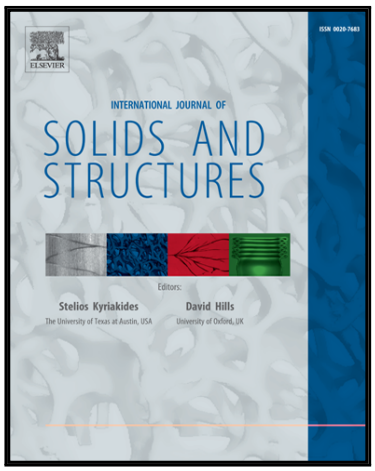

On the buckling and post-buckling of core-shell cylinders under thermal loading

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PII: S0020-7683(17)30342-6
DOI: 10.1016/j.ijsolstr.2017.07.024
Reference: SAS 9670

To appear in: *International Journal of Solids and Structures*

Received date: 12 May 2017
Revised date: 22 July 2017
Accepted date: 25 July 2017

Please cite this article as: Fan Xu, Radhi Abdelmoula, Michel Potier-Ferry, On the buckling and post-buckling of core-shell cylinders under thermal loading, *International Journal of Solids and Structures* (2017), doi: 10.1016/j.ijsolstr.2017.07.024

Highlights

- Theoretical analyses were conducted to find curvature-related key parameters for pattern selection in core-shell soft cylinders under thermal loading.
- Transition from subcritical to supercritical bifurcation was captured both analytically and numerically.
- Curvature and modulus effects on pattern formation are quantified by a new dimensionless parameter Ct.
- A 3D shell/solid coupled finite element model was applied for post-buckling analysis from a quantitative standpoint.
- Tracing of post-buckling evolution was performed by a path-following continuation technique.