CONTENTS

inside

04 LETTER FROM THE EDITOR
06 NAPARS: LETTER FROM THE PRESIDENT
07 ORGANIZATION PARTNERS
05 ADVERTISER INDEX

features

10 DYNAMICS OF VEHICLE-TO-VEHICLE SIDE IMPACT CRASH TESTS
by Lawrence A. Wilson and Sean H. Haight

24 PILOT TO DETERMINE IF USING LASER SCANNING SAVES TIME & IMPROVES COLLISION INVESTIGATIONS
by Richard Auty

32 MY TURN AT THE WHEEL: HOW TO USE THE COMBINED SPEED FORMULA, OR NOT!
by Erik Carlson

36 A COMPARISON BETWEEN A REAL WORLD CRASH TEST, HVE SIMULATION AND 3D SCANNING
by Jeffrey Suway, Anthony Corno, John Swanson, Fawzi Bayan, Ronny Wahba and Alfred Cipriani

46 USING & PRESERVING HVEDR DIAGNOSTIC EVENT DATA
by Timothy Austin, William Meserschmidt, and Michael Farrell

54 DETERMINATION OF IMPACT FORCE AND CRUSH ENERGY USING ABDUCTIVE NETWORKS
by Oren Masory and Nicolas Putod

68 ANALYSIS AND APPLICATION OF ROLLOVER DATA FROM TESTING
by W. R. Rusty Haight and Sean H. Haight

88 DETERMINATION OF VEHICLE ORIENTATION AT GROUND CONTACT FOR ROLLOVER ACCIDENTS
by Juan M. Herrera and Anselmo Najera G.

94 SCHOOL BUS SUBMERGENCE COLLISION INVESTIGATION AND PASSENGER SURVIVABILITY
by Ray Turner

100 RECONSTRUCTION ESSENTIALS FOR TREAD SEPARATION ACCIDENTS INVOLVING AXLE TRAMP
by Paul T. Semones

110 CRASH TEAM BOOT CAMP - CRASH TEST DATA REVIEW
by James D. English, John Howell, C. Bruce Gambardella, Bob Lynn and Jeff Bangle

122 FORCE-BALANCE: A NON-STANDARD APPLICATION OF THE TOOL
by Daniel W. Vomhof III

132 YAW MARKS: PAST AND PRESENT
by John Howell and Mario Alfonsi