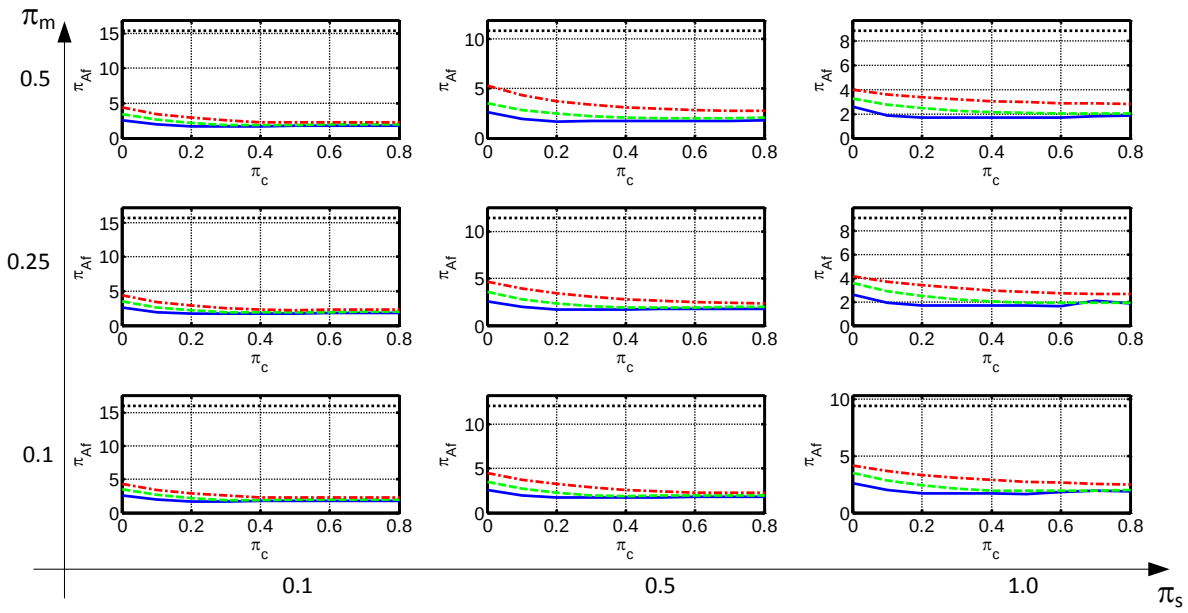


(a)

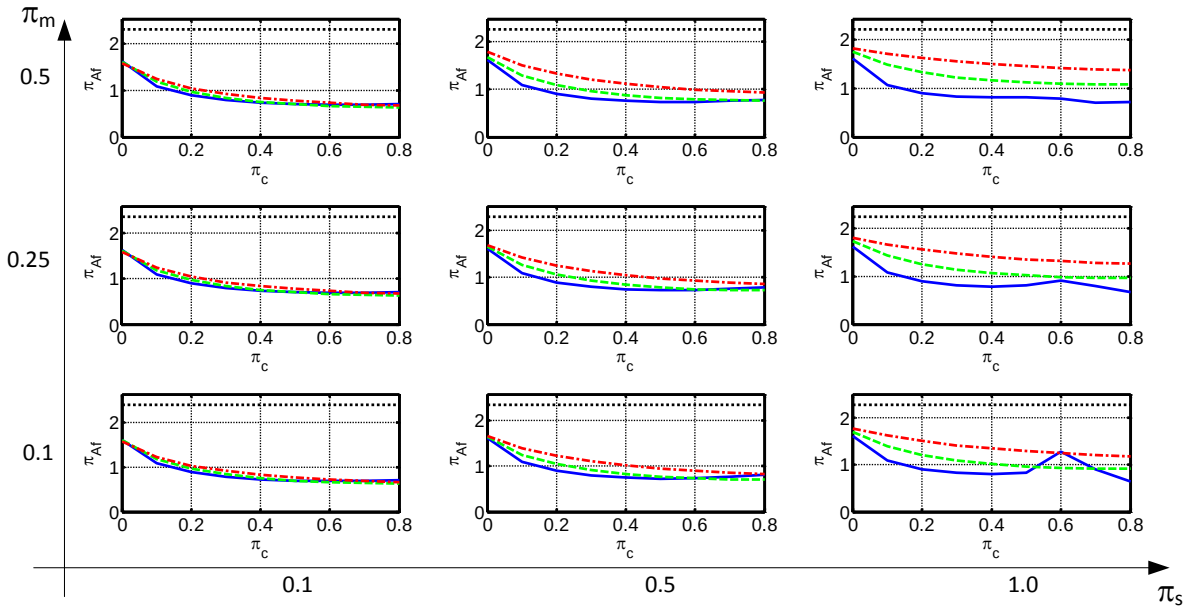


(b)

ɔplementary Figure 7. Wall base overturning moment: (a) constant velocity region (b) constant acceleration region

