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Asymptotic behavior of a structure made by a plate and a straight rod

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This paper is devoted to describe the asymptotic behavior of a structure made by a thin plate and a thin rod in the framework of nonlinear elasticity. We scale the applied forces in such a way that the level of the total elastic energy leads to the Von-K\'arm\'an's equations (or the linear model for smaller forces) in the plate and to a one dimensional rod-model at the limit. The junction conditions include in particular the continuity of the bending in the plate and the stretching in the rod at the junction.

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