The math of suspensions

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Course: Mathematical Modeling in the Industry
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Agenda & Learning Outcomes

1. **Introduction lecture: mathematical engineering in the industry.**
   - *Evaluate alternative career development paths.*
2. **Workshop: modeling and control of a vehicle suspension.**
   1. Create a suspension model, analyze its frequency response and create a PID controller that meets the requirements, in Matlab.
   2. Create a suspension model and analyze its open-loop response, in Simulink.
   - *Apply the modeling – programming – control workflow in a concrete example.*
   - *Use commands from Matlab's Control System Toolbox.*
3. **Extension lecture: model-based development at DRiV.**
   - *Discuss state-of-the-art modeling and simulation methodologies in automotive engineering.*
   - *Recognize your professional assets.*