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Article: New findings from V. Senthilkumar and co-researchers in the area of fullerenes described.

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"The buckling behaviour of the single-walled carbon nanotube has been analysed based on the nonlocal elasticity model under various boundary conditions. In this present study, the main focus is given to the nonlocal Euler-Bernoulli beam model based on stress gradient approach," scientists in Bangalore, India report.

"Four different boundary conditions have been used to study the buckling load. The use of differential transform method solves the buckling load in the beam model. For the first time in the literature, the present numerical method calculates the buckling load in the beam model with nonlocal effects. This technique produces the large number of simultaneous equations for the convergence of the solution and it is very easy to implement. The nonlocal effect and its effect on buckling load has been investigated using this numerical technique for the boundary conditions of clamped clamped, simply supported, clamped free and clamped-hinged beam. The present method gives very high degree of accuracy results with the exact analytical solution for the cases of buckling in nonlocal continuum model. The absence of nonlocal effect produces the classical Euler-Bernoulli beam model and again it gives very close results that compares well with the analytical solution," wrote V. Senthilkumar and colleagues.

The researchers concluded: "The accuracy and efficiency of differential transform method gives the confidence of numerical technique to solve the buckling analysis of carbon nanotube with nonlocal effects."

Senthilkumar and colleagues published their study in *Advanced Science Letters* (Buckling Analysis of a Single-Walled Carbon Nanotube with Nonlocal Continuum Elasticity by Using Differential Transform Method. *Advanced Science Letters*, 2010;3(3):337-340).

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