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A Carbon Nanotube NEMS Switching Device LAMAR MAIR, ADAM HALL, University of North Carolina at Chapel Hill, Curriculum in Applied and Materials Sciences, Chapel Hill, NC 27599, DMITRY SPIVAK, University of North Carolina at Chapel Hill, Department of Physics and Astronomy, Chapel Hill, NC 27599, MICHAEL FALVO, University of North Carolina at Chapel Hill, Curriculum in Applied and Materials Sciences, Chapel Hill, NC 27599, RICHARD SUPERFINE, SEAN WASHBURN, University of North Carolina at Chapel Hill, Department of Physics and Astronomy, Chapel Hill, NC 27599 — Attempts are underway to fabricate an electrostatically actuated device which uses the overlaying nanotube of a MWNT junction as the dynamic member. The underlying MWNT behaves as a stationary rail on which the top nanotube rests and, during actuation, will slide. The overlaying nanotube is clamped at one end and simply supported by the underlying MWNT, creating a situation of mixed support. Electron beam lithography is used to create sub-micron device features. Controlled manipulation and switching of this device could have impacts in the area of NEMS.

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