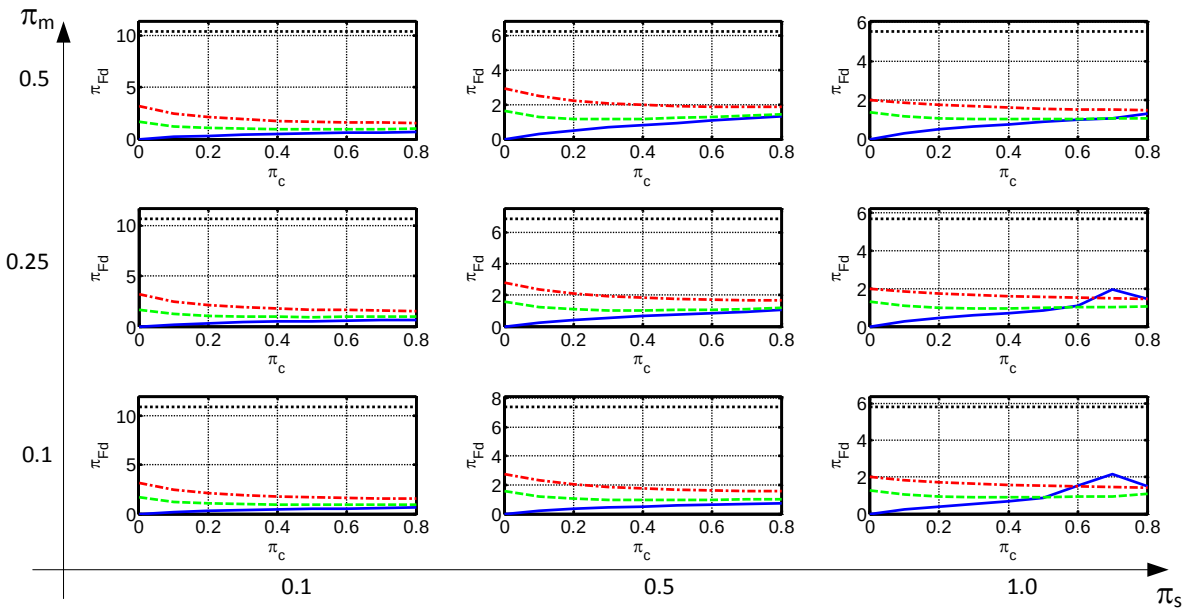


(a)

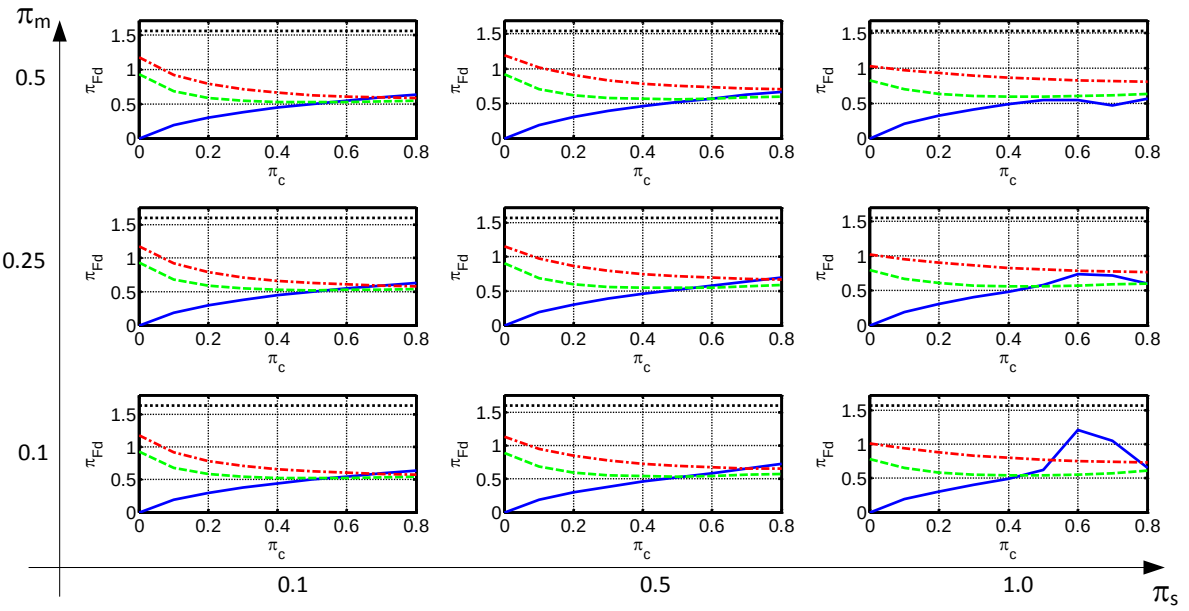


(b)

Supplementary Figure 8. Max frame acceleration: (a) constant velocity region (b) constant acceleration region

