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their deformation theory (TSDT). In this study, the delaminated plates have been divided into different regions and trigonometric shape functions have been employed to the analysis of the buckling behavior of the delaminated plates. Aden et al. (1994) solved the governing differential equation for beams with multiple through-the-width delaminations to find the buckling load. In this study, the effects of contact between delaminated sublaminae have not been considered and because of that, in some cases, the physically unacceptable mode shapes have been predicted. Wang and Cheng (1993) used spring simulation technique to determine the local buckling load of delaminated beams and plates. In this study, the delaminated sublaminae has been considered in this in comparison to the base laminate and according to that, the sublaminate has been considered as a lamina on an elastic foundation. In other word, this method is able to analyze the local buckling of the delaminated sublaminae. They have then used the developed spring simulated model to determine the strain energy release rate of delaminated composite plates (Wang and Huang 1994). Shariwan and Wass (1994, 1997) used the nonlinear spring distribution between a thin plate which is bonded in-situ to a thick plate to analyze the buckling problem and delamination