

structState.disp is a vector of [U, DU, dU]

```
for n = 1:num_step - 1
    conv_flag = 0
    iter = 0
    while conv_flag is 0 and iter < iter_max
        given current state, determine state, i.e., state = Mate25n(matData, state)
        get curr K and R
        unb = P(n+1) - R
        if |unb| < tol
            save structState.disp(1) for nth load step
            set structState.disp(2) and structState.disp(3) to 0
            commit state, i.e., state.past = state.pres
            conv_flag = 1
        else
            structState.disp(3) = inv(K) * unb
            update structState.disp(1) += structState.disp(3)
            update structState.disp(2) += structState.disp(3)
            state.eps = structState.disp/L
            j += 1
        end
    end
end
end
```