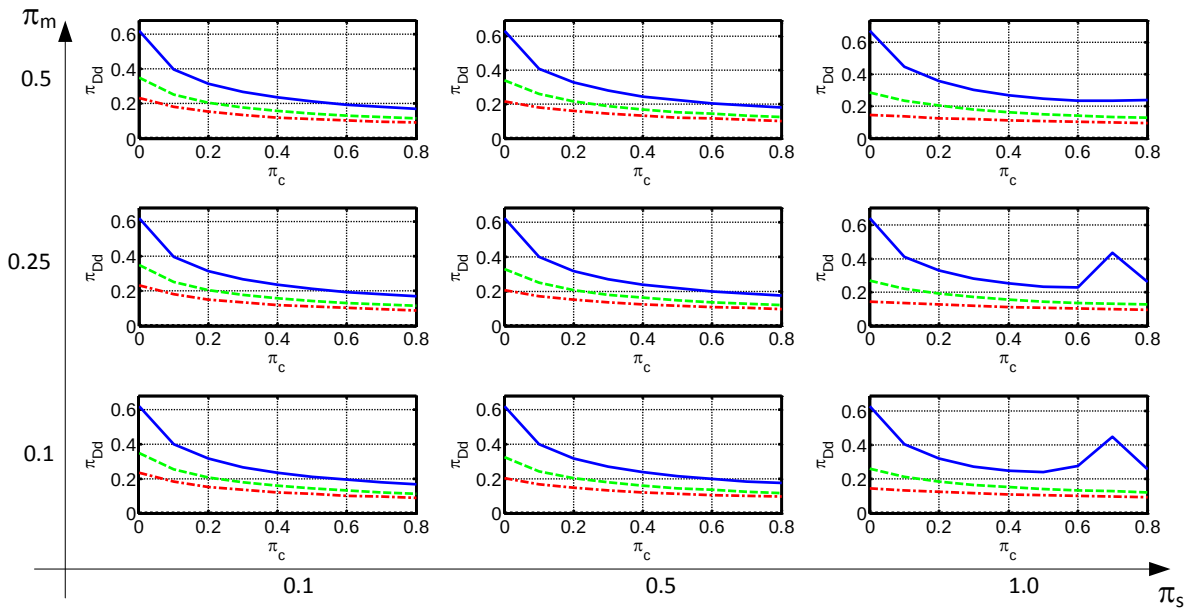


(a)

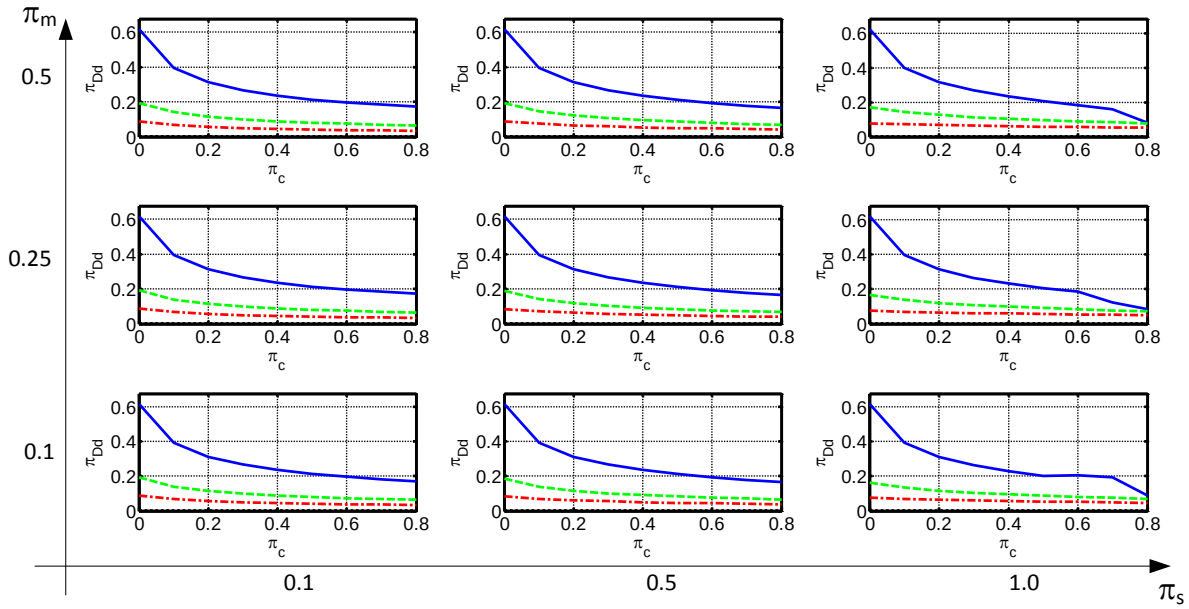


(b)

Supplementary Figure 9. Max connection force: (a) constant velocity region (b) constant acceleration region



(a)



(b)

plementary Figure 10. Max connection displacement: (a) constant velocity region (b) constant acceleration region