Predicting and Utilizing the Vehicle’s Past and Future Road Grade

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The 17th Directions in Engine-Efficiency and Emissions Research (DEER) Conference
Detroit, Michigan
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• Complete powertrain strategies
  • Utilize the past vehicle history
  • Predict the future road grade
  • Intelligent component controls

• Simulation Setup
  • Powertrain System Analysis Toolkit (PSAT)
  • Six Test Weights
  • Vehicle: 2010 EPA Compliant Volvo VNL
  • Three Road Profiles: Flat, Rolling Hills, and Hilly

• Showed a reduced fuel consumption (0.1-4.7%) while still maintaining adequate vehicle performance