

Python symbolic integration of parametric K:

Parametric stiffness matrix integrated symbolically:

| | | | | | | | | |
|-------|-------|----------|----------|--------|--------|-------|----------|----------|
| 6.94 | -3.47 | -3.47 | -1.74 | -1.74 | 0 | -1.74 | 0 | -1.74 |
| -3.47 | 6.94 | -3.47 | 1.74 | 3.47 | 1.74 | 0 | -1.74 | -1.74 |
| -3.47 | -3.47 | 6.94 | 2.22e-16 | -1.74 | -1.74 | 1.74 | 1.74 | 3.47 |
| -1.74 | 1.74 | 2.22e-16 | 0.868 | 0.868 | 0 | 0 | 1.11e-16 | 1.11e-16 |
| -1.74 | 3.47 | -1.74 | 0.868 | 1.74 | 0.868 | 0 | -0.868 | -0.868 |
| 0 | 1.74 | -1.74 | 0 | 0.868 | 0.868 | 0 | -0.868 | -0.868 |
| -1.74 | 0 | 1.74 | 0 | 0 | 0 | 0.868 | 0 | 0.868 |
| 0 | -1.74 | 1.74 | 1.11e-16 | -0.868 | -0.868 | 0 | 0.868 | 0.868 |
| -1.74 | -1.74 | 3.47 | 1.11e-16 | -0.868 | -0.868 | 0.868 | 0.868 | 1.74 |

C++ numerical integration of shearK with 3GPs in Cartesian form:

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Using Super DSGc3 formulation
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Printing C++ cartesian shear K to Blezinger DOFs!
| 6.94 | -3.47 | -3.47 | -1.74 | -1.74 | 0.00 | -1.74 | 0.00 | -1.74 |
| -3.47 | 6.94 | -3.47 | 1.74 | 3.47 | 1.74 | 0.00 | -1.74 | -1.74 |
| -3.47 | -3.47 | 6.94 | 0.00 | -1.74 | -1.74 | 1.74 | 1.74 | 3.47 |
| -1.74 | 1.74 | 0.00 | 0.87 | 0.87 | 0.00 | 0.00 | 0.00 | 0.00 |
| -1.74 | 3.47 | -1.74 | 0.87 | 1.74 | 0.87 | 0.00 | -0.87 | -0.87 |
| 0.00 | 1.74 | -1.74 | 0.00 | 0.87 | 0.87 | 0.00 | -0.87 | -0.87 |
| -1.74 | 0.00 | 1.74 | 0.00 | 0.00 | 0.00 | 0.87 | 0.00 | 0.87 |
| 0.00 | -1.74 | 1.74 | 0.00 | -0.87 | -0.87 | 0.00 | 0.87 | 0.87 |
| -1.74 | -1.74 | 3.47 | 0.00 | -0.87 | -0.87 | 0.87 | 0.87 | 1.74 |

::[KSM Simulation]:: Analysis -END-
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