

## **NASCAR Vehicle Dynamics and Suspension Tuning**

### **OEM vehicle development, racing programs and vehicle Suspension Solutions**



**Bob Simons**

Vice President  
Morse Measurements

Founded in 2003, Morse Measurements LLC is an independent, privately held company, with no vehicle manufacturer or race team affiliations.

Bob Simons and Phil Morse, two bright young mid-west engineers, teamed up to nurture their suspension engineering acumen and business idea into the reality of the Morse Measurements test facility in the heart of NASCAR country.

Their specialty is Suspension Kinematics and Compliance (K&C) testing and associated consulting.

Bob, Phil and their engineering team apply a blend of practical experience with the latest prediction and testing tools. They also undertake design, development and quality consulting projects often advancing the state of the art. Their K&C work lead them to the purchase of an Anthony Best Dynamics Suspension parameter Measuring Machine (SPMM) in 2004.

**Hear Bob discuss** how Suspension Kinematics and Compliance testing has become a vital part of OEM vehicle development and racing programs, assisting development and manufacturing engineers in the design, tuning, simulation and quality adherence of vehicle suspension systems for improved handling. By measuring in their testing facility – where everything is accessible and repeatable - clients can substantially reduce costs associated with on-road/track test sessions.

Historically, comprehensive suspension Kinematics and Compliance testing has been the domain of a few large automobile and tire manufacturers, but Morse Measurements LLC changed all that by opening a truly public suspension K&C test facility - the first of its kind in North America.

Their story has been reported in several national publications including the cover page of the FasTrack Racing Journal. Morse Measurement engineering contributions are available on the Society of Automotive Engineering (SAE) website.

Bob Simons was a professor at Davenport University for six years and simultaneously an engineering consultant with a number of automotive OEMs, software companies, and racing teams.

Prior to that he was a development engineer at Delphi Automotive Systems for three years.

Bob's experience includes steering system design, control system integration, lab testing, and data acquisition. Bob has prepared and driven his own SCCA-IT racecar.

Bob graduated from Purdue University with a Masters degree in Mechanical Engineering and Lehigh University with a Bachelors degree in Mechanical Engineering.