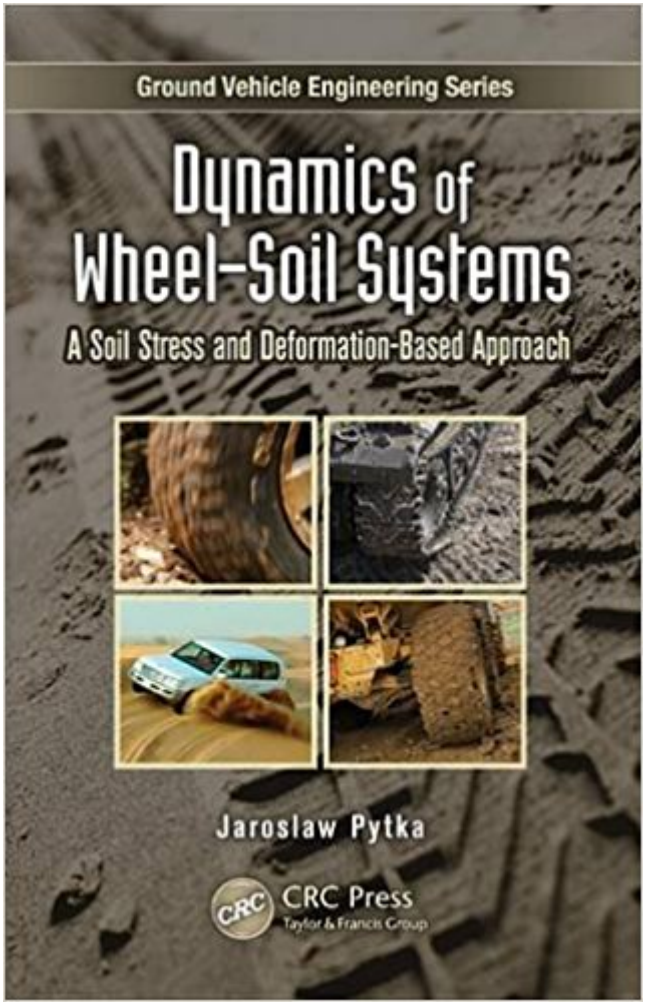
Dynamics Of WheelÃ¢â‚¬â€œSoil Systems: A Soil Stress And Deformation-Based Approach (Ground Vehicle Engineering)



Synopsis

Why is knowledge of soil stress and deformation state important for off-road locomotion? How do you measure soil stress and deformation under wheel loads? What are the actual values of stresses and deformation in soil or snow under a passing wheel? Providing answers to these questions and more, Dynamics of WheelÃ¢â ¬â œSoil Systems: A Soil Stress and Deformation-Based Approach is a practical reference for anyone who works with experiment design and data analysis of soil stress and deformation measurements under vehicle load. Based on the authorÃ¢â ¬â„¢s 15 years of experience in field experimentation on wheelÃ¢â ¬â œsoil dynamics, the book describes methods and devices for soil stress and deformation measurements and presents numerical data from full-scale field experiments. These methods offer practical solutions to methodological problems that may arise during the design and preparation of field experiments. Provides technical information on measuring, modeling, and optimizing off-road vehicle tractionÃ¢â ¬â ¢including a novel method for describing off-road traction Provides rare experimental data on soil stress and deformation under a variety of wheeled and tracked vehicles Supplies solutions for designing, building, and using soil or snow pressure transducers and sensors Compiles original experimental data on soil degradation due to agricultural machinery traffic and soil compaction Explains how to create dynamic models of wheelÃ¢â ¬â œsoil systems based on experimental data A valuable reference on an important area of terramechanics, this book shows how to analyze and model wheelÃ¢â ¬â œsoil interactions to create more effective designs for a range of vehicle types.

Book Information

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Customer Reviews

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