Supplementary Material

Table 2. Notations and values for the Acela Express train used in the model

|  |  |  |  |
| --- | --- | --- | --- |
| Acela Passenger Train Properties | | | |
|  | | car body mass |  | kg | |
|  | | car body mass inertia |  | kg.mm2 | |
|  | | car body pitch rotation | - |  | |
|  | | car body displacement | - |  | |
|  | | secondary suspension damping |  | kN.s/m | |
|  | | secondary suspension stiffness |  | kN/m | |
|  | | bogie mass |  | kg | |
|  | | bogie mass inertia |  | kg.m2 | |
|  | | bogie pitch rotation | - |  | |
|  | | bogie displacement | - |  | |
|  | | primary suspension damping |  | kN.s/m | |
|  | | primary suspension stiffness |  | kN/m | |
|  | | wheel mass |  | kg | |
|  | | wheel displacement | - |  | |
|  | | wheel-rail interaction force | - |  | |
|  | | bogie distance |  | m | |
|  | |  |  | m